

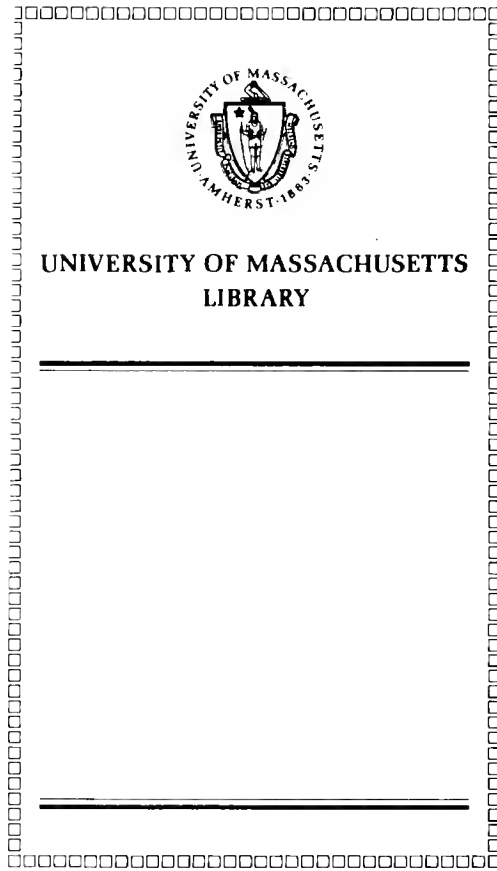
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SIR WILLIAM TURNER THISELTON-DYER, K.C.M.G., F.R.S.



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Per

— TO —

SIR WILLIAM TURNER THISELTON-DYER,

DIRECTOR OF THE ROYAL GARDENS, KEW.

THE FIFTY-SEVENTH VOLUME OF "THE GARDEN"

Is dedicated.

BORN in 1843, Sir William Thiselton-Dyer became, forty-three years later, Director of the Royal Gardens, Kew, in succession to his father-in-law, Sir Joseph Hooker. In his earlier years Sir William took honours in Mathematical and Natural Science at the universities of Oxford and London, and held the Professorship of Natural History and of Botany successively at the Royal Agricultural College at Cirencester and the Royal College of Science for Ireland, entering on his work at the Royal Gardens as Assistant Director in 1875. As Professor of Botany and of Natural History, as lecturer to classes of teachers in training, as President of more than one section, on different occasions, of the British Association, as Vice-President of the Royal Society, as Member of the Senate of the London University and in other allied offices, he has already done a life's work of steady labour in botany.

In botanical literature Sir William published in 1865, with the late Dr. Trimen, *A Flora of Middlesex*, for which the collection of material was begun in school days, and in 1875 edited the English edition of *Sachs's Pocket-book of Botany*, and is now engaged in editing the *Icons Plantarum*, and the continuation of the *Flora Capensis* and the *Flora of Tropical Africa*.

Since his appointment to the Directorship of the Royal Gardens, Sir William has laboured with conspicuous success to the perfecting of their scientific organisation. The Gardens now contain 20,000 species and marked varieties, and these are nearly all catalogued in a series of hand-lists, which are generally accepted as authoritative standards of botanical nomenclature. The Director is now mainly occupied with the organisation of botanic establishments in India and the colonies and in training men for their service. The labour entailed by these works, besides that of advising the Government on technical questions and the constant pressure of an immense and important correspondence, must be more than enough for a man who has all his life had to struggle with indifferent health.

But in addition to his earnest and arduous labours in botanical science and organisation, all who have delight or interest in horticulture owe an immense debt of gratitude to the Director of the Royal Gardens, in that he has so raised their horticultural standing as to have made them a living exposition of a vast collection of plants so grown and arranged as to make the Gardens a place of beauty and of the highest instructive value in gardening, of a kind that may be understood, not only by the owners of large places, but by those who are holders of the tiniest plot of ground.

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THE GARDEN.

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[JANUARY 6, 1900.

A WINTRY PICTURE.

Now in the woodlands from the creaking boughs
The last sere leaves are loosened and unstrung,
Where once the tender honeysuckle ching,
And the fond mavis fluted to his spouse,
Already dreaming of her winter drowse,
And brooding dimly on her unborn young,
The dormouse rakes the beechmast, and among
The matted roots the moldwarp paws and
ploughs,
Over the furrows brown and pastures gray
The melancholy plovers flap and plain;
And, along shivering pool and sodden lane,
As lower droop the lids of dying day,
Like to a disembodied soul in pain,
The homeless wind goes wailing all the way.

ALFRED AUSTIN.

TO OUR READERS.

WITH the present issue, *THE GARDEN*, under new ownership and direction, enters upon another period of its existence.

During the twenty-eight years through which it has reflected the thought and intention of its founder, it has been the instrument mainly employed for the furthering of the object to which the best years of his life have been devoted. This object has been to promote the knowledge of the better ways of horticulture, and to give to all who would garden well in the temperate world, a clear knowledge of beautiful plants and shrubs and trees, and of the best ways of using them. That such helpful instruction was much needed has been proved by the eagerness with which it has been accepted, while its clear result is shown in the widespread and intelligent interest now taken in matters horticultural.

And although the newer and better ways of gardening are only a return to those of our ancestors, yet the precious heritage they left us had for many years been lost. To have been the means of restoring it, and also to have awakened many more minds to the knowledge of the happiness that may be found in a garden, is an achievement of which any one man may well be proud. The benefit is one which is not only individual, but national. Indeed, it is probable that, during the century of extraordinary progress upon whose last year we are now entering, no movement that has been kindled into life has had so direct a bearing upon the happiness of so large a number of people.

When, towards the close of the year 1871, Mr. Robinson founded *THE GARDEN*, the good hardy border flowers, beloved of our ancestors,

had long been banished, and the bedding system, in the wearisome monotony of its all-prevailing practice, was almost the only expression of gardening existing throughout the country. It was a bondage of fashion, spreading from end to end of the land, that had even in many cases driven the good old border flowers out of the little cottage plots. Mr. Robinson set himself the task of combating this evil, and of restoring to favour the simple and delightful ways of the older gardening, that for so many years had been thrust aside. There can be no doubt that it is mainly owing to his work and influence that our gardens have regained their ancient and most precious character of peace and beauty, and power of giving happiness.

The love of beautiful flowers and of gardening is deeply rooted in the heart of the English people, and the remarkable evidence of the reawakening of its latent vigour that has taken place during late years, shows how gladly and gratefully people have seized upon the opportunities that have once more been placed within their reach.

It is not only in private gardens, great and small, that the wholesome change has been wrought. The present Director of the Royal Gardens at Kew was quick to apprehend the importance of the movement, and to appreciate its value as a means of national education. And now at Kew the intentional pictorial treatment of tree and shrub and flower adds a new and vast range of instructive teaching to an already magnificent scientific establishment; moreover, following this good example, the curators of Botanic Gardens throughout the kingdom now appear to vie with each other in adding to the beauty as well as to the scientific efficiency of those that are in their charge. The great improvement in the treatment of flowers in London parks is traceable to the same good influence, while the beautiful grouping of plants, especially as in Regent's Park, has become an important means of popular instruction, both in the making of good acquaintance with ornamental vegetation and in the enjoyment of one of the best and purest of human pleasures.

We desire to strengthen all *THE GARDEN*'S good traditions. It is to be, even more than heretofore, a paper for everybody. We trust that the learned botanist and the consummate horticulturist will still give a helping hand to the amateur, who begins equipped only with his love of flowers, his honest enthusiasm, and his desire to learn; that the working gardener, whose life's

experience is beyond all value, will write of it for the good of all; that the paper will continue to be a medium of pleasant interchange of thought, suggestion, and record of practice. We earnestly request its old friends to give it, in its new life, the welcome help that has contributed in so large a measure to the building up of its present position and utility. We ask for the courteous and kindly countenance of our brethren in horticultural journalism, and especially for that of our older and graver contemporaries. We also desire that our friendly relations with all the branches of horticultural trade may not only be to their own benefit, but may enable us to co-operate with them to the working out of the many matters that bear upon the best and worthiest aspects and interests of gardening.

So it is that we take up the work of *THE GARDEN*; remembering the long labour and wealth of solid material that have gone to its making; ever mindful of the clear purport of its teaching, that has won it honour from the beginning; looking forward with good courage to gaining for it an ever-widening field of usefulness, and working onward with the determination to build well and soundly upon its firm foundation.

THE EDITORS.

CHRISTMAS ROSE (HELLEBORUS ALTIFOLIUS),

which usually commences to bloom towards the close of October, is, for the most part, past its best by Christmas-tide, but its place is taken by the chaste St. Bridget's Christmas Rose (*H. javernis*), with its capped blossoms and pale green stems, the Riverston and Bath varieties, and the handsome Madame Fourcade. The flowers of the Christmas Rose often remain uninjured, in a dormant condition, through a spell of severe frost. During the bitter cold that marked the opening months of 1895 some partially-expanded blooms and buds of varieties of *Helleborus niger* were caught by the frost in the first week of January and remained frozen on the ground until the month of March was well advanced and the long-deterred thaw set in. As the frost relaxed its grip the flowers gradually assumed an erect position and continued their abnormally delayed expansion unharmed. The gold of the Winter Jasmine (*J. nudiflorum*) lights up many a southern wall and cliff face, and is particularly charming when associated with the crimson of the beautifully variegated *Cotoneaster microphylla*. On not a few houses the Passion Flowers still display their oval orange fruits beneath the sheltering eaves, and the Winter Sweet (*Chimonanthus fragrans*) diffuses on the air its delicate perfume. Some of the earlier Rhododendrons, such as *R. Nobilemum*, are already showing colour in their flower trusses, and in positions screened from the effects of the frost a few Violets are to be found.

"THE GARDEN."

IT is written on the first page of the first volume of THE GARDEN, sent to me by my friend the Editor:

"My dear Mr. Hole. We talked one day in Regent's Park of THE GARDEN before it came into existence, and on the same day gave it its name. Kindly accept the first volume as a small token of my deep gratitude for the great help you gave me, in endeavouring to conduct it safely through the first and most difficult year of its life. Always yours, WILLIAM ROBINSON, November 29, 1872."

I had retired with my friend from the heat of the Exhibition tents when he first announced, as we sat, *subtequino fagi*, his intention to edit a weekly newspaper exclusively devoted to horticulture. At that time there was only one hebdomadal publication on the subject which kept within the boundaries of the garden, and this, the *Gardener's Magazine*, although it was conducted by a most zealous and capable editor, Mr. Shirley Hibberd, had not the circulation which it deserved. The *Gardener's Chronicle*, admirable then as now, and supported by a very large staff of efficient contributors, was combined with an *Agricultural Gazette*, and many of the pleasant practical pages of the *Cottage Gardener* were devoted to beehives and cocks and hens.

I therefore welcomed with acclamation Mr. Robinson's proposal to establish a newspaper which would treat of the garden and the garden only, and so far as other topics were concerned should "brook no rival near its throne."

I was impelled by stronger motives and happier anticipations to express my sympathy, and to promise such help as I could give, as I knew that my companion was resolved to maintain against all comers the superiority of the Natural to the Artificial system, of the English to the Italian, style of garden, and that he had not only the will but the power. He believed, as I believed, in Tennyson's words: "Great Nature is more wise than I."

We were troubled with sceptical notions on the subject of "bedding-out." The new toy had fascinated the childish heart, which delights in coats of many colours by day, and in fireworks by night, but the eyes began to ache and tire of the kaleidoscope.

I had been constrained to ask a gardener who grew scarlet Geraniums, yellow Calceolarias, and blue Lobelias by the acre, to take me to his kitchen garden that I might cool my organs of vision on the parsley. Hundreds of us who thought that we were gardeners had been dazzled into a serious form of ophthalmia which forgot the wise warning: "*O formose puer nitidum ne crede colori*," and had forsaken our first love, expelled in many instances our flowering shrubs and perennial flowers, so that we might entertain and admire this delicate visitor, with her hectic flush and her gaudy habiliments. We were beginning to tire of her smart full dress, "company" clothes, her perpetual *toupe*, her society manners, her changeless expression. She was too bright, if not too good, for human nature's daily food; and, as with a guest who first charms us with outward demeanour, and then bores us by imbecility of mind, we felt a strong desire that she should go.

We became exceedingly wroth, as people always are when they do foolish things. We were never tired of telling our deluded companions that they had ruined their gardens. We spoke with bitter sarcasm of the Pelargonium family in general, and of "Tom Thumb, vivid scarlet" in particular. We

attributed all the disastrous results to the malignant influence of *Coleus Verschaffeltii*, and to the satanic power of *Cerastium tomentosum*. We rushed, also, as a matter of course, into the opposite extreme. We would annihilate this bedding-out. In no place, in no form, would we tolerate this gorgeous impostor, who had robbed our gardens of so much graceful beauty, who had induced us to substitute angles for curves, uniformity for variety, gravel for grass, perishable for permanent plants, dead levels for undulating ground, scentless for fragrant flowers.

Time and experience have told us that there is no rule, be it never so golden, which is without exceptions. All who are familiar with our palaces, castles, and grand mansions, with our public buildings, public gardens, and parks, must recognise the effective ornamentation which taste and money can make by the introduction of the "movable feasts" of spring and summer flowers. They relieve with their bright colours the massive monotony of our great buildings, and, where a garden is impossible, they charm and cheer.

Only let it be distinctly understood that this form of floriculture does not make a garden. Admire it as much as you please; when you see it with terraces and stairs and balustrades, and copings and statues and fountains, regard it as a picturesque combination of the architect's and florist's art, but please don't call it a garden.

A garden is not a place in which you are observed by all the dwellers in the house, by the proprietors and their guests below stairs, the housemaids in the bedrooms, the footmen in the lobbies, the children in the nurseries, by the grooms exercising in the park, or the visitors coming to call. A garden is a place of seclusion, of peaceful rest to the weary, in which joy can sing with the birds and sorrow can sigh with the summer breeze. It is a place in which children can play "I spy" and "hide and seek," instead of being continually warned by the governess to "keep on the walks." It is a place in which lovers' vows are sweet in every whispered word, but who ever heard of a proposal (except on the terrace by moonlight) in front of fifty windows of plate-glass, without a nook, or an arbour, or a garden chair?

Nevertheless, and though there was a time when, in a spirit of *reducta*, I would have stamped out every symptom of "bedding-out" as though it had been hydrophobia, I am convinced that in the surroundings to which I have referred it may be introduced with becoming effect as a peaceful adjunct to the scene, an ornamental appendage, but not a garden.

Mr. Robinson, in his *magnum opus*, "The English Flower Garden," the best book which a gardener can have in his library, has remarked that there are positions where stonework is necessary owing to the peculiar formation of the ground, but he strongly protests against masonic intrusions upon beautiful lawns; and whatever concessions he might be disposed to make where the houses were large and the boundaries extensive, he would never dignify these arrangements with the title of a garden.

As we sat under the tree, this "English Flower Garden," which now claims our grateful admiration, was only an idea in the brain of the author, to be realised by a laborious life. But I knew his mind and spirit—the spirit of Walpole, Addison, Pope, Kent, Whateley, Mason, and all our great English gardeners, and I listened with delight to his declaration of war against stucco, spirals, incongruities and shams of all denominations, proudly accepting his invitation to act as an honorary member of his staff.

He and his coadjutors—and I would include in this alliance all the writers, landscape and working gardeners, professional and amateur, who would promote the natural garden—have made great progress in the last quarter of our century. The love and cultivation of flowers in general, the interest in horticultural literature, the laying out of gardens and grounds, have rapidly increased and improved. The desire develops on every side to regard the garden as a thing of beauty and as a joy for ever, rather than the sort of thing you must have, don't you know, supplying pretty bouquets, tender peas, new potatoes, and a clean promenade on Sundays. There is a manifest decline in the mutilation of evergreen shrubs, and in the conversion of yews into poultry. The conviction grows that *naturam expellas furci tamen usque recurret*; you may shut out Nature with long straight lines and sharp angles, with brick-dust, and gypsum and iron palisades, but she will reappear round the corner and reproach you with an irresistible smile.

It is a march which must end in victory; but, like that of our armies in Africa, it is through the enemy's land. It is opposed by prejudice, ignorance, indolence, colour-blindness, grosser enjoyments. "Don't care," "haven't time," "can't afford," are the coarse, clumsy giants who would stop the way. They bellow, and they boast, and wear gaudy uniforms; but they are only half hardy, and in their contest with refinement and common-sense they are as the children of Ephraim, who turned themselves back in the day of battle. There are other adversaries, pigmies, and people of all sizes and sorts. Men and women with no taste, with bad taste, with a little good taste which should be educated, all these must be dealt with. We want leaders and teachers—object-lessons—beauty placed by the side of ugliness.

And so, when a field-marshal, after a long campaign of brave, patient, and successful service, returns from the front, still to guide with his counsel those whom he had led with his sword, and we cheer him as he lands on our more peaceful shores, the anxious question interrupts our welcome, "Who is to take his place?" Leaving metaphor, where shall we find a new editor for THE GARDEN.

The Americans affirm that in each great crisis of their history, although there did not seem before its occurrence to be any "kings of men" in their midst conspicuously qualified to overcome all difficulties, and to achieve greatness, and lead on to fortune, such a champion never failed to present himself—the right man, at the right time, and in the right place.

Assuredly we gardeners, on the present occasion, can make the same jubilant boast. We can say of floriculture as of the Phoenix, *uno arulso non deficit alter*, the throne is no longer empty, and although we cannot cry "Long live the king," all of us who have lived in the happy and glorious reign of Victoria will sing with all our heart and voice "God save the Queen."

My ideal of a perfect gardener, and therefore of a teacher best qualified to instruct others, would be one who combined the devout reverence of a Christian, the sentiments of a poet, and the accomplishments of an artist with the long experience of mental and manual work; and all who have read the records of this work in "Wood and Garden," they especially who have been privileged to see it, will anticipate with a sure confidence a grand success for THE GARDEN under the combined editorial auspices of Miss Jekyll and of Mr. Cook, her able and energetic co-editor.

S. REYNOLDS HOLE.

The Dairy, Rochester, December, 1899.

THE FLOWER GARDEN.

THE LARGE BLUE WOOD ANEMONE.

OUR common Wood Anemone in the Weald of Kent or Sussex varies but little, and we see it often exactly of the same type. But in woods in warm and gritty soils it grows more vigorously, and varies sometimes in an interesting way. Once, in the north of Ireland, I remember seeing nearly a dozen forms of it in one wood on free gritty soil. Now, this precious large Blue Wood Anemone of our gardens, which has come into cultivation within the last thirty years, is a pale blue variety of one of the larger forms of our wild Wood Anemone (*A. nemorosa*), and it was sent in the first instance from Ireland to the Oxford Botanic Gardens, where, in the time of the late Mr. Baxter, I first saw it. The blue forms of our native Anemone, like the white, vary, and one I saw wild in North Wales and plentiful is distinct from our plant. Blue forms of the Wood Anemone occur here and there both in England and Ireland, but are far rarer than the white forms, and smaller. Our present plant merits attention because it is the most precious of these native varieties, one of the most widely

spring flowers on warm banks, but it is also, where there is room enough, a lovely plant near grass walks and on the north side of trees and mounds, as in that way we can prolong the bloom in a sensible degree, for if there happens to be a few sunny days when the flower is in full bloom, and the flowers in the sun seem faded, we have still our reserve of blooms on the north side. Being a native plant, one of its charms is that, when sufficiently plentiful for the roots to be spared, it is one of the prettiest things to naturalise by mossy or grass walks, and the increase of the plant in cool soil of ordinary quality is very rapid. W. R.

ALTHÆA FICIFOLIA.

A YEAR ago one of my best garden friends gave me some seed of Hibiscus or *Althæa ficifolia*, and it is many years since a plant hitherto unknown to me has given me so much pleasure.

It is a kind of single Hollyhock, but much better than any single Hollyhock I have ever seen, for it has just that quality of grace and refinement that in these is lacking. The flowers are of a delicate texture and of a tender lemon colour, in some cases approaching white. The stem-leaves are lobed, and the 7-foot-high stems are slight and gracefully carried. From July to September it was one of the most delightful things in the garden—a plant that one could not pass without a feeling of pleasure and thankfulness. G. J.

West Surrey.

gardens already contain the majority of the things mentioned, but they are often scattered about the ground in a haphazard way, no attempt being made to bring them together in positions where their winter beauty would be most manifest, nor to give them the special cultivation they need.

SALIX (WILLOW).

Amongst the most noteworthy are the red and yellow-barked varieties of *Salix vitellina*. To see these Willows at their best they should be grown in masses near the water side. Although naturally trees (*Salix vitellina* being considered by some authorities to be no more than a variety of our native White Willow) they show the fine colours of the bark better when kept to a shrubby state by pruning. It is, of course, only the shoots of the year that are coloured, and the system of cultivation should be to obtain as many of these young shoots as possible and to get them of good length and thickness. There are some groups of these red and yellow Willows on the islands on the lake at Kew. They are pollarded hard back every year in March, the "stools" remaining 3 feet to 4 feet high. By means of this annual pruning, dense thickets of slender wands, 4 feet to 6 feet long, are obtained which during the four dullest months of the year give some of the brightest effects that can be had out-of-doors at that season.

Salix daphnoides and *S. acutifolia* can be treated in the same way. The bark of both is covered with a bluish white bloom—really a waxy secretion—and although the colour has not the warmth and attractiveness of the *S. vitellina* forms, the effect of a group of one or other of these species is very striking.

CORNUS (DOGWOOD).

The Willows are naturally best adapted for moist positions, near a lake or pond. For drier places several species of Dogwood (*Cornus*) can be used, some with red and others with yellow bark. The best of the red ones is *C. alba* and its varieties, but *C. stolonifera*, *C. Bailyi* and *C. circinata* are also red tinged with brown. There is a yellow-barked variety of *C. stolonifera* introduced recently from America, also a similarly coloured variety of *C. alba* called *flaviramea*. Both are bright and worth planting in masses for colour.

RUBUS (BRAMBLE).

The white-stemmed Brambles are also worthy of mention. There are several species that possess these blue-white stems, due, as in *Salix daphnoides*, to a waxy secretion on the bark which can easily be rubbed off. Undoubtedly the best of the group is *Rubus biflorus*—a species from the Himalaya frequently to be obtained from nurseries under the name of *R. leucodermis*. It grows 8 feet or more high, and its thorny, arching shoots are often 1 inch in diameter. The stems are biennial, flowering the second year. After fruiting they should be cut out, only the clean young wood of the year remaining. It requires generous conditions at the root to be seen at its best. Although similar in colour to *Salix daphnoides* and *S. acutifolia* it is, for the qualities under discussion, a better shrub, especially near London. It should be planted in groups consisting of not less than half a dozen specimens.

The best of the other species with whitish stems are *R. leucodermis*, *R. neglectus*, and *R. occidentalis*, all three of North American origin.

BETULA (BIRCH).

The silvery trunks of the common white Birch are amongst the most conspicuous



THE LARGE BLUE WOOD ANEMONE (*ANEMONE ROBINSONIANA*).

distributed, and best of all native Anemones, and also the best of the blue Anemones by reason of its hardiness and freedom in all soils, constant and prolonged bloom. When we compare it in this way with such very fine plants as the Apennine and Greek Anemones we are setting up a high standard; but this surpasses them in free growth, and I think, on the whole, in beauty. That beauty anybody can see in some degree from the smallest tuft fully open in the middle of a spring day, but its full charm can only be seen when we use it in quantities enough to form carpets among shrubs. In that case, even if dull weather prevents the beautiful quality of the colour of the open flowers from being seen, the effect of the large soft buds is very pretty. It is excellent for use among early

TREES & SHRUBS IN WINTER.

THE midwinter beauty of hardy trees and shrubs, especially deciduous ones, is apt to be overlooked. Yet woody vegetation at this season possesses a distinct charm. The rugged form of many trees—the Oak and Horse Chestnut—is only fully revealed then, and the delicate grace of others like the Birch is never so apparent. Nothing of its kind is more impressive than a giant Elm with its huge, rugged trunk and towering mass of branches and twigs—the fretted outline of which is unsurpassed in beauty among hardy deciduous trees. In this note, however, I wish to draw attention to those trees and shrubs conspicuous for the beautiful colour of their bark in winter. Many

features of the garden landscape at this season. Associated with dark evergreens like the Holly or Rhododendron, they give a singularly cheerful effect, especially in positions where the low rays of the winter sun can strike upon them. There are, however, other Birches with trunks even more vividly white than those of our native species. One of the most noteworthy of them is *Betula papyrifera*—the famous Canoe Birch of the forests of North America. Others equally good are *B. corylifolia* and *B. nudaifolia* (also called *B. alba costata*) from Japan. The freshly-exposed bark of *B. lutea* has a warm brownish-yellow colour, not, however, sufficiently pronounced to produce a noticeable effect. The trunks of the River Birch of North America (*B. nigra*), if not exactly handsome are peculiarly striking because of the bark peeling off in great flakes, which remain on the trunk for several years.

Other trees that deserve mention are the golden-twigged Lime (*Tilia platyphyllos aurantia*), the yellow-bark Ash (*Fraxinus Excelsior aurea*), and the variety of *Alnus incana* with red twigs (*ramulis coccineis*).

Some charming effects can be made by planting the early flowering bulbs beneath groups of shrubs with coloured bark. *Cornus alba* or *C. alba sibirica* with a carpeting of the yellow winter Aconite (*Eranthis*) makes a very pretty combination. The white-stemmed Rubus may be associated with *Chionodoxa* or *Scilla* in the same way. W. J. BEAN.

The Royal Gardens, Kew.

WOODLAND AND FOREST.

THE HARDIEST FIRS.

BY the term "Firs" is here meant any of the conifer family.

What constitutes *hardiness* in a forest tree in this country is a question that may be asked at the outset! Generally speaking, the answer would be "power to withstand our severest winters"—otherwise exposure and a low temperature. But there are other influences at work than those that prevent the healthy development of some of our forest trees, and these are neither a low temperature nor exposure, but are such as the tree cannot endure. Take the common Deodar, for example. It is now well known that the Deodar is not hardy enough to endure the enervating conditions existing in such localities as the valley of the Thames, in some places at least, or the climate of the New Forest, while it is quite at home in the coldest parts of the north of England and Scotland. The common Spruce, the Silver Fir, and the Douglas Fir are also sensitive subjects, and all the Spruces are more or less peculiar. The three named are at home anywhere in Scotland, where the rainfall is abundant and the soil moist, and are often subjected to a temperature below zero without the least injury, but in many parts of the east of Scotland and England, where the winds are keen though not strong, they will not thrive, and in some spots will hardly live. Inside of a dense wood they will grow and do pretty well, but nowhere else.

The Wellingtonia has the same peculiarities. It becomes a scarecrow in the open, in exposed situations where keen spring winds are felt, but it will grow fast in a wood. Frost has no effect upon it, but cold keen persistent east winds it cannot endure, and on not a few estates it has been discarded for these reasons. Up till now, our so-called pinetums have done little else

than lead us astray as regards the fitness of many exotic trees for this climate, as timber trees, because pinetum culture does not give the trees a fair trial. There are many species that will grow under plantation culture that will not succeed well in an open pinetum or lawn. Any species that will endure our severe winters in the open may be relied upon to succeed in a forest, but some species that endure severe cold, but do not grow fast in the open, will also pull up into a good useful pole in a wood.

Pines of the Scots, Corsican and Austrian Fir class behave very differently from the Spruces. Provided the soil is fairly well drained they are alike indifferent, comparatively, to severe frosts and cold winds. The peculiar constitutional difference between the Pine and Abies in that respect has never been explained, and I have often wondered if it was anything in the habit of the trees or the disposition of their leaves that caused the difference. *Abies Nordmanniana*, for example, has never, I believe, been known to suffer from the severest frost in this country. Yet I have seen this tree on an eastern aspect in Yorkshire suffer so severely from keen cold winds in February and March as to lose its leaves at the extremities of the branches, while the Scots Fir and Austrian Fir hard by showed no signs of injury. Probably excessive evaporation from the foliage caused by these dry winds causes the leaves to fall. None of the Spruces are good subjects for planting round the margins of woods in cold eastern aspects. They are all trees for gullies and glens and the inside of dense plantations.

The hardest Firs for any aspect are undoubtedly the Corsican, Scotch, and Austrian Firs and Larch. There may be others but I know of none that I would trust like these, and I put the Corsican first, Scots Fir second, and Austrian last. A good many years ago a long strip of these three species, with Larch and Beech, were planted on a most exposed site at the top of Wharfedale Crags, over 1,000 feet above the sea, on a poor peaty but dry soil, and the Corsican has over-topped all the others by a good bit; the Scots Fir coming next, and the Austrian last—a mere bush in fact. The long silky, fine glaucous leaves of the Corsican show that it is at home in such situations. Unfortunately, a fire from the railway, extending a mile from the point of origin, almost completely destroyed this fine plantation some years ago, leaving only a fragment, but quite enough to show what I have described. The fault of the Corsican as a shelter tree is that it is a sparse brancher, but that can be got over by thick planting. The Corsican's hardiness is beyond all doubt. In the exceptionally severe winter of 1894-95, when, with us, the thermometer remained at zero or near it for weeks, and native trees like the Holly and Yew were much injured, the three species that did not show the least sign of injury were the Corsican and Scotch Firs and the Deodar. I am somewhat alone, I believe, in championing the latter, but I know it so well in many parts of England and Scotland on high-lying exposed situations and in dry soils that I am sure of it. If I wished to plant a shelter belt that would not take up much room and would be high and dense—a thorough barrier to gales I would plant Corsican, Scotch, and Deodar, putting the first on the cold side, Scotch in the middle, and the Deodar in front. In a few years these would produce a shelter from cold wind and gales that a stone wall of the same height could not surpass. Comparatively speaking, these are all storm-fast trees, and do not go down before the wind like the Spruces.

I am aware that there are other species as

hardy as those named, but I am here speaking of hardiness in conjunction with trees worth growing for timber or purposes of shelter. Such species as the dwarf mountain Pine, Siberian Pine, *Abies alba* and *nigra* (white and black Spruce) I regard as worthless for either of the above purposes. J. SIMPSON.

FRUITS FOR THE GARDEN.

Those who have still to give orders to nurserymen for trees may like the names of the best varieties. Other good kinds may be added that are known to succeed in the neighbourhood. It is better to plant several trees of the best kinds than to plant inferior ones for the sake of variety.

Apples, Dessert. Beauty of Bath, Irish Peach, Devonshire Quarrenden, Worcester Pearmain, Blenheim Orange, Margil, King of Pippins, Ribston Pippin, Cox's Orange Pippin, Cockle Pippin, Mabbot's Pearmain, Adam's Pearmain, Mannington's Pearmain, Scarlet Nonpareil, Claygate Pearmain, Golden Russet, Lord Burleigh, D'Arcy Spice, Court pendu Plat, Wealthy, and Wyken Pippin.

Kitchen Apples. Keswick Codlin, Lord Suffield, Lord Grosvenor, Ecklinville, Stirling Castle, Golden Spire, New Hawthornden, Golden Noble, Lord Derby, Tower of Glamis, Warner's King, Bismarck, Yorkshire Beauty, More de Monage, Wellington, Lane's Prince Albert, Newton Wonder, Lady Hemiker, Bramley's Seedling, and Dutch Mignonne. The last-named and Lane's Prince Albert are the two heaviest cropping varieties I am acquainted with.

Pears. Doyenne d'Ete, Beurré Giffard, Souvenir du Congrès, Clapp's Favourite, Williams' Bon Chrétien, Triomphe de Vienne, Fondante d'Automne, Louise Bonne de Jersey, Thompson's, Garonne de Mello, Durondeau, Marie Louise, Pitmaston Duchess, Emile d'Heyst, Beurré Superfin, Beurré Bose, Knight's Monarch, Doyenne du Commerce, Josephine de Malines, Minc, Treyve, and Olivier des Serres.

Stewing Pears. Catillac, Gijogil, Uvedale's St. Germain, Verulam, and Grassane. The last-named is a very heavy and regular cropping variety.

Plums. Rivers' Early Prolific, New Orleans, Denniston Superb, Transparent Gage, early and late, Kirk's, Victoria, Green Gage, and Monarch. All varieties mentioned may be grown as pyramids or bushes.

Currants, Red. Ruby Castle, Red Dutch, and La Versaillaise.

Currants, White. White Dutch and White Versailles.

Currants, Black. Lee's Prolific.

Gooseberries. Yellow Sulphur, Whitesmith, Langley Beauty, Crown Bob, Whinlam's Industry, and Warrington.

Raspberries. Superlative is the finest of all. G. NORMAN.

The Gardens, Hatfield House, Herts.

Nerine undulata. During the last three months of the year the different species and varieties of *Nerine* are very pleasing, but with the advent of January few are left. Two are, however, still in flower, viz., *N. Manselli* and *N. undulata*, also known as *N. crispata*. In this last the slender flower-stem reaches a height of 15 inches to 18 inches, and the flowers, which are arranged in an open head, have the segments reduced to extremely narrow proportions, so that a cluster of bloom has a particularly light and elegant appearance, which is heightened by the wavy character of the petals, from whence the names of *undulata* and *crispata* are both derived. The colour of the flower is light pink, varying considerably in intensity. Greenhouse treatment suits the *Nerines* well, the original species being all natives of South Africa, but there are now in cultivation a great many garden hybrids.

OUR BOTANIC GARDENS. I.

ROYAL GARDENS, KEW.

IT is our intention to illustrate the botanic gardens in the British dominions, and no one will quarrel with us for selecting as the first of the series the Royal Gardens at Kew. This is a splendid scientific establishment and a beautiful garden, which are not always synonymous terms. Not many years ago everyone with a grain of artistic feeling entered a botanic garden with apprehension. One was always prepared for a rude shock, and the lessons that were supposed to guide one in learning something of the flora of our own and other lands remained unheeded. Why? Because the plants were set out in ugly ways, stuck in beds regimental fashion, and behind labels big enough to hide leaf and flower—a collection of species and varieties arranged in a style to make scientific study as palatable as teaching history with a table of dates.

An awakening has disturbed the old order of things. There is much work to accomplish before all our botanic gardens can be called beautiful, but the healthful change in arranging the flowers and trees proceeds steadily, until in the near future a botanic garden will be a place to visit with a knowledge that the plants there collected together are shown in ways to display as far as possible their natural beauty. It loses none of its usefulness because artistic planting has been thought of. A Rose is a Rose still when garlanding a bush or flinging its trails of blossom over pillar and wall, but the gardeners of old thought otherwise, and crowded every species of a family into one place, with strange results. Tall and short, stont and lean were shoulder to shoulder in that unhappy medley of species to represent certain orders. Kew, with its splendid scientific past, has become

A GREAT TEACHER.

not merely to the seeker after technical knowledge, but to the man in the street, who cares

little concerning botanical lore. He becomes, however, insensibly interested in the world of flowers, their infinite variety and degrees of beauty, when shrub and plant are disposed in big groups to play their part in garden adornment. No longer are the plants set out in a living herbarium, but spread in pleasure ground and woodland, on turf and by lake-

issue of THE GARDEN to show how much has been accomplished, and to express a hope, too, that the work now proceeding will not be checked or cramped by narrow views of what such a place should be—a garden to roam in and learn from the flowers spread over the grounds that in a smaller acreage maybe it is possible to obtain good effects, even when the



IN THE LILY HOUSE.

side, in rock garden and in dell, and each year brings with it some improvement in artistic planting. Mistakes are committed, and a lingering love exists for lines of liver-coloured beds, but no gardener is perfect, nor can one hope for perfection when painting the earth with the colours of a thousand flowers. We have illustrated a few phases of Kew in the present

smoke clouds of a great city hover near. THE PLEASURE GROUNDS.

are filled with flowers through spring, summer, and autumn; and even in winter, when the earth is not frost bound, Cyclamens, the early Snowdrops, Winter Aconites, and other harbingers of brighter skies open shyly in the weak sunshine. Upon a winter day we have seen many shrubs in beauty: the golden-flowered Wych Hazel (*Hamamelis arborea*), *Lonicera Standishi*, scenting the cold air, *Chimonanthus* or Winter Sweet, and Heath. But colour, too, comes from the Sea Buckthorn (*Hippophae rhamnoides*) by the lake, and from Siberian Dogwood and Scarlet and Golden Willow. Many good gardeners have told the writer that not a few of their best effects have been suggested by the grouping of families of shrubs and plants at Kew, and in May Tulip time, when the spring flowers have flown for the most part, and there comes a lull in the garden, the beds on the rich sweeps of grass are a blaze of glory. We have never seen richer colour; it seems to pour from the big goblets of Gesner's Tulip its varieties and species almost as gorgeous in their shades of vermilion and scarlet. Until a flower is grouped its usefulness for garden decoration remains unrevealed. A Gesner's Tulip alone is sumptuous; but in a well-planned yet simple group the flower becomes of intense brilliancy, suggesting that in all places where rich pictures are desired this late spring bulb should receive its proper place. We write of the May Tulips in particular, for we think Kew is the first botanic garden to show how much has been lost in the past by not using liberally bulbs almost unknown to many good gardeners that have flowered modestly in the cottage plot for generations. The same may be written of a host of other good things, rare except at Kew, where, of course, the Director has oppor-



HYBRID WATER LILY GROUPS ON THE LAKE.

tinuities of making handsome and artistic effects, and has happily neither forsaken nor forgotten true gardening for a dry as dust herbarium.

BOTANICAL KNOWLEDGE AND GOOD GARDENING.

should go hand in hand. This meeting of two phases of flower life is seen here, and such a noble garden has an important influence upon horticulture in this country. How great has been the change from the former ugly ways of planting, may be seen in the early spring months, when the Royal Gardens are in their sweetest dress. The grass swards are filled with flowers happy under such conditions, Star Narcissi, double Meadow Saxifrage, Crocuses, Lady's Smock, Snowdrops, the fragrant Tulipa suaveolens, Poet's Narcissi, and hosts of other precious flowers of the early year. The whole garden is perfumed and coloured with these wavy colonies and sweeps of blossom. Near to the principal entrance from Kew Green the grass is full of bulbs which have now become almost naturalised,

land. But this garden is an object lesson of great value, showing that even in a low-lying river-side woodland the Bamboos are not merely comfortable but make tremendous growths. Those who visit Kew to gain information concerning things which at present are a closed volume, and wish to know how well Bamboos thrive, should spend a few hours here, where the plants have now become thoroughly established, and are fresh-looking in their green colouring throughout winter. Of course shelter is necessary, and this is provided by the surrounding woodland, the garden being set, so to speak, amidst trees, and approached in one way from the delightful dell of Rhododendrons, where many rare hybrids and Himalayan species have grown into vigorous bushes. Readers of THE GARDEN, however, have been well informed as to the species and varieties of Bamboo that succeed at Kew, and the method adopted for forming the present garden. There is no haphazard system of culture, but everything is assisted to promote its full vigour and develop its natural beauty of form, leaf,

numerous plant houses new introductions are flowered and new hybrids and varieties raised. These will be recorded in our pages week by week, and it must not be forgotten that it is a place in which flowers are hybridised to create fresh races. The Streptocarpus of our gardens practically had their birth here, and visitors to the Hybrid Conference in the Royal Horticultural Gardens last year will remember the splendid group of Kalanchoe flammea grown at Kew. This is, without question, the most important new plant of last year.

Thus we commence this present series with the greatest garden of its kind in the world. An immense work is quietly performed by those responsible for its management, in giving advice to horticulturists at home and abroad, and in maintaining a botanical influence that is felt not only in Britain, but in our colonies and countries of other nations. Of that great work we have no intention of writing about now. We regard the gardens rather from another standpoint, that of their importance in teaching that botanical science need not disfigure the woodland or pleasure ground. The Arboretum is not merely a collection of trees and shrubs, labelled and classified into their respective families without a thought of their natural growth. Fir, Spruce and Tamarisk, Oak and Beech, and every other tree and shrub group are represented by all the species and varieties it is possible to procure, and this may be written of every plant family, whether it be the glorious hybrid Nymphaeas basking in the summer sun on the lake surface, or tender exotic sheltered under glass.

We are happy in the belief that the director and his assistants realise the great teaching importance of the gardens under their charge, from whence are sent men to the four quarters of the globe to work out the knowledge of the gardening and botanical science acquired during their apprenticeship. Kew is a beautiful botanic garden; it was not always so, but the gardening spirit has made itself manifest and will reveal itself more strongly as the years roll on.

NEW GARDEN PLANTS, 1898.

ACCORDING later than usual, the Supplement of the *Kew Bulletin*, containing a list, briefly descriptive, of all the plants newly introduced into gardens in 1898, and described in botanical and horticultural publications, English and foreign, in that year, will be found useful as a permanent record for future reference. A similar list has been issued annually since 1887. It comprises not only plants brought into cultivation for the first time, but the most noteworthy of those which have been re-introduced after being lost to cultivation. Species, varieties, and hybrids, with botanical names, are included. Some idea of the character of the list will be obtained from the following example of a description taken from the list for 1898: "*Passiflora In-Thurnii*, Masters (*Gardens Chron.*, xxiii., 305, fig. 114), Passifloraceae, Stove. A new species, near to *P. glandulosa*. Leaves broadly oblong, acute, leathery, glabrous above, setulose below. Flowers erect, 4 inches wide, with oblong glandular sepals coloured bright scarlet; petals smaller, rose coloured or almost white. Mr. In-Thurn calls it 'the red and white Passion-flower.' Guiana." This last list contains over 300 descriptions, but in some years over 500 have been recorded. The lists are sold at the gardens, price 4d. W. W.

Varieties of Impatiens Sultani

The flowers of the normal form of this Balsam are bright and pretty, while two varieties are very distinct, and, though not so free, are still decidedly attractive. One of these, *carminica*, has blossoms of a bright carmine-red shade, while in *salmonea* they are salmon. Like several others of their class, these Balsams are easily grown.



FORSYTHIA SUSPENS A AND CARPET OF SCILLA.

as also in the woodland or arboretum. Poet's Narcissi in thousands gleam in the openings between shrub and tree, companions to the Bluebell, which carpet the ground in rich profusion. As the illustrations depict, happy ways of using flowers are considered; and this beautiful gardening is not of one season alone, but in summer and autumn pictures of interest and splendour are unfolded. It may be of a hundred Tiger Lilies massed beneath a group of Chili Pine, or the fragrant Mezerion with a carpeting of Butcher's Broom. Kew is a botanic and experimental garden too, and plants one would not suppose sufficiently hardy or vigorous for a climate near the metropolis of London thrive unharmed by a murky atmosphere, unless saturated with visitations of dense fog. One of the most interesting additions of recent years is

THE BAMBOO GARDEN.

This has been the means, in no small degree, of popularising a graceful family, hitherto regarded as too tender, save *Arundinaria Metake*, for our

or flower. We have never visited this garden without leaving it wiser and better informed than when we entered it, gaining fresh ideas of the way of grouping certain shrubs or flowers, and learning something of their requirements. It is to assist our readers that we shall in the future give notes of everything at Kew likely to interest and instruct. Of course there are many failures, but if a plant expires or feebly struggles for existence in one spot it is tried in another, until its requirements are so supplied as to ensure success.

Last year an important addition was made to the gardens by Her Majesty, who sanctioned throwing into the grounds the Queen's Cottage and surrounding woodland, a paradise of birds and wild flowers. This, we believe, will be preserved in its natural wildness, and visitors in Bluebell time will enjoy a walk of the azure flowers, a sea of colour, hiding the sparse grass beneath the trees with a mantle of scented blossom. But it is difficult to write about Kew without encroaching upon space that can ill be spared in this issue. In the grounds and the

FRUIT GARDEN.

POT CULTURE OF PLUMS.

THE culture of Plums in pots has not advanced so rapidly as in the case of Peaches and Nectarines. Various explanations might be given of this fact, but it still remains the same. My own impression a few years ago was that Plums were not so amenable to pot culture as other stone fruits, but I have found from practical experiments that quite the opposite is the case. Some varieties fruit more abundantly in pots than when planted out in either the orchard house or the open air.

VALUE OF THE TRANSPARENT GAGE.

The varieties of the Transparent Gage (which I consider the finest of dessert Plums) are instances of this. These Plums are very strong growers when planted out, but when restricted at the roots by pot culture they are quite manageable. In our collection of several kinds, the Transparent Gages are the most prolific of any, a tree rarely failing to carry a good crop. This is far from being the case where the trees are planted out, so far as my experience has enabled me to form an opinion. These instances could be multiplied, but it is hardly necessary save to state that it applies to all strong-growing kinds as well as those that are supposed to crop badly.

Not only is it advantageous from the cropping point of view, but it applies also, and in an equal degree, to the quality of the fruit, except, perhaps, in the more highly favoured situations and soils. I find the flavour of fruits gathered from pots more fully developed than those from the open air. This is not peculiar to any one variety, but is applicable to all. Take, for instance, the Gages already alluded to, pot-grown examples of which are extremely delicious; so, also, are such as Coe's Golden Drop, Oullin's Golden, Golden Esperen, and Iekworth Imperatrice. There is scarcely any loss; birds, wasps, woodlice, and earwigs rarely destroy fruits upon pot trees. The two last-mentioned smaller enemies are, nevertheless, very destructive to wall fruits. There is no risk of injury to the crop by heavy rains in the autumn, which will often cause splitting or cracking, nor are the fruits in any way disfigured. Those grown in pots under glass retain their bloom to perfection; in fact, it is more perfectly developed, whilst the colour is intensified in nearly every instance, the peculiar freckles, spots, and other well-defined markings being thus brought out to perfection also.

FORCING PLUMS.

Some kinds are well adapted for this, and success is as certain as in the case of Nectarines under exactly the same treatment. Plums in pots may be had ripe without any difficulty by

the end of May or the first week in June, and thence onwards to nearly the end of October a supply may be maintained. For forcing I have grown, and am well satisfied with, Early Transparent Gage, Jefferson, and Reine Claude de Comte Althaus. These have fruited well in June and July, each variety when ripe being quite distinct from one another. The stone of a pot-grown fruit of the Plum is not so large, comparatively, as from trees growing in the open, but it puts on no less flesh for all that, in some cases even more. From the standpoint of beauty, Plums in pots have much to recommend them: there is first the flowering season; and, secondly, the fruiting stage. In flower the pot Plums make a beautiful display in the

They should have been grown one year in pots previously, so as to secure a good proportion of fibrous roots.

TREATMENT OF TREES WHEN FIRST RECEIVED.

When such trees are purchased, repot them without delay, reducing the balls in every case, more or less, on no account potting them on into larger pots without any reduction at all—this is another mistake, not infrequently made in pot-fruit culture. In nearly every case these newly-acquired plants or trees will go back into the same size of pot again. Pots of 9 inches or 10 inches diameter are quite large enough for the first few years. Firm potting is essential, and it should be done equally as well as if potting a greenhouse Erica or a Cape or New Holland plant, than which no plants need more careful handling. The best soil is a calcareous loam, to which little need be added—a small proportion of well-decomposed hot-bed manure to encourage fresh root action—the same of lime rubble or crushed bones (bone meal is almost too fine) to aid in the proper development of the stones (when the crop is swelling freely, then more manure can be applied, rather than in the soil at the time of potting). After potting give a few good waterings and let the trees stand in an open position, covering up the pots as a protection against frost. Here the trees can remain until the first flowers are expanded. Then it is desirable to bring them under glass for greater safety rather than run any risk from frost which, to our out-of-doors Plums, is often disastrous. For these, a house that is provided with abundant ventilation is most desirable. J. H. HOSKIN.

*Gunnerybury House Gardens,
Acton, Middlesex.*



OLD HARDY POPLAR AND BHOTAN PINE NEAR THE PALM HOUSE.

spring, but I consider the autumnal effect is far more beautiful when the trees are well laden with fruit, whether they be the varied tints of gold and orange, deep blue and purple, or reds of various shades. If no forcing is attempted, then no artificial warmth is at all necessary, hence no cost of fuel need be entertained.

In making a start to grow Plums in pots it should be borne in mind that light is essential. One cannot expect great success if the trees be grown under the shade of other things. This is where many have stumbled when first attempting pot-fruit-tree culture. Young trees are the best to start with, *i.e.*, those from three to four years old from the time of working.

flavour compared to others that are of high quality?

During the last thirty-five years I have had an opportunity of noting the behaviour of Pears in many gardens placed in various parts of the country, as well as in varied soils and situations. I could name several kinds that I have never known to be flavourless, while others are always poor. Some kinds need high culture to obtain their best qualities; and this applies to many other fruits, such as Muscat Grapes and British Queen Strawberry. No hardy fruit repays for close attention to their needs more than Pears, and there is no need to grow many kinds that are known not to keep. In most cases two trees are sufficient; and in some instances I should recommend cordons.

The following kind I can recommend, having

PEARS FOR FLAVOUR.

No doubt many will agree with me that Pears are the most delicious in flavour of all hardy fruits, and good fruits for dessert may be obtained over a long season, some growers having material from July till April. This may be so in exceptional seasons or localities, or if the grower is content to have Pears without regard to quality; but I fail to see the wisdom of growing kinds (whatever the position or locality may be) that are useless except for cooking. This being so, then why grow kinds that are known to possess no

grown them in various soils and situations with the best results. Many others could be added, but these are some of the finest, all points considered, for flavour.

Jurgonelle must head the list. The fruit is very fine here, gathered from a south wall on the abbey, the roots running under the turf and gravel drive. The trees are more than 100 years old. This is generally of finer flavour in the north than south of England.

Bon Chretien (Williams's) every one knows to be good. It is of better flavour from trees in the open than from those growing on walls.

Fantaisie d'Automne is excellent. It is always of good flavour, and must be closely netted or the birds will destroy the fruit.

Comte de Lutray, although not large, is first-rate. I have eaten deliciously-flavoured fruit from trees in the Royal Horticultural Garden at Chiswick, as well as in Purbeck Isle.

Mme. Tregou and *Bonne Supperin* are fine in their season. When residing in North Hants I used to have noble fruits for size and flavour from bush trees.

Louise Bonne of Jersey can be depended on, although the fruit in our garden is of higher flavour from trees in the open than those from a wall, although not to be compared to wall fruit for appearance.

Mme. Louise is so well known that it needs no praise; while

Suckle should be grown by every one for flavour. Although small, I never have known it of poor flavour.

Pomme du Comte is a splendid Pear, and is being more extensively planted.

Globe Maroon, in a general way, is first rate, especially when the fruit is russety. In Hampshire it was very good from an old tree, and was in season for two months.

Josephine de Malines must be mentioned. I saw it in fine condition at Sherborne Castle early in December. The fruit is of high flavour from a bush tree.

Naucelle Futee is a good late Pear, which succeeds well at Sherborne Castle.

Winter Xalis I consider the best of all Pears. It does well with me under high culture.

Estee Bonne, and *Beyrouth d'Espagne* are good in some soils; the latter is of fine flavour here on a bush.

Officer des Sciences is reliable, but of poor growth. Culture and site have much to do with flavour as also the stock the trees are worked upon.

J. Crook.

Chard, Somerset.

APPLE COCKLE PIPPIN.

This is an old and valuable dessert Apple of medium size and rich aromatic flavour. Although not so handsome as some Apples, few late-keeping kinds are of better flavour.

I remember some fine trees in an orchard at Heddon Park twenty-five to thirty years ago, and these produce fine fruit. The tree is not of large growth, but bears abundantly. When at Sherborne Castle, early in December, I saw in the fruit room a quantity of this kind. J.

RED CURRANT LA VERSAILLAISE.

This should be more known, as it is a long-bunched, late-keeping kind. I grew it some two years ago, and the only drawback to it is that the bushes are of stiff growth, and when heavily fruited large branches are apt to break off, which, in some instances, renders the bushes practically useless. This can be remedied by pinching or stopping them when young so as to form a base. It would pay to train this Currant on walls, boards, &c., to obtain a late supply.

Can anyone tell me the difference between this and Fay's Prolific, which I saw once in a garden near Minehead, but had not La Versaillaise to compare it with? J.

TREES AND SHRUBS.

RHODODENDRONS IN LARGE GROUPS.

THE value of a simple grouping of one good flowering plant or shrub can hardly be too highly rated. It is a lesson of such importance in good gardening, that we desire to take every opportunity of referring to it. A group of Rhododendrons, towering masses of bloom, some 18 feet high, shows how a noble mass of one thing alone goes to the composing of a satisfying garden picture. It also shows the beneficial service of shrubs of large growth in giving interest to the hard line of a rectangular pool by breaking over it, and boldly insisting on the display of its own unrestrained growth.

For this class of treatment no kinds are better than well-chosen seedlings of *R. ponticum*. But there are also two good old garden hybrids, namely *album grandiflorum* and *album elegans*, that have tall, vigorous growth and abundance of bloom, qualities that befitted them for large and pictorially-treated groups, while their colour suits admirably with the seedlings of *ponticum*. But as these vary a good deal in tint, it is well to pick them out in the nursery at blooming time, when it is easy, by taking two blooms in the hand, to go round and assort plants, either for one or two groups of the warmer and cooler shades respectively. The effect is much better, even in a large planting, if one only of these shades of purple is used throughout with the tall growing whites.

Such a grouping would have a fine effect in a rather large space of moist, peaty ground, and it would look all the better for some well-grown groups of Silver Birch.

MISTLETOE.

There is something strangely attractive about this curious plant, something mysterious that rouses the imagination. It is attractive, and yet at the same time slightly repellent, for it has somewhat of a vampire nature, in that it sucks out and lives upon the life blood of some honest tree. Moreover, it is both ugly and pleasant to see, for it hangs in rather ungainly bunches and masses, and yet is beautiful in detail. In fact it is so simply constructed that it gives one the impression of being low in the scale of vegetable creation. It is built almost as simply as a seaweed, but there is a strange and rare kind of beauty in the individual twigs, and especially in the relation of colour between the golden-green leaf and the pearl-white berry.

The trees it most frequents are Lime, Apple, Poplar, Thorn, and Mountain Ash. The seed can be sown by fixing the berry either in an artificial slit, or a crack in the bark of any likely tree, preferably on the underside of a branch. Such sowings are often ineffectual because the seed is used before it is ripe. It is no use taking it from boughs as sold about Christmas time, for the seed is not ripe till quite two months later.

Mistletoe abounds in some English west-county Apple orchards, but is in still greater profusion in those of Brittany.

PERNETTYA MUCRONATA.

Why is it that this beautiful, useful, and perfectly hardy plant is, comparatively speaking, so little known? Although its period of greatest charm is from early October to early spring, when, if the winters prove like those of 1897 and 1898, the lovely berries, which the birds rarely touch, will be still in good condition, it is beautiful all the year round, distinct in foliage and flower, of most easy culture, apparently indifferent as to soil, and although requiring full light to berry really well, it will even thrive in half shade. It is a plant that ought to be in every garden, and yet in how many gardens does one see it? Admired by all, one's friends invariably ask for the name, the keenest

and most energetic going so far as to write it down; but their energy and interest seem to cease. Figured some fifteen years or more ago in THE GARDEN, and frequently shown in berry at the Royal Horticultural Society's shows, it is passing strange that, as I say, it is so little grown.

After all, the *Pernettya* is not alone in being admired and neglected; it would be easy but useless to make a long list of beautiful hardy plants which are always admired, but never grown by their admirers. Lovers of the garden and gardening, who would spare no trouble to secure some plant which they have seen doing well elsewhere, can at times hardly realise that their friends can really care for the plants which they admire year after year, when they seldom get beyond asking the name, and seem to never get so far as to grow the plant themselves. Candidly, I sometimes think they expect me to take the plants round in a barrow and plant them in their gardens for them. In my early gardening days I was weak enough when a friend asked for a plant to make a note and send it at the right time, but years ago a very well-known gardener, whom I have to thank not only for many choice plants now thriving here but for the precept and example which have greatly helped me in my gardening efforts, gave me a most valuable hint, one which has saved me endless unnecessary work.

Apocryphal of this careless butterfly class of gardeners who would like to have a pretty garden, but will not take the slightest trouble to make one, I will pass on the hint in the hope that it may be of use to others as it has been to me. The matter came about in this way: I was walking round a friend's beautiful garden, and the owner, a lady, was making notes of any plants I wanted, when she informed me that she always divided her gardening friends into two classes; to the second class she said: "Oh! you like that plant, then I shall be most pleased to send you a piece if you will let me have a postcard in October" (or whatever was the right month), but to the others she sent the plants without reminder. Naturally, I was pleased to find myself in the *first class*, but was informed that I had obtained my promotion solely by *never failing to send the necessary postcard*. Before that day I was foolish enough to think that when one's gushing gardening friends were profuse with thanks about some promised plant they were really interested, but when they received it, the letter of acknowledgment showed clearly that they had forgotten all about it.

But now that I adopt the above classification I know better, for not once in ten times do I get the reminder. May I add that the garden was Muirstead, and my friend Miss Jekyll.

A. KINGSMILL.

Harlow Wood, Middlesex.

Brownea Crawfordii. A large specimen of this *Brownea* in the Palm house at Kew is just now bearing a number of its pendant clusters of bright-coloured blossoms, which, seen in the sombre light of a midwinter day, appear particularly rich and telling. It is quite a tree of 20 feet in height, or thereabouts, clothed with long pinnate leaves. At a little distance the flower clusters suggest trusses of Rhododendrons, except that they are drooping, but closer inspection reveals the fact that the individual blooms are quite different, and closely packed. The colour is a kind of rosy or salmon scarlet. The *Brownias* belong to the natural order Leguminosae, but to the casual observer they appear to have no points in common with the generally accepted types of that order. There are several species, nearly all of which are among the finest of tropical flowering trees. *B. Crawfordii* is a hybrid raised in the gardens of the late W. H. Crawford, Lakelands, Cork (noted as being the first plant in the British Isles to flower *Magnolia Campbellii*, the parents being *B. grandiceps* and *B. macrophylla*). These gorgeous plants require a very large structure, such as the Palm house at Kew, hence suitable accommodation can only be given in a few gardens. One species, however, *B. coccinea*, can be flowered.

GARDEN THOUGHTS.

FLOWERS IN GRASS.

FROM very early days it has been the practice to grow the commoner kinds of double and single Narcissus in meadows and orchards; and within a recent period most of the rarer kinds have been found to prefer grass-land to cultivated ground, and with the best possible effect; but so far as my observation has gone, with the exception of Snowdrops and Crocuses, the Narcissus stands nearly alone. This seems to me a mistake. There are many other flowers of equal beauty and perfectly adapted to similar localities. I might instance the blue, pink, and white Spanish Harebells, *Scilla italica*, Snowflakes, and, perhaps, Columbines of different colours; and, when the grass is not very rank, I have found *Scilla precox* and *S. bifolia*, *Chionodoxa*, Muscari, and hardy Cyclamen to do well. Perhaps, above all, the chequered and white Fritillaries give most satisfaction. Many of the Alliums are very beautiful, but too dangerous in their increase to be lightly introduced; Colchicums are very suitable, where cattle are not likely to be poisoned by them. I have found both Fritillaries and Cyclamens to increase in the grass, but it has been my practice to keep a seed-bed of each annually in the kitchen garden, and to plant out the second or third year. If it be a fact, that to gather a Fritillary flower is to kill the plant, the seed-bed will allow you to gather some of the flowers, and yet keep up the stock. Both kinds are equally graceful, but, for effect in the meadow, the white should predominate.

I have always been anxious to naturalise the Sternbergias, especially *S. angustifolia*; both flower very fully in the garden, but in the grass a solitary bloom has been my only reward; they require sun at the root. I have also tried one English Tulip (*T. sylvestris*), which flowers freely in North Wales (one of its natural habitats), but I have had no success; it thrives, but does not flower. Even in the garden it does not flower very fully, not to be compared with its very near relative, *Tulipa fragrans*; and from its stoloniferous habit it becomes a troublesome nuisance, springing up where it is not wanted, in the midst of other plants.

If any of your readers are inclined to enhance the unimproved spots in their grounds, it is not too late to procure the material for the coming season. Among the autumn Crocuses I have found species and multiflorus the most satisfactory in grass, and least attacked by mice and voles. As regards *C. multiflorus*, the grass is particularly useful in supporting the long, naked stalks, which in the border are beaten to the earth by the first heavy shower.

T. H. ARCHER-HEND.

Cumulisshutere House, South Devon.

CRINUM CAPENSE SEEDS.

I HAVE recently had a curious experience with seeds of *Crinum capense*. A few were put aside in a bag after gathering. On opening the bag a few days since, I found they had all germinated and produced a small bulb with plumule, ready to pot. The experience is not, however, new; the same thing has occurred before, but I never met with any reference to a similar incident. The seeds of the Xerines behave in the same manner. What a contrast between these seeds and others which no skill can induce to germinate, such as those of the new *Polygonum bald-chameneum*.

Upton

Wm. THOMPSON.

RIVIERA GARDENING.

GREAT pleasures and great pains are so nearly akin, that northern gardeners who sigh for sunny lands and sheltered valleys will feel somewhat consoled for their own distresses

when some of the difficulties of a southern garden are placed before them.

Occupied as I am just now in wrestling with "Nature" on a sunny hillside not far from Nice, I am constantly reminded of old Horace's dictum "*Natura facit capellas, tamen usque reuerit*." Yes, indeed, Nature does reassert herself with a vengeance in these climates, even though you may expel her at the fork's end, and by dint of much water and much manure. The *bichou*, the two-pronged fork is still the weapon the gardener uses, and with a mighty effort he delves down to more than a yard in depth before he will allow a plant to be put in the ground, for unless the plant's roots can have a deep run, the summer heat and drought will wither up both root and top, so that on your return in autumn you will but find a tangle of weed overtopping the dead remains of the plants.

All one's loved northern plants must have complete shelter from the fierce heat and sun of summer if they are to succeed; and, as by exceptional fortune there is a moist and deeply shaded valley in my ground where such plants can live, I am occupied in making an English garden, where at least no spring frosts or biting winds can harm them, so that in a few seasons I trust that a wealth of spring blossom may be realised, set off and framed by southern surroundings.

The difficulty of getting a French gardener to plant this, may be realised only when one finds that, to his idea, everything must be planted in rows and in a trench, so that left to himself your garden is a gridiron, very convenient for watering and retaining moisture no doubt. Last spring I planted carefully, and as I thought artistically, some hundreds of *Cyclamen persicum* in my wood, where there is abundance of good leaf-mould and shelter, and I left, picturing to myself the charming effect the marbled leaves and brilliant flowers would have coming up through ivy trails under the trees. What did I find on my return, but long rows of my poor *Cyclamen* which had been dug up to edge the paths in formal lines, and next, a row of Tulips, and then Daffodils behind, all neatly and beautifully edged with an *Echeveria*-like *Sedum*.

A long grass terrace was planned with tree Peonies at the edge and frises on the bank. I found the grass carefully sown at the sides, and the frises edging a stiff straight walk in the middle; so no further need is there of stating how the nature of that man needs expelling. And yet how infinitely delightful that man is, how dextrously he wields his tools, and handles his plants as if he loved them. Yet to him it was not possible to do otherwise; it was an insult to his best feelings.

The rough grassy bottom of this valley is carpeted with myriads of starry Anemones, lilac, white and sometimes crimson, wherever a little natural hybridisation has taken place between the *Anemone stellata* and the golden-eyed scarlet "Soleil" Anemone, which also grows there in lesser quantity, and which is so much more lovely than *A. coronaria* can be at any time.

Narcissus *Tazetta*, both the early yellow and the late white orange-eyed, spear up among the bushes, relics of the good old days when they were wild on every terrace, though now it is only in some nook like this that they survive. Wishing to beautify a bare spot where brambles have been dug up and burnt, I send out some quantity of *Anemone fulgens* to plant there. Unluckily, I said "sow some grass seed over them." In consequence of my rash order the grass was duly sown, but the *Anemones* were planted in a rectangular pattern round the

sacred square of grass—thus destroying all the beauty I had aimed at.

There are none the less great pleasures. One for instance is a pergola that I planted last May with *Taesonias*, *Heliotropes*, *Bignonias* of sorts, climbing yellow *Senecios*, Ivy *Geraniums* and *Roses*, purple *Kennedias* and yellow *Cassia tomentosa*, which in winter takes the place of *C. corymbosa*. To describe the luxuriance of growth and the abundance of flowers in November and December is hardly possible without laying oneself out to the charge of exaggeration, and this feast of colour and scent will go on throughout the winter, unless some exceptionally cold night or storm from the mountain nips the more tender plants for a time. As there has never been any frost or snow to cut even a *Heliotrope* here since 1895, it is only too likely that 1900 may signal its arrival by an icy blast; meanwhile, it is well thankfully to enjoy the sunshine, while looking forward to the spring display of hardy plants which enjoy a little snap of winter cold.

E. H. WOODALL.

RECENT PLANT PORTRAITS.

The first portfolio of the fourth series of Messrs. Cogniaux and Goossen's "Dictionnaire Iconographique des Orchidées" contains admirably coloured portraits of the following thirteen Orchids, with descriptions by the editor:

Angulosa Chavensis. The well-known yellow Cradle Orchid.

Cattleya Allana inversa. A beautiful variety, with light rose-coloured upper petals and deep carmine lip.

Cattleya Rex. A most beautiful variety, with pure white upper petals and delicately-pencilled tube and lip.

Cochlioda coccinea. A pretty, small rose-coloured flower.

Dendrobium Victoria Regina. A pretty flower, coloured violet and white.

Epidendrum atropurpureum var. longiloba. A handsome variety with dark brown upper petals, with greenish backs and pure white lip, with deep rose blotch at throat.

Epidendrum goldianum. A curious globular bunch of small golden-yellow flowers.

Grammatophyllum Rumphianum.—A medium-sized flower, with green petals, heavily blotched with brown and a whitish centre, curious but not beautiful.

Lelia avathina. A beautiful yellow flower with whitish centre and delicately-pencilled lip.

Macillaria striata. A curious flower with brown and yellow colouring, and yellow tips to the two upper petals.

Mormodes Oceana. A handsome deep-red flower, the four upper petals curiously spotted.

Mormodes buccinator. A curious and not ornamental brown flower, with lighter shaded under-petal.

Mormodes buccinator var. citrinum. A much prettier flower, of a deep yellow colour, with whitish centre and curious incurved petals.

The first monthly part of the fifteenth volume of *Limbria* contains handsome life-size portraits of the four following Orchids:

Compurallia speciosa. A beautiful pendulous raceme of soft deep rose-coloured flowers like a small *Phalenopsis*.

Cypripedium Argus var. nigricans. A rather dull slipper plant, with greenish-white sepals, heavily blotched with blackish-brown.

Oboloblossum crispum var. Rosette. A pretty variety, with all the flowers in a bunch on top of stem instead of in a pendulous raceme, as is usual in this family. The ground colour of the flowers is pure white, blotched with rose-brown.

Arachnanthe Calceata. A very handsome large flower, with deep brown petals, regularly and evenly veined with white, and a prominent yellow lip also veined and lined with rose. This was long known as a *Vanda*, but has now been separated from them and renamed by the botanical authorities as above.

W. E. GIMBERTOS.

AN ARTIST'S NOTE-BOOK.

GIANT VIOLETS.

(With Illustrations by H. G. Moon.)

ONE hears that the Violet is being ruined, that we are robbing it of its "modest" character—whatever that may mean—that the scent is disappearing, and that instead of a Violet we are producing a monstrosity which partakes largely of the character of the Pansy.

in which sample blooms have been sent have retained the perfume for months; and when the boxes of flowers have been taken to the local post office, although the boxes are tight fitting and closely wrapped in brown paper, the employes have immediately detected the nature of the contents.

With regard to the size of the Violet, there is no reason why this flower should be singled out from all others and no advance allowed in size. In nearly everything else increased size means increased usefulness, provided that other qualities are not neglected, and, in spite of the few objections, we are satisfied that the vast majority of those who love flowers are grateful beyond measure for "Giant" Violets.

We may say that increased breadth of petal and length and strength of stem have added immensely to the decorative value of Violets.

VARIETIES.

La France is the latest addition, and is an improvement, in many respects, on Princess of Wales. It has only recently been possible to arrive at this conclusion, but they have now been fairly tested. La France is more compact in growth, which is a consideration where quantities of flowers are required and the space is limited. It is also a larger flower, and of a richer and darker colour. Lastly, it is certainly more free flowering than the other.

With regard to Princess of Wales we may say that it will be a long time before it can be discarded. The long stout stems, and perfect blooms and foliage, and the vigorous constitution, have ensured for it a long-lived popularity. In passing, it is perhaps as well to point out

that there is a mongrel stock in circulation, which can give no correct idea as to the value of this variety when true.

Luxonne is a large and graceful French variety, which flowers very freely in the autumn, and seems as hardy as any. The stems are long, and the flowers are well protected by the abundant foliage.

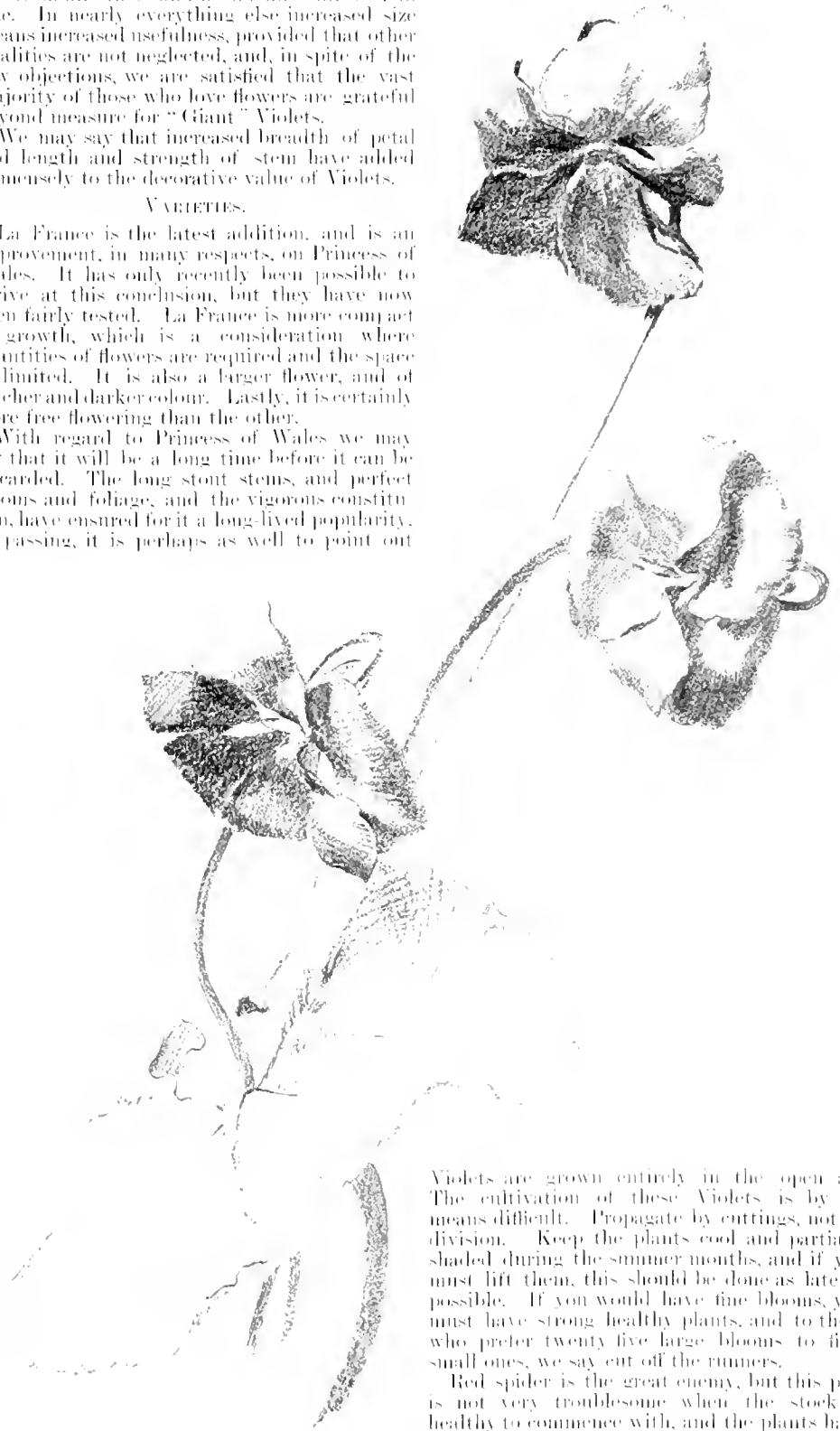
California is still good, and is useful when



DOUBLE VIOLET MARIE LOUISE.

We may remark in passing that a flower show is not an ideal place to ascertain the perfume of anything—except, perhaps, tobacco—and certainly when Violets have been gathered the previous day, carried 200 or 300 miles, and placed by the side of Roman Hyacinths or of Apples, it is somewhat irritating to be told on the third day that "your Violets have no scent."

There is no question about this, the Giant Violets are strongly and sweetly scented. People standing on the gallery at York Chrysanthemum Show said that the perfume was most noticeable, although the Violets were on the floor of the hall. Many times we have heard the remark by those who have been standing with their backs to the exhibit and yards away: "Where are the Violets?" Envelopes



VIOLET PRINCESS OF WALES.

Violets are grown entirely in the open air. The cultivation of these Violets is by no means difficult. Propagate by cuttings, not by division. Keep the plants cool and partially shaded during the summer months, and if you must lift them, this should be done as late as possible. If you would have fine blooms, you must have strong healthy plants, and to those who prefer twenty five large blooms to fifty small ones, we say cut off the runners.

Red spider is the great enemy, but this pest is not very troublesome when the stock is healthy to commence with, and the plants have not been allowed to suffer from drought.

Westbury-on-Trym.

J. C. HOULST.

Rosomanes, but far more brilliant, and highly fragrant. We want more of this type, and also of such Roses as Viscountess Folkestone, Caroline Testout, and Mme. Abel Chatenay.

At present the Hybrid Tea group possesses too many of the Lady Mary Fitzwilliam class. We need to break away from these. Mme. Abel Chatenay and Grand Duc Luxembourg are two of the most beautiful of modern Roses. The former, with its delicious salmon pink tint and sweet fragrance; and the latter, with its distinct shades of brilliant lake and rosy red.

As the Hybrid Teas have been frequently alluded to in THE GARDEN during recent years, it will be unnecessary to dwell upon the merits of such well-known kinds as La France and its sports, Augustine Guinoisseau and Duchess of Albany, Camoens, Grace Darling, Gustave Regis, White Lady, Mme. Pernet Ducher, Gloire Lyonnaise, Kaiserin Augusta Victoria, &c., but rather direct attention to a few little-known or recent

base of petals. The buds are long and pointed. Altogether a good garden Rose.

Aurore is very free flowering, sweetly fragrant, and vigorous in growth. If severely disbudded its flowers become very large. It was finely shown in pots at the Temple Flower Show two or three years ago.

Mme. Eugène Bouillet. A very distinct variety in colour. It may be described as yellow, with a salmon and carmine shading. Probably this will make a good exhibition Rose. Its growths are stiff and strong, after the Hybrid Perpetual style.

Ferdinand Batet is another with conspicuous yellow shading. Although not large enough for exhibition, the flowers are evenly arranged, and the colour delightful. This yellow shading is characteristic of many of the newer Hybrid Teas. A really fine Rose is

German Trochu. In growth it is very vigorous, but stiff, and its flowers are produced in fine trusses. The colour is a pretty orange yellow. This variety and Gustave Regis are just the kinds to plant for bold effect. In large gardens one requires some tall beds for certain positions. If the plants are obtainable with an erect habit, so much the better. Therefore, this Rose is adapted for this purpose. Two other fine garden kinds are

Clara Watson and *Souvenir du Président Carnot*, the latter resembling a refined Souvenir de la Malmaison.

L'Innocence. It has been good under glass, but that is often very misleading as to the behaviour of a Rose outdoors. I should like to know more of this kind in the open.

HYBRID TEA ROSES FOR SHOW.

The following may be accepted as genuine additions to our show Roses. First to mention is

Mrs. W. J. Grant. One cannot speak too highly of this magnificent Rose. For beauty of petal it is unrivalled, and it is wonderfully free. I cannot say I care much for it in autumn. Its fresh colours seem to have gone.

Marquise Litta I believe will be extensively grown under glass for market. It is one of the best pot Roses, and we have evidence of its popularity as an exhibition flower by the large numbers shown last season.



THE ROSE GARDEN.

PLATE 1256.

HYBRID TEA ROSES.

(WITH A COLOURED PLATE.)

THESE are many signs that decorative Roses are becoming more popular every year. Those varieties that make effective groups and are useful to gather with long stems are preferred to the exhibitors type, with perhaps one blossom to a plant.

The Hybrid Teas provide many of the best decorative Roses. I do not say they do so exclusively, for there are among the true Tea-scented, Chinese, Bourbon, and Polyantha groups varieties equally as decorative.

The formation of this Hybrid Tea class has been the cause of much dissension among rosarians. It matters little what one may call a Rose, if it is beautiful in the garden. The hybrid illustrated is one of the best of decorative Roses. Its full beauty is seen when a hundred or more plants are massed together. I believe, however, it will be eclipsed by the more recent German variety, *Gruss an Teplitz*. This is a typical garden Rose, growing as freely and in somewhat the same style, as *Gloire des*

VIOLET LUXONNE.

HYBRID TEA ROSES.

Taking the true decorative kinds first, the following are all worthy of a place in any collection:

Antoin Riviere. The flowers of this are rosy flesh shaded with yellow, Camellia-like in form and very beautiful.

Kilbarnock. Most distinct and attractive; large, semi-double, pale pink flowers and exquisitely pointed buds, growth vigorous, quite as free as Viscountess Folkestone.

Mme. Jules Gröbe. A very fine kind. Its clear silvery rose colour is perfectly distinct from any other Rose. There is also a pretty yellow shading at the



VIOLET LA FRANCE.

Mme. Cadeau Raney has also gained notoriety, and deservedly so. Its fine globular high-centred form and rosy flesh colour, with a distinct yellow base, make it a valuable addition to our show Roses.

Tunneyson is a Rose that will be warmly welcomed by exhibitors, not so much, perhaps, for its form as for its splendid lasting qualities. It was finely shown at Manchester, and also at the Hybrid Conference at Chiswick. On both occasions the heat was tropical, but this seemed to have no effect upon the substantial flowers.

Papa Lambert should make a good exhibition flower, that is if the colour, which is rose, proves to be clear enough. In growth it much resembles *Baroness Rothschild*.

Bessie Brown is a magnificent variety. It is of pointed globular form, and appears to be of vigorous growth.

A word or two as to

STOCKS

may be acceptable. I have found the Briar the most suitable; but I am aware the Polyantha stock finds much favour, especially if budded where the plants are to remain. The hedge Briar undoubtedly yields the finest exhibition flowers, but for the garden the Briar cutting or seedling Briar are by far the best stocks for Hybrid Tea and Tea-scented Roses.

If I had a shallow soil, I should have the majority of my Roses upon the Briar cutting. Their roots are more spreading than the seedlings, but where a good depth of soil is available, then I would select the seedling Briar.

PHILOMEL.

THE PROTECTION OF TEA ROSES FROM FROST.

It will, I think, be generally conceded that our modern Roses are, as a rule, far more beautiful and far more free-flowering than most of the old-fashioned varieties still in cultivation. Indeed, the advance made during the last thirty or forty years towards perfection of form, in variety and charm of colour, and in floriferousness is little short of marvellous. There are, however, two important qualities, in which it must be confessed many of the old-fashioned Roses, when compared with those of the present day, are superior. They are, generally speaking, more sweet-scented, and are, moreover, of a harder constitution.

As regards the latter quality, with which we are for the moment more particularly concerned, there are but few of our up-to-date Roses which do not suffer to a greater or less extent whenever the winter happens to be in any way exceptionally severe. Take, for instance, the last cold winter that of 1894-95; the only Roses in my collection, with two exceptions, which passed through it altogether uninjured to the tips of their shoots, and which can therefore be regarded as perfectly hardy, were such very old favourites as the common Provence or old Cabbage, as it is disrespectfully called; its equally fragrant sister, the common Moss; that ever-blooming Scotch Rose which is much less frequently grown than it should be, *Stanwell Perpetual*; all the Austrian Briers; and that rampant and hardy Ayrshire Rose, *Bennett's Seedling* or *Thoresbyana*. Two of the pioneers of the Hybrid Perpetual race, *Jules Margottin* and *Duchess of Sutherland*, were but slightly injured. Now, the only modern Roses in my rose garden which could compare with the foregoing in hardiness, if we adopt the same severe test, and except such single-flowered varieties as some of the *Rugosas* and Hybrid Sweet Briers, were that charming Hybrid Tea, *Gustave Regis* and *Crimson Rambler*.

Among the Roses most largely grown in the present day, the Hybrid Perpetuals are undoubtedly the least tender. In this class the varieties which are more or less thorny stand, I find, hard winters the best, especially *A. K. Williams*, *Mme. Gabriel Lantet*, and *Marie Baumann*. On the other

hand, such smooth-wooded kinds as *Comtesse d'Oxford*, *Pride of Waltham*, *Reynolds-Hole*, and the like are remarkably susceptible to frost. Next in their ability to withstand keen winters come the Hybrid Teas, some few of which—for instance, *La France* and *Gustave Regis*—are quite as hardy as the hardiest of the H. P.'s. At the bottom of this scale of hardness we must unfortunately place that lovely section, the Teas and Noisettes.

These tender, or at best only half-hardy, Teas and Noisettes, are, as is well-known, among the choicest and most delicately tinted of all Roses, and are therefore well worthy of any extra care and attention they may require in order to preserve them from severe injuries during the winter months. All varieties are by no means equally tender. Of those least susceptible to cold may be mentioned *Francisca Kruger*, *Mme. Lamblard*, *Anna Olivier*, *Caroline Kuster* (*Noisette*), *Souvenir d'un Ami*, and *Souvenir de S. A. Prince*. Whereas such kinds as *Sunset*, *Perle des Jardins*, *Mme. de Watteville*, and *Niphotos* suffer most keenly during periods of severe or prolonged frost. In all

BLEAK AND EXPOSED SITUATIONS.

and particularly where the soil is cold and retentive, Tea Roses should be grown, as recommended many years ago by Mr. George Paul, in beds raised a few inches above the general level of the ground. This plan will tend to keep the beds warmer and drier than they otherwise would be. In cold districts it will also be well to thin out all the sappy shoots early in November, in order to arrest any further growth of the plants, and at the same time by admitting additional light and air to enable those that remain to become better ripened before the winter sets in.

I have tried many methods of protecting both dwarf and standard Teas, and have come to the conclusion that, after all, the simplest and the most easily applied prove in the end the best. For instance, dwarf plants need only have the surrounding soil drawn over their crowns to the height of 4 inches or 5 inches in order to preserve them from serious injury. In a severe winter the shoots rising above the covering of soil may be, and no doubt will be, greatly damaged; but when these shoots are cut away at pruning time the plants will in most cases start again into growth as vigorously as usual. Further protection, if desired, may be afforded by twisting in lightly pieces of bracken among these shoots. I have, however, invariably found that such additional protection, although doubtless of some service in moderate winters, was rather harmful than otherwise during a very mild one, and not sufficient to do any real good in any winter of exceptional severity. Many apply a mulching of manure to the beds in the autumn, but the earthing-up method is preferable, as it affords the plants more efficient protection without keeping the soil in a cold and sodden state should the winter prove wet.

STANDARD TEAS.

are the most difficult to protect. Of all the plans I have tried, the following I have found the most effectual. In the first instance, to shield the most vulnerable part of the plants from injury, a hay-band should be wound round the junction of the Rose with the stock. Then, in order to prevent rain and snow finding their way into the centre of the head, the best shoots should be gathered together and fastened as far as practicable in a conical form to the top of a stake firmly driven into the ground and passing through the head of the plant and above it. Some straw should then be combed out and the head lightly thatched with it, and the upper ends secured to the stake, adding one or two horizontal ties lower down to keep the straw in its place during high winds. It will be found helpful in carrying out this method of protection to cut out in the first instance all the soft and sappy shoots.

For climbing Roses on walls I find that fine cotton matting or tiling this, a double thickness of ordinary fish-netting, arranged loosely, but firmly secured over them, will be found in all but very exceptional cases sufficiently effectual. This plan has the further advantage of not excluding light and air from the shoots, so that they do not

become as tender as when a mat or other close material is used in a similar way. Another plan would be to place pieces of fir or bracken among the branches. While on the question of bracken I may say that this term to be of any real service should be cut early in the season, for if cut when it has turned quite brown it becomes brittle and of comparatively little value.

When several mild winters occur in succession the tendency is to undervalue protection of any kind, or, at all events, to defer affording any shelter to Tea Roses until reminded of its necessity by the sudden advent of an unusually severe frost, when no earthing-up of the dwarf plants is possible and the thatching of the heads of the standards is equally impracticable. Under such circumstances the only thing to be done is to place some bracken or dry leaves round the dwarfs and work in some bracken or light evergreens into the heads of the standards.

But the wise rosarian will not allow himself to be caught napping in this way, but will arrange some fixed date in the early winter—say the end of the first week in December—and, having a supply of bracken and straw ready, will at once proceed to carry out the foregoing or similar directions for the safety of his Teas. I mention a supply of bracken because, should the soil in the beds be saturated, some of this can be tucked round the lower part of the dwarf plants in order to keep the wet soil coming into direct contact with the shoots. None but the enthusiastic Rose grower can appreciate the feeling of comfort and relief which comes over him whenever a sharp frost sets in unexpectedly, as it did in December last, when he knows that all his delicate Roses have long since been securely protected, and that no cold wind, heavy snow, or keen frost that may follow can seriously injure them.

Berkhamsted.

EDWARD MAWLEY.

NATIONAL ROSE SOCIETY.

SUGGESTIONS FOR COMPETITIONS IN CHAMPIONSHIP CLASSES.

HAVING been a pioneer in the movement for an amendment of the National Rose Society Exhibition Schedules in 1894-1892, in which effort I was much helped by the then Editor of THE GARDEN allowing me to give my views *in extenso*, I do not think that some further suggestions which I now make on the subject of N.R.S. exhibiting will be received in bad part by the members of the Society.

The venerable Joint Secretary of the Society, the Rev. H. Honeywood D'Ombraim, was one of my toughest opponents when I carried my point in 1891, but he has been one of those who, since then, most frequently and generously acknowledged the value of the changes made on behalf of the smaller exhibitors and stated that it has given them great encouragement, thereby also obtaining recruits. In what I now suggest I hope that Mr. D'Ombraim will be my supporter, for the important reason that he is one of those who has frequently expressed his wonders and fears as to who can be the successors to the present champions among Rose exhibitors in the highest divisions.

It is in order that there should be encouragement for such competition in the future that I now write, as I fear that if the highest prizes continue to go year after year to a few—a very limited few—it is at present the result may be that when those who are now almost always champions cease to exhibit there will be no successors worthy of the name. The aspirations of many now exhibiting may by then have been so damped by long waiting that they will have ceased to be interested in Rose-showing, except in a very small way.

To remedy this, I would suggest that the system of exhibiting in championship classes and for all special prizes but those which are given to be won outright or within a limited number of competitions should be varied or altered to the extent that any winner of a championship or first prize in any class or division for two or three years in succession should by that fact be barred from showing in that particular class for the year following such success. This would give those who are keen exhibitors a chance of winning one of the champion-

ship or best prizes, and make them, having been once successful, anxious to retain what they have won. I notice little inclination at present on the part of those in Divisions B, C, and D to move up; they stick where they are, partly because they fear to compete against exhibitors who are well known to be almost invincible in the higher divisions, and partly because they win easily in the small classes. Having to a great extent given up exhibiting, except in a very moderate way, I speak more for others than for myself; but I believe that unless something be done by the Society in the way I now suggest, or in some way approximating thereto, the future promises poor exhibits in our premier Rose classes after the present champions have decided to retire, having previously frightened away any who might in time have been their equals. This would be a misfortune in a way for the Society, although my own views, frequently expressed some years ago and still unaltered, are that small exhibits of six, twelve, and eighteen distinct flowers are far preferable and lead to infinitely more interesting competitions than exhibits of twenty-four, thirty-six, forty-eight, and seventy-two flowers. In the former instances you are likely to obtain exhibits of perfect specimens, whereas in the big competitions the exhibits are frequently uneven and imperfect; taking off in boxes is very frequent, detracting greatly from the general appearance of exhibits set up by even our crack growers. Those who have tried a hand in setting up thirty-six or forty-eight Roses know the difficulty in maintaining excellence after the first twenty-four are selected, even from a large garden or nursery.

I hope this question, which may possibly have been mooted elsewhere, will be thoroughly discussed in THE GARDEN, as I think it is an important one for the future of the N.R.S.

CHARLES J. GRAHAM.

Weylandts, Leatherhead.

NEW AND RARE PLANTS.

ZEPHYRANTHES AJAX.

THIS is said to be a hybrid between *Z. candida* and *Z. citrina*. It is figured and described by C. Sprenger in the *Gartenflora* for December, p. 649, where it is stated the plant is intermediate between its two parents, but harder than either, and that it flowers profusely in late autumn. The figure represents a tuft 6 inches high of rush-like leaves and a dozen flowers over 2 inches wide, coloured lemon-yellow, flushed with rose outside. In appearance it resembles *Z. candida* in every particular except colour, and if it be really as hardy and floriferous as that plant it is a valuable acquisition. *Z. citrina* was introduced by Messrs. Veitch in 1881, and figured in the *Botanical Magazine* (t. 6605), where it is described as a distinct species allied to *Z. candida*, but differing in the form and golden-yellow colour of its flowers. I have never seen a living example of this plant, and I think it just possible that *Z. Andersoni* (*Habanthus*), a common yellow-flowered species, and not *Z. citrina*, is the other parent of this new hybrid. Mr. Sprenger is quite right when he says that the genus is much more useful in the garden than is commonly supposed, and that if its hardiness were better understood it would be much in favour. At Kew, *Z. candida* is used as an edging for flower borders in place of Box.

KALANCHOË FLAMMËA.

SEEDS of this, perhaps the best new plant of last year, are offered by Messrs. J. Veitch & Sons, who, by an arrangement with the Director of the Royal Gardens, Kew, have secured the whole stock of this new species of Kalanchoe, recently introduced from Somaliland, in East Africa. Its cultivation is of the simplest, provided one or two essential conditions are observed. These are: First, the plant requires full sunlight at all times, a stove temperature for the first 6 months, greenhouse afterwards;

second, the seedlings should not be stopped until they are 6 inches high, and then they should be cut down to within 2 inches of the soil; after this they should not be stopped again; third, the soil best suited to them is a mixture of loam, peat, and leaf-mould; two parts of the first to one each of the other two, and plenty of sand. During winter they should be kept on the dry side. Under proper treatment seeds sown in February should produce plants to flower in about 15 months.

CRESTED BIRDS-NEST FERN.

THE only plant known of this remarkable Fern was introduced to Kew from Queensland two years ago, and as it bore ripe spores a sowing was at once made, from which a large batch of plants were raised. These have grown into nice plants, and a large proportion, probably 50 per cent., have developed the character peculiar to the parent, namely, fronds which, instead of being strap-shaped and simple, are branched or lobed so much as in some cases to be distinctly bi-pinnatifid. The type, *Asplenium Nidus*, is now one of the most popular of Ferns for use in room decoration, thousands of it being disposed of annually by some of the principal London market growers. It is therefore probable that the new variety may also find favour as a commercial plant. Botanically it is interesting, because of its being a wild sport which has reproduced its peculiar characters from spores.

BEGONIA HEMSLEYANA.

CHINESE plants are now objects of more attention than formerly, several collectors being engaged in sending new and interesting plants from the interior to England. One of the most energetic in this respect is Dr. Henry, who has discovered and sent to Kew many interesting plants, including the beautiful *Lilium* named in compliment to him. A plant of less intrinsic merit than the *Lilium*, but still of interest horticulturally as well as botanically, is this *Begonia*, which when not in flower might easily be mistaken for a Hellebore. It forms dense tufts of palmately divided dark green leaves, on stems about 1 foot, and produces erect, few-flowered scapes of pink flowers. In view of the value the Socotran *Begonia* has proved to the hybridist, this Chinese introduction is worth attention. Sir Joseph Hooker says of it: "The discovery of a palmate partite-leaved *Begonia*, the Old World, is a very remarkable one, the few known species with this character being all American." It was found at an elevation of 5,000 feet in Yunnan by Dr. Henry, who described it as a very pretty plant 1½ feet high. It flowered freely and continuously at Kew in a greenhouse from April onwards.

DIANTHUS SUPERBUS CHINENSIS.

A COLOURED plate of this plant was published in THE GARDEN last year (May, p. 330), when it was suggested that the plant was probably a perennial, as it had survived the winter at Kew. This autumn, and on until the beginning of December, the same plant flowered most profusely, the stems being again 1 yard high, forming quite a sheet of grassy-green leaves and starry rosy-mauve flowers 2 inches across. It is totally distinct in character from all other pinks, and is in every sense a most effective hardy plant. As stated last year, it has lately been introduced from Central China, by means of seeds collected in Shensi by the Rev. Preech, a missionary there. In addition to its own merits as a hardy border subject, this plant, which is probably like all other pinks in their readiness to cross freely, may prove the progenitor of a race of hardy late autumn-flowering sorts. It is worth the experiment.

MUSSELENDIA CAPSULIFERA.

AS represented by a figure in a recent number of the *Botanical Magazine* (t. 7671), this has failed hitherto to attract the notice of horticulturists. It is, however, not unlikely to find favour, if only on account of the delicious odour of its white

Jasmine-like flowers; probably, too, it will prove a pretty little flowering pot-shrub when its requirements are better known. It comes from the island of Socotra, where it was found by Dr. Balton at the same time as *Begonia socotranica*, but it was not introduced until two years ago, when the late Mr. Theodore Bent visited the island and brought home seeds of it, which were sown at Kew, where plants flowered in April last. It forms a leafy, compact shrub, suggestive of a *Hypericum*, the leaves being lanceolate, dark green, and 2 inches to 3 inches long. The flowers are produced in erect terminal corymbs, and they are like those of *Jasminum grandiflorum* in size, shape, and whiteness; they remain fresh on the plant a week or more, and, as already stated, they are deliciously fragrant.

HIDALGOA WERCKLEI.

THIS is a new plant of more than ordinary promise. It is a quick-growing climber, self-supporting, with numerous drooping branches clothed with evergreen elegant ternately divided bright green leaves. Even as a climber for draping pillars, &c., in conservatories, and probably also for growing outside on verandahs, &c., in summer it would prove of value, and in addition to its leaf attractions the bright scarlet flowers, 2½ inches across and resembling single Dahlias, are freely produced. A small plant received at Kew, and placed in a cool house in April, grew freely and flowered in July, and it is now 12 feet long, with numerous branches, some of which are now (December) bearing flower buds. It is easily propagated from cuttings. For its introduction we are indebted to Mr. J. L. Childs, the New York nurseryman, in whose catalogue a coloured picture of it was published, together with particulars of its origin, &c. These are to the effect that the plant was found in the mountains of Costa Rica by M. Carlo Werckle, and that in New York it has proved suitable for cool shady windows or verandahs, where it has received the names of Treasure Vine and *Childsia Wercklei*. The plant, however, belongs to the genus *Hidalgoa*, which is related to *Dahlia* and *Coccoloba*. There are possibilities in this relationship which hybridists might turn to account. A figure of this plant has lately appeared in the *Botanical Magazine*.

Royal Gardens, Kew. W. WATSON.

WINTER PROTECTION FOR OUTDOOR FLOWERS.

IT is well worth while to provide suitable shelters for the few outdoor flowers that we have in mid-winter. Of these one of the most important is the yellow Jasmine, so usually grown against walls, palings, or sheds. Either the rot-proof Willden canvas or a stout quality of the same scrim are excellent materials for protective coverings.

It is easy to have a sheet of this for each section of wall or space where it is likely to be wanted, and well worth the trouble of the slight preparation needed for taking on or off quickly. The sheet has a strong tape or webbing sewn to the top and a few stout rings, and the wall is provided with corresponding hooks, it is soon put up and taken down, and is easily folded up when out of use. If several of such sheets are in use, it saves much trouble to have them numbered; best by painting in white or grey a 3 inch square patch in one top corner, on which, when dry, a number in darker colour is painted, also painting the same mark on the wall, then there is no fumbling about or loss of time in finding out which sheet is for which place. Contrivances for keeping the sheets down in windy weather will suggest themselves to intelligent persons; but the great thing is to have the protection at hand.

A number of hurdles latched with straw or reed or heath are always of use to be put over Christmas Roses, or Uzar Violets, or Iris *stylosa*. The sweet bloom of any *Chimonanthus* trained to a wall shrivels and is spoilt in severe frost, but may be saved by hanging over the bush some boughs of Spruce or Scotch Fir. If the protecting boughs are hung up by their stem ends they are easily lifted or moved aside so that the flowers may be picked.

CORRESPONDENCE.

LOVE OR FASHION?

[TO THE EDITOR OF "THE GARDEN."]

SIR, We have boasted somewhat of the revival of the love of gardening in recent years. And as evidences of it we have pointed to the enormous increase in the cultivation of flowers for the London market, to the flower-sellers in the streets, to the profusion of flowers in house and table-decoration, to the almost universal use of real flowers for sprays on ladies' dresses, where ten or twelve years ago artificial ones would almost certainly have been employed. And there is no denying these things. The cut-flower trade of London, and of all large towns, is assuming a really gigantic proportion. Tons and tons of cut blooms come into London daily. The street-sellers bid fair ere long to become almost as great a hindrance to free traffic as the nursery-maids and perambulators.

The profusion of flowers in some drawing-rooms is so great that it is with difficulty one can pilot a safe course from one side to the other without being in collision with a basket or vase; and many dinner-tables are so overlaid with them that not a speck of tablecloth is to be seen, and not a vestige of a spot where a fan or an extra glass of water can be set. These things are undeniable. But do they really evidence an increased love of gardening, or even an increased love of flowers? By no means necessarily so. A man may furnish his library with the most expensive books, gloriously bound, but it by no means follows that he cares for the books as books, or loves to read them, study them, or pore over them. They may to him be merely so much of the furnishing of his house—the sort of things to have, you know! And I fear the present craze for flowers has in very many cases no truer basis. It does not spring from real love of the flowers, but from love of fashion and love of outdoing one's neighbour.

Looking back half a century I see comparatively very few flowers in the house, none at all upon the dinner-table; and a single *Camellia* or bunch of *Stephanotis* in the hair. But do not think that people cared less for their gardens or their flowers in that "long, long ago." Why, they loved them so dearly that they almost grudged to cut them for their personal adornment. They would gather one for a sweetheart or a friend, but hardly for themselves. Each country house had its bordering of flowers along its garden walks, and the mistress was wont to dissipate her household cares by personally caring for her flowers. Where are these old-time country ladies now? Now everything is left to gardeners; I daresay may, I know more flowers are grown; but do not tell me that it indicates an increased love of flowers.

I love my gardener. I admire him vastly; he is always at work toiling early and late in heat and cold, in wet and dry. He knows a hundred times more about the wants of the plants, probably than I. And all he needs is a hint now and then to prevent his going off in a wrong direction, or after a mistaken idea of excellence; but for all that he does not love the flowers as I do. A doctor may know far more about the children's wants than the mother does, but he does not love them as she does. Why has the vampire of size in flowers, fruits, and vegetables, been allowed to well-nigh smother out ideas of true fitness and proportion? Because the refinement of the

country lady's personal attention has decreased. Everything has been left to the gardener, and he has easily been led astray by the bugbear of competition without a single hint from master or from mistress that he was pursuing an altogether mistaken idea of excellence.

And yet I do believe the tide is turning, or has turned. More individual attention is being paid, more personal interest taken in, the gardens and plants themselves, and not only in the flowers and fruits that are got out of them. The craze the fashion may, the love of flowers and fruits will not easily decay; now we want to add to it a revival of the old-fashioned personal love of plants and gardens.

Shirley Vicarage.

W. WILKS.

[We think and hope that our kind friend the secretary of the Royal Horticultural Society underrates the strong growth that has of late years taken place in the love of gardening. For though there can be no doubt that just now it is the fashion to like flowers, or to pretend to like them, yet the number of people whose love of flowers and gardening one may test by the trouble they have taken to learn something about them, is truly astonishing, and seems to be ever on the increase. ED.]

BIRDS IN THE GARDEN.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Birds have been placed under the protection of Act of Parliament to enable them to increase and multiply and prey upon destructive insects, thus ridding our gardens of one of the gravest troubles which the gardener has to contend with. But gratitude seems to be a sentiment quite foreign to the ideas of the birds, and just as these plagues have, under protection, increased, so, in a like ratio, have the insect pests increased; thus, between the birds and the insects, allied to turgid attacks, the life of the gardener is becoming wretched. We have credited some of the hard-billed birds with a taste for the buds of Plum and other fruit trees, as well as of gooseberry and currant bushes, only when hard driven for food in severe weather. But the feathered depredators do not wait for frosts before they have begun their work, and already one hears complaints that the Plum and Damson trees, Gooseberry and Currant bushes, are being stripped of their buds, thus rendering them useless for next season at least. "We have acted on the best advice, and syringed the trees with soft soap, then oiled them with lime and soot, to render the buds obnoxious, but without avail. Accordingly destruction has come on all the same. What can we do to protect our trees and bushes?" Here is a common form of complaint, and it is the appeal of the gardener. What is the good of telling such men to try the common remedies when they have found them already useless? Shoot the little pests they may not. Sparrows, linnets, chaffinches, tom-tits, and many other birds seem to have realised that the law will not throw them over, and they are far more harmful than ever. What is to be done? Can it be recommended that we shall cover in all our fruit quarters in gardens with small mesh wire or nets to the utter exclusion of "those pretty birds"? Oh, the selfishness of man thus to suggest such a thing. Why may not the birds have their share? If they could be reasoned with by their uneducated admirers, and induced to leave fruit buds alone, and be content to take tithe of the fruit only, few would complain. But these creatures destroy the embryo fruit buds in their inception, and thus not only rob themselves of their share of the fruit but the aggrieved gardener of his share absolutely. Birds prefer vegetable tit-bits, such as are the sweet buds produced on fruit trees, the delicious points of germinating seeds, the soft green peas in pods not yet full-grown, and, not least, the fleshy sweet Pears and Apples and other fruits which they peck. We have had about enough of this laddism, and the Wild Bird Preservation Acts, so far as they relate to known depredators, must be revised.

What is the good of constantly urging our wider planting of fruit trees and bushes if the products of the labour are to be barren, arising from the foolish preservation of harmful birds. To get plenty of good fruit is more important and useful than is bird-pest preservation. The tad or sentiment has run wild long enough. Now is the gardeners' time for protection, and against nothing here at home does there seem greater need for such protection than against that intolerable trouble, the protected birds. A. D.

THE FIRST TOMATO GROWER.

A good deal has been written about the Tomato of late, and speculation as to its successful culture outdoors is being discussed; but the culture of the Tomato as a vegetable in this country, either indoors or out, is not such a recent affair as some seem to think. Tomatoes were grown both indoors and outdoors at Drumlanrig Castle, in Scotland, at the time of the Crimean War, about 1853 or 1854, by Mr. James McIntosh, the gardener there at that time. The reason probably was that Mr. McIntosh was rather fond of trying novelties. He grew, about the same time, good crops of *Passiflora edulis*, and, I think, *P. quadrangularis*, the Guava, the Egg-plant, and tried the Vanilla, but did not succeed in fruiting it. The Tomatoes were grown abundantly over the paths in the pine-stoves, and large quantities were cooked. They were then so acceptable to the cook that an attempt was made to produce a late supply out of doors. The plants for that purpose were grown on like the Dahlias in pots, and planted out in May against a close wooden paling about 200 feet long. They fruited, but few of the fruits ripened thoroughly, and about October the plants were pulled up with the partly ripened fruit on them and hung up in warm sheds to ripen.

I forget the botanical name of the Tomato then, but it was not "*Solanum*," and it was called the "Love Apple." The fruit looked so tempting that the writer was once induced to taste it, but he never bit another for a dozen years at least. Afterwards, when near Edinburgh, no Tomatoes were grown in any garden near there that I knew of, nor was it till long after that that it became common. Now-a-days it is as common as the Potato, and is in every greengrocer's shop and on every hawk's barrow.

J. SIMPSON.

A USEFUL VEGETABLE.

CELERIAC, OR TURNIP-ROOTED CELERY. This is a useful winter vegetable, but it is not so largely grown as it deserves to be; its value has long been recognised on the continent, and quantities are annually imported into this country, which always find a ready sale and realise good prices. The flavour is very distinct from that of Celery, and makes a most welcome change. The cultivation is simple; it will thrive luxuriantly on almost any well prepared soil. The seed should be sown thinly in pans early in March, and the seedlings pricked out as soon as large enough to handle, treated, indeed, precisely in the same way as Celery. By the end of April or early in May they should be transferred to their summer quarters. A south or west border should be selected if possible. Trench the ground or deeply dig it during the winter; no trenches are required, as it should be grown on the flat. Break the surface up before planting, make quite firm, and rake down level. Lift and plant with a trowel, allowing 2 feet between the rows and 18 inches from plant to plant. Like Celery it is a moisture-loving plant, and should be kept well supplied with both clear and liquid manure water during dry weather, keeping the soil constantly stirred with the hoe to promote a free, quick growth. Lift the roots before frosty weather sets in, trimming off the leaves and store in sand or ashes in the root room, when they may be taken out as required. These will generally last in good condition until the end of March.

EDWIN BECKETT.

A STREAM AMONG THE MEADOWS.

In quiet places of wood and hill and valley, one may often come suddenly upon some quite simple picture of flower-beauty, or of pleasant natural combination of form and line, or even of both together. In many a tract of meadow-land such a picture as the one here shown may be met with; of extreme simplicity and yet full of interest in detail, and with a grouping so broad and good that it is a practical lesson in what is known in painters' talk as "composition." It is April; the Alders are not yet in leaf, but the masses of their large red-brown catkins look solid against the sky. The level lines of the meadow give full value to the rounded masses of the Willows, whose young foliage is in the soft velvet-like stage of growth.

The trout stream comes gaily along, singing its charming ripple-song as it flows swiftly over its shallow, stony bed. Just now it is not a stream only but a garden, handsomely set with broadly-spreading patches of the Water Crowfoot, the earliest to bloom of the wild flowers of our pools and streams. In such a scene one sees the value, as a garden lesson, of the simple treatment of one

CHRYSANTHEMUMS.

CHRYSANTHEMUMS FOR DECORATION.

IN few instances, at the numerous exhibitions held throughout the United Kingdom, are the flowers of smaller size met with, then only from the collections of those who know and appreciate their beauty. A change, however, has set in, and many interested in Chrysanthemums now at last see that in growing large exhibition blooms their display has been limited and an unsatisfactory result for a year's work.

A Chrysanthemum to find favour as a decorative plant must partake of certain features. In the first place it must be free-flowering, bushy, or branching in habit, and by no means tall. Colour is a most important point, and a good self-coloured variety has many advantages over one of varied shades, the decorative effect of the former being more decided. On the other hand, flowers of varying shades are less effective, and for conservatory decoration and cut flowers less valuable,

which flowers of the finest colour are obtained, and in which an unpleasant "damping" often seen in buds of an earlier kind is rarely noticed. A long season of steady growth is quite as necessary in the case of plants intended for decorations as for those cultivated for exhibition blooms, and it is fairly safe to assume that if the same share of attention be given to the decorative sorts as to the other group, the former would considerably benefit.

When the plants have made some progress in the early spring, say during March, pinch out the point of the respective shoots. This will have the effect of inducing lateral growths to appear, and a few of the strongest should be selected and grown on, rubbing out the weakest from among them. At this period the grower must consider the object in view. If bushy plants be desired, the shoots may with safety be pinched at each succeeding 6 inches to 8 inches of their growth, the last pinching to be carried out during the latter part of June. Plants treated in this way produce an immense head of charming flowers. If it be the wish of the grower to only produce a few dozen flowers of medium size, after the first pinching the plants may be left to make their "breaks" naturally. When housing the plants in the autumn avoid crowding, otherwise much of the foliage will be lost. Abundant ventilation is desirable at the same time, but care in this matter should be observed.

SELECTION OF VARIETIES.

A selection to meet the needs of most growers should embrace those sorts flowering in October, November, and December. The following are the most beautiful:

OCTOBER (Japanese sorts). Klondike, rich yellow; Clinton Chalfont, bright yellow; Gladly-Roult, pure white, very free; Nellie Brown, reddish-bronze; Rycroft Glory, bronzy-yellow; Source d'Or, terra-cotta; Eolides Precoces, bright crimson; May Mauser, creamy-white; Lady Selborne, white; Yellow Selborne, yellow; Yellow Source d'Or, bright yellow; Mrs. Wingfield, rosy-pink; O. J. Quintus, mauve-pink; White O. J. Quintus, pure white sport from last named; Queen of the Earlies, white; and William Holmes, crimson. **Pompons.** Sem Melanc, white; Crimson Precocite, bright crimson; and Vesuve, crimson red.

NOVEMBER (Japanese). Mlle. Lactois, pure white; La Nymphe, pink; Annie Cliban, silvery-rose-pink; Mme. Louise Leroy, white; Mr. Chas. E. Shea, light yellow; Phœbus, yellow; Mons. Chas Molin, reddish-bronze; Pallanza, rich yellow; John Shrimpton, rich velvety crimson; Vivand Morel, silvery-mauve; Western King, pure white; William Seward, rich deep crimson; Emily Salisbury, white; Soleil d'Octobre, emary yellow; and Mrs. Coombes, silvery-pink. **Lucifer**

Mrs. Geo. Rundle, white; George Glemy, pale yellow; and Mrs. Dixon, rich yellow. **Pompons.** William Westlake, yellow; William Kennedy, crimson-amaranth; Marie Stuart and Emily Rowbottom, both Anemone pompons, the former bluish-blue and the latter white.

DECEMBER (Japanese). King of Plumes, deep yellow; Taxedo, bronze; Golden Dart, rich yellow; Mme. Felix Perrin, pink; L. Gunning, white; Golden Gem, orange and crimson; Princess Victoria, creamy-white; Mrs. Filkins, pale yellow; Mrs. Carter, primrose; Alice Carter, reddish-bronze; Sam Caswell, pink; and W. H. Lincoln, yellow. **Pompons.** Snowdrop, white; Primrose League, yellow; Antonius, rich deep yellow.

D. B. CRANE.



WATER CROWFOOT (Najas) IN A MEADOW STREAM.

good thing at a time. The whole landscape is delightful, but the eye fixes on the flowery patches as strongly attractive incidents. In a garden one can never exactly copy Nature, but the more we gardeners observe her methods the better we fit ourselves for composing our garden pictures, and it in our rambles among wild places, when we come upon a natural combination that strikes us as pictorially satisfactory, we have acquired the power of seeing why it is right and why we feel it to be beautiful, then we may have the satisfaction of knowing that the mind has gained some grasp of such practical apprehension as will serve for the planning of beautiful pictures in our gardens.

One of the important things this meadow picture teaches is the value of the feeling of repose given by the level line. Gardeners generally err in being too fussy. The level line in the picture is always of value, whether in the larger areas of the landscapes of Holland or of our own fenslands, or the still greater sea-horizon or distant lake shore. The towering heights of the Alps are never so beautiful or so full of impressive dignity as when seen above the long levels of the plains of Lombardy.

Many varieties, too, bear flowers of fleeting colour, and no reliance can be placed upon them for blending or for effecting a good contrast, consequently they cannot be regarded with the same favour as those of a more fixed and certain kind. Hence, when making a selection, avoid those kinds lacking clear, bright, and lasting colour. Those sorts, too, which develop their flowers on long, erect footstalks have a distinct advantage. This characteristic is regarded with more favour where the flowers are used for large vases, now so popular for decorating rooms. Unlike the exhibition varieties, those of a decorative kind invariably possess a good constitution, and this feature is important where a large display is desired.

Many writers advocate later propagation for decorative varieties than that followed in the case of exhibition sorts. This advice is open to question. No doubt late propagation means a dwarfer plant, but then there is less time to develop a good specimen. Early propagation usually results in the development of plants capable of producing a few dozen blossoms of medium size, or a profuse display of useful sprays of flowers when the latter are not disbudded. Early propagation must necessarily hasten the production of terminal buds, from

Erica melanthera. While many of the Cape Heaths are proverbially difficult to grow, this is one of the least fastidious of its class, and is now flowering freely in the greenhouse. It forms a very dense, twiggy bush, and from the profusion with which it flowers the entire plant is simply a mass of its little pinkish blossoms, against which background the tiny blackish anthers stand out conspicuously. The flowers remain a long time in beauty, and have a faint though pleasing perfume.

GARDENING FOR THE WEEK

PRACTICAL NOTES FOR
AMATEURS.

CHRYSANTHEMUMS.

ALL who wish to attain success next autumn in the production of high-class blooms, whether intended for exhibition or for home decoration, must, if they have not already done so, lose no time in making a commencement. The plants must have a long season of growth, and from the first great care and attention must be given to ensure the building up of

must naturally do almost dormant for a few weeks after insertion in the cutting pots, the damage done to the young tender growth is more serious than many suppose; reject any that have the slightest trace of rust, and wherever the stock has been badly affected with this disease obtain a clean healthy stock elsewhere, after burning every particle of those which have been infested.

The cuttings should be struck singly in clean, well-drained thumb-pots, and the compost should consist of equal parts of light fibrous loam and well-decayed leaf-mould, with a liberal addition of coarse silver sand, sufficient to enable the water to pass away freely. The whole should be passed through a sieve with a half-inch mesh.

Thoroughly mix the ingredients together, taking care that the soil is in a moderately dry condition before use, after placing a little fibre taken from the loam over the drainage. The soil should be

work should be pushed along whilst favourable weather prevails. Trenching is necessary for all fruit trees, as it allows the roots to penetrate deeply into the soil out of the reach of drought in the growing season, and water can percolate through the soil more freely. When grown thus the trees become better established, and produce a larger quantity of finer fruit than those planted in shallow cultivated ground. The ground should be trenched about 2 feet deep, by placing the top spit at the bottom and bringing the bottom one to the top; the advantages are that the best soil goes to the bottom for the roots to ramify in and weeds are killed, whilst the bottom (I may say interior) soil is brought to the surface, where it can be improved by nature and cultivation.

Old mortar rubble and charred earth are valuable for dressing heavy ground, and these ingredients should be worked in as trenching proceeds.



VIEW IN MR. WILSON'S GARDEN. PLANTS BY WATERSIDE.

strong, solid growth, without which flowers of the highest excellence cannot be expected. I am of opinion that the Chrysanthemum cannot at any time be too strong and vigorous, especially in the younger stages of its growth, providing of course a proper system of treatment be afforded. How often one hears the remark during August and September, "My plants are not very strong, but the wood is well ripened." I am quite aware that well-matured wood is necessary, but I am also fully convinced one must have both to achieve the best results. The

SELECTION OF CUTTINGS.

is important. Choose strong, sturdy root cuttings if possible, but before doing so the old stools should be thoroughly fumigated to free them from every particle of green or black aphids. When the cuttings are infested with these, and they remain, as they

made firm, placing a small quantity of dry sand on the surface, part of which will find its way to the base of the cutting when inserting it with a small dibble.

Everything should be in readiness before taking the cuttings. Each pot should be correctly labelled as the work proceeds, the cuttings being well watered in with a fine rose watering pot, and placed without delay in the propagating pit. The cuttings should on no account be allowed to flag.

EDWIN BLOKETT.

Albion House Gardens, Elstree, Herts.

THE HARDY FRUIT GARDEN.

HARDY FRUIT TREES.

WHEN the ground was not prepared nor the trees planted at the best time—*i.e.*, in the autumn—the

Ground if not naturally well-drained should be made so artificially. Fruit trees are not a success in wet, stagnant soil.

The situation should be open to receive the fullest benefit from the sun, but sheltered from direct winds.

The best shaped tree is the dwarf pyramid and bush for such kinds as Apples, Plums, and Pears. Such trees are more easily managed than standards, whilst they do not get so much damaged by wind, neither is the loss of fruit so great from the same cause. Twelve feet apart is a suitable distance to plant, more or less, according to the vigour of the variety and the kind of stock used at the time of grafting, whether of free or dwarfing influence.

Planting should be done when the ground is neither very wet nor frozen; this applies to all kinds of soil. Some sandy soils dry quickly after rain,

while others of a heavy nature are the reverse. The hole should be a little wider than the spread of roots of the tree, and the highest roots should be 3 inches or 4 inches beneath the surface. Slightly shorten with a sharp knife the broken ends of the thickest roots, put the roots out straight, work the soil amongst them, and make all firm.

After planting put a strong neat stake to each tree, and finish with a mulching of farmyard manure.

PLANTING BUSH FRUITS.

Ground between fruit trees may be cropped with small fruits or vegetables. If the former, a distance of 6 feet apart should be given to Red and White Currants and Gooseberries, and 8 feet or 9 feet for Black Currants.

Raspberries should be 6 feet between the rows and 4 feet from cane to cane in the rows. At the time of planting, shorten the canes to within 1 foot of the ground so as to throw all vigour into suckers to form canes, and to bear fruit the second season after planting.

G. NORMAN.

The Gardens, Hatfield House, Herts.

KITCHEN GARDEN.

At the beginning of the year the work in this department will consist chiefly in preparations for later crops. That sharp short spell of wintry weather in mid-December will have enabled the cultivator to wheel manure on the land, and this may now be dug in. Trenching the soil, especially in old gardens, is necessary. Although, by constant cropping, the soil may be considered in workable condition, it is not so, as it naturally needs a rest, and the introduction of new soil is a great gain, and will often do more good than quantities of rank manure. On the other hand, all soils cannot be treated alike, and any advice given may be beneficial. Bringing up poor, inert soil to the surface, and burying the old top layer too deeply, would be worse than merely surface digging. In such cases the old top soil must be retained, and deep digging practised, turning the surface up roughly, and allowing the weather to mellow and sweeten it. I will briefly touch upon the need of making unsuitable land more fertile, as one often hears that it will not grow certain crops; but frequently with a little assistance the soil may be made suitable. No better time of year can be chosen to do this work, providing the weather is suitable, than the present.

DRESSING SOILS.

It is not sufficient to place quantities of animal manure on the land. This practice may suffice in some cases, but not in all. For instance, I have had two or three kinds of soil in one garden, and these need very different treatment. In heavy clay land add burnt refuse, road scrapings, wood ashes, in fact, anything that drains or lightens; and with very light soil resting on gravel larger quantities of manure are needed. Dig as deep as possible, but keep the top soil on the surface. Again, the soil, as in the case of old gardens, may be badly infested with wireworm, which needs strong measures to eradicate. Frequently, however, one imports the enemy quite unintentionally. A few years ago I saw the top soil of a pasture used to improve a poor kitchen garden soil; the latter, though heavy and poor, was clean, whereas the soil brought in teemed with wireworm, and in its new quarters spread alarmingly, attacking the roots not only of vegetables but even Strawberries. Soils of old, worn vegetable quarters may be greatly improved by dressing with lime and gas lime to kill wireworm and prevent chubbing in Brassicas.

FRENCH BEANS.

French Beans should not be forced until the new year, as it is difficult to set the bloom. Some forced vegetables lack flavour, but this depends greatly upon temperatures. Dwarf Beans fortunately retain their good flavour when grown in heat, if well looked after, and from this date to the end of May it is not difficult to have Beans in quantity. Of course, at the last-named period, only cold frames are required. Only those kinds that bear abundantly and are dwarf and quick in growth should be used. A variety named Sutton's Foreing, also Progress and Early Favourite, are excellent for pot

culture, and to these may be added Syon House, No Plus Ultra, and Mohawk. I use rather small pots at the early part of the year, as quick growth is important, and 6-inch and 7-inch pots are quite large enough, using a light, rich soil, and placing the pots in a warm place for the seeds to germinate. After that, place near the light, and in a genial, most temperature not less than 65°. Sown every three weeks, a supply will be maintained.

Syon Gardens, Brantford. GEO. WYTHES.

WORKERS AMONG THE FLOWERS.

As the editors of THE GARDEN tell me that they propose to give a note on the doings and experience of some amateur working gardeners, and suggest one on mine, as a humble member of the fraternity I am happy to give it. My first work was with an orchard-house. My sister, whose good garden adjoins my cottage garden, was inspired by one of Mr. Rivers's early books to put up a large orchard house. Seeing that this suc-



G. F. WILSON, F.R.S., V.M.H.

ceeded, I put up, about forty-five years ago, one 60 feet by 20 feet, but being then a hard-worked man I had to prime the trees by candle-light. The rafters had proverbs, principally Spanish ones, pasted on them. An amateur asked Mr. Rivers how it was that his fruit was eaten by wasps while Wilson's escaped! The answer was, "How could they attack it with all these proverbs against stealing overhead!" I grew many sorts of good fruit, and got a first prize for early Pears, against thirty-six competing dishes, at the Crystal Palace show. The next move was at a sale at Stevens's, where there were some lots of Japanese Lily bulbs, supposed to be sea-damaged. The old stagers looked askance at them; I had hopes, and bought lot after lot of fifties, cut down wine cases, planted, and put them in the orchard-house; these turned out well. Among them, a beautiful Lily, allied to *L. elegans*, but of much stronger growth, and with a beautiful gold band in centre of petals, was named *L. Wilsoni*. Another Lily was a grand form of *L. longiflorum*, which M. Max Leichtlin named *L. longiflorum Wilsoni*, but I now believe it to have been the true eximium,

This success led me to take up Lily growing both in the house and in the open, and Canon Ellacombe named me "Lily Wilson." I received twenty-five certificates from the floral committee for Lilies shown for the first time. There was, besides, a successful rockwork in the cottage garden.

On retiring from business, I was able to attend the meetings of the Royal Horticultural Society's Committee, and was made chairman of the fruit committee, and afterwards of the floral committee, so I had means of knowing what was going on. In 1878 I had the chance of buying Oakwood, at Wisley (where heathy land is not worth, as it is here, £1000 an acre), a farm of about sixty acres, with an old oak wood and many sorts of soil.

My business work having been mixed up with many experiments and inventions, this place gave just what I wanted, a grand new field and plenty of work. The wood had not been disturbed for many hundreds of years, during which time oak leaves and bracken decaying had made a great depth of vegetable soil. This, with the light loam of the hill, gave great capabilities.

Rhododendrons and many other such plants grow vigorously and look after themselves. With a mixture of loam Lilies are happy, and in beds in full sun the early Irises, Calochorti, Ixias, and many bulbs liking hot places flourish. Iris Kämpferi having succeeded on the banks of our ponds, and now, having a rather damp six-acre field of good soil, we made a wide winding ditch, planting these Irises in damp soil. These were beautiful, so we have made a larger, wider ditch from which we have great hopes for next year. Gardening friends have spoken very kindly of the Wisley Garden. In a note in the *Gardeners' Chronicle* of 23rd June, 1883, one of the greatest plant authorities, Canon Ellacombe, wrote: "I saw it first three years ago, and thought it a very pleasant but not a very hopeful experiment. When I saw it last year I was astonished at the progress made, but I was still doubtful of its general utility. I had the pleasure of seeing it again last week, and must confess that it is a great success." Another great gardener who has a beautiful and successful garden of her own, on going round with me, said: "I don't know what to call this place, it is not a garden," and on my assenting to this, said, "I think it is a place where plants from all parts of the world grow wild," this being what I aimed at, was very comforting.

GEORGE F. WILSON, F.R.S., V.M.H.

Heatherbank, Weybridge Heath, December 15, 1899.

[In this slight and very modest sketch of what he has done, Mr. Wilson gives no idea of the great services he has rendered to horticulture. For, though he speaks briefly of Lilies and Japanese Irises, he makes no mention of the thousands of plants and shrubs from all parts of the temperate world, planted in different soils and aspects for experimental culture; of the large seed-beds of alpine and border plants; nor of the wide plantings of the many beautiful things that make his woodland and hillside at Wisley not only one of the most interesting gardens from the experimental point of view, but, region by region, one of the most pictorially beautiful. Neither has he said a word about the many articles, letters, and notes constantly contributed to the horticultural press, recording almost every stage and incident of his garden work. Of his unflinching and helpful kindness to the groping amateur, there must be thousands who would gladly express their gratitude. (Ed.)

GARDEN DESTROYERS.

DESTRUCTION OF PESTS
AT THIS TIME.

AT the turn of the year it is incumbent on all actively engaged in horticulture to think over what remains in the way of work that is best done in the winter that has not yet been put in hand, and at once to take steps to carry it out, as the spring work will soon force itself on their notice. Among the most important work that should be done, and which cannot be effected at any other time of year, is the destruction of certain insects which are now in a position to be dealt with in a manner that is impossible later on, when the buds begin to open, and the insects themselves are in more active condition. The members of that destructive family, the

SAW-FLIES.

which attack the plants in our gardens, are more easily exterminated in the winter than at any other time of the year, as they are then in the chrysalis condition in the earth beneath the plants on which the grubs have fed, and they can easily be destroyed by removing the earth to the depth of 3 inches or 4 inches, and killing the chrysalides that are in it. To do this effectually, the soil should be burnt or spread out somewhere, so that poultry can scratch it over, and pick out the chrysalides. If either of these ways is not feasible for any reason, the soil may be buried not less than 1 foot below the surface, and the ground above made tolerably firm, so that the saw flies, when they make their way out of the chrysalides, may not be able to reach the outer air, and fly to the plants on which they wish to lay their eggs. When the grubs drop from the bushes, they do not crawl far, but at once bury themselves, so that it is not necessary to remove the soil for any distance beyond the tips of the shoots. In the case of Pear trees, against a wall, that have suffered from the attacks of those grubs known as

SLUG-WORMS.

it would only be necessary to remove the soil for about 6 inches or 8 inches from the wall and for the length of the branches. With Gooseberry bushes planted in rows there would be of course a considerable quantity of soil to move; still, the trouble of taking it away and replacing it with fresh earth would be amply repaid by the bushes not suffering next season from an attack by these grubs. The soil round Rose bushes which have suffered from the attacks of these pests should be treated in the same way. Picking off the grubs by hand, or syringing with an insecticide, is not so effectual. Another insect which can be more easily combatted in the winter than when the leaves are on is the

AMERICAN BLIGHT.

which is one of the most destructive pests to Apple trees. If the trees are espaliers or cordons, they should be carefully looked over, and wherever the least sign of the insect can be found, that part of the branch or shoot should be well wetted with methylated spirit, applied with a camel's-hair brush or a solution of paraffin emulsion. If the tree has been so long infested by this insect that swellings and cracks are present in the bark, cloths of some description should be placed under the tree, and the loose rough parts of the bark be scraped off, carefully collected, and burnt. Well scrub the parts where the insects are with a stiffish brush dipped in a solution of paraffin emulsion, or some similar insecticide. When a tree is so large that it is almost impossible to reach all the parts infested by this insect, the tree should be sprayed with a caustic wash, which should be made as follows: Dissolve 1 lb. of caustic soda in half a pailful of water, then add $\frac{1}{2}$ of a lb. of pearlsh; stir the mixture until it is dissolved, and pour it into a vessel containing 10 gallons of water; then add 10 oz. of soft soap that have already been dissolved in a little boiling water; stir again

thoroughly, and the mixture is ready for use. It is not only most efficacious in killing all kinds of insect life, but also cleanses the trees from any moss or lichen that may be growing on them. As this mixture is very caustic, due care should be used to prevent it getting into the hands and clothes more than is necessary, and when using it wear a very old suit, and stand with one's back to the wind if possible; also choose a calm day for the purpose. The mixture should be applied with one of the knapsack spraying machines, or with a syringe, or garden engine fitted with a nozzle for making a fine spray. Every part of the tree that is likely to be infested with the American blight should be well wetted with the mixture. It is not safe to use this insecticide after the buds show any signs of bursting. Dead leaves only too often afford a good and welcome shelter to many garden pests, and as they give an untidy appearance to a garden there is no excuse for leaving them lying about under trees and in sheltered places as is so often done. Some of our most

INJURIOUS CATERPILLARS.

often pass the winter snugly curled up in a dead leaf. If the leaves are not wanted for leaf mould, they should be collected and burnt; if they are, they should be made into a heap as early in the winter as possible. When the refuse and remains of any crop are being removed, if the crop has been infested by any insect or fungus, they should not be thrown into a rubbish heap, but burnt, for the mild heating process that takes place on such a heap does not in any way injure many pests, either animal or vegetable; and when the contents of the heap are used as a dressing, these pests are ready at hand to attack the next crop that is planted. The

ROOT EEL WORM.

for instance, has been known to live for two years in a perfectly dry condition, and the resting spores of the finger and toe fungus are also capable of remaining dormant for the same time, or for even a longer period. The seeds of many weeds also are spread over gardens in the same manner, so that to my mind a bonfire in a garden is a much more useful institution than the often much-vaunted rubbish heap. The

LACEY MOTH (*CLISOCAMPA NEUSTRIA*).

whose caterpillars are so injurious at times to the foliage of apple and other trees, is one of the insects that can be better dealt with in the winter than at other times, for the females lay their eggs in such a manner that they are easily detected. Small bands, consisting of several rows of these eggs may often be found encircling the shoots of fruit trees, like a bracelet. These are the eggs of this moth, and if a tree can be freed from them there will be no chance of its being attacked by the caterpillars the next season, as it otherwise most certainly would have been. When these bracelets are picked off they should be carefully destroyed, and not merely thrown on the ground, where they will in due time hatch, and the caterpillars will very probably find their way to their trees. When beds and borders are being dug in the winter, a good look-out should be kept for any chrysalides that may be turned up. A slight blow with the spade or fork will destroy them, and the destruction of one chrysalis means one brood less of caterpillars later on. All the prunings and clippings from any plant that has been infested by any pest should be collected and burnt, and not allowed to lie about on the ground, near the plants. The winter is also the best time to cleanse fruit trees in orchard houses from the

TORTOISE SCALE.

that often infests them. The scales should be rubbed off with a stiff brush or a piece of coarse flannel, or canvas dipped in soft soap and water. All the branches and shoots should then be syringed or painted over with paraffin emulsion diluted with ten times its volume of water, for there are probably many young scales that are very small scattered about the tree that should be destroyed. If the trees are fastened against a wall or trellis, so that both sides cannot readily be got at, they must be

unfastened, for the branches must be treated on both sides alike. When they are replaced, new fastenings should be used, as pests are often harboured in old ones. The walls should be relime-washed, and the trellis newly painted or thoroughly cleansed. Vines, also, during the resting period, can be more easily freed from such insects as

MEALY-BUG AND SCALE INSECTS.

than at any other time. To rid vines from these pests, the rods and canes should be scraped with a blunt knife or some similar instrument. This scraping process should not be carried too far, or the insecticide used afterwards may prove injurious; it is only necessary to remove the loose bark, which might act as a shelter to the insects. The scrapings should be collected and burnt. To facilitate this the vines should be painted over first with a lather of soft soap and water, as this will prevent anything that is removed from falling about. While thus going over the vines it would be useful to have a small bottle of methylated spirit and a small brush handy, and to thoroughly wet with it any part from which any of these pests have been removed. The young ones and eggs are not always visible because of their small size. The vines should then be dressed with one of the following insecticides: Paraffin emulsion diluted with ten times its volume of water, or three parts of clay and one part of tar well mixed, and enough water to form the mixture into a paint. The walls should be well lime-washed, and all the wood and ironwork scrubbed with soft soap and water. There is an erroneous idea that a cold winter is very detrimental to insect life. This is by no means the case, and I do not know of a single instance in which it is true. Experiments have been made with the grubs of certain insects, which were frozen so hard that they could be snapped in two. A number were destroyed in this manner, whilst others that were allowed to thaw again seemed none the worse for the treatment.

G. S. SAUNDERS.

WINTER MOTH AND ITS
DESTRUCTION.

THE winter moth on our greased lands on fruit trees has been more than we have had for several years past. We were led to hope, from last year having less than a tenth of the usual quantity, that our annual landing had lessened their numbers. There seems something in the Wisley garden which suits them; in neither of our Weybridge gardens we find enough to make it worth while to have the cost and trouble of protecting the trees.

GEORGE F. WILSON.

Heathbank, Weybridge Heath, Surrey.

POLYGONUM BALDSCHUANI-
CUM.

THE demand for this beautiful hardy climber is far in excess of the supply, and is likely to continue so for some time unless some readier means of propagating it are discovered than we have now. The seeds distributed last year were failures everywhere, so far as records show; cuttings of young wood failed to strike, and those of older wood, tried in some gardens, were unsuccessful. I am told by one who succeeded that pieces of the old stems which have stood the winter out of doors will strike if placed in a warm frame in March or April. I believe layering in the same way as answers in the case of *Lapageria* will prove the best plan. The growth the plant makes is extraordinary. A small piece planted at the corner of a house in the spring in Cornwall had become a large mass by the autumn, and flowered freely. The plant was discovered by Regel, in 1883, on the banks of a river in Bokhara, at an elevation of 1200 feet to 1700 feet, and figured in the *Gartenflora* in 1888. It first flowered at Kew in 1896, and was figured in the *Botanical Magazine* the year following. It is perfectly hardy at Kew, where it has formed a Bindweed-like mass of perennial stems 6 feet high. It is said to grow to a height of 20 feet. It bears in summer large panicles of small white flowers, which gradually change to rose, and are succeeded in autumn by reddish fruits.

ORCHIDS.

CULTURAL NOTES.

NOTES which will appear under the above heading will possibly be at variance with the experience of many of THE GARDEN readers, but it should be borne in mind that the majority of Orchid collections are confined to certain areas, such as in the neighbourhood of London, Manchester, and large manufacturing districts, where poisonous fogs and smoky atmospheric conditions are present for the greater part of the year. I therefore propose to devote particular attention to the above-mentioned circumstances.

In Orchid culture, like all other branches of horticulture, suitable conditions should be provided. If a certain position in the house does not appear satisfactory try some other, either by suspending the plant nearer the glass or by placing it on the staging. In my experience I know many instances in which a change in the position of plants has had the desired effect. There can be no hard and fast lines in the culture of Orchids any more than in the case of other plants.

SOME ORCHIDS IN FLOWER.

The month of January is perhaps one of the duller seasons of the year, both as regards plants in flower and the work in the different divisions. With the exception of *Cattleya Triana*, *Cologyne cristata*, a few *Cypripediums*, and the early-flowering *Dendrobiums*, very few flowers are open. In the warm division, the flower-spikes of the *Phalanopsis* and developing, and will need constant attention to prevent them coming in contact with the roof glass. This is most important, because when very near to glass they are liable to be affected by sudden changes in the outside conditions. Though not apparent at the time the ill effects develop at a later period, and the results are unsatisfactory. I find that it is wise to lower those plants suspended by bringing into use small wire hooks to place them in the desired positions. When the plants are on the stages the spikes should be secured by tying them to a firmly fixed stick, and thus drawing them out of danger. During dull weather, or when excessively cold,

WATERING.

needs considerable care. The fact of the flower spike developing necessitates the plants being kept fairly moist at the roots, but sometimes excessive moisture would be detrimental. It is a good plan to give water early in the day, as then excessive moisture can drain away. When watering dip the plants sufficiently deep to cover the potting compost, thereby thoroughly saturating the material, but take care to prevent the water getting into the axils of the leaves. Allow the plants to become quite dry before water is again given. The water used also must have attention. After showers or heavy rains the water in the tanks will be found much colder for several days than the temperature of the house. This being the case, procure hot water to add until the water to be used is raised to the desired temperature. The bulk of the deciduous

DENDROBIUMS.

which include *D. Wardianum*, *D. aurum*, *D. nobile* in its many and varied forms, and the numerous hybrids of the *D. Ainsworthii*, *D. splendidissimum*, and *D. endocharis* sections, that have been placed under cool conditions for resting purposes, are now getting into forward condition. Extend the flowering season as long as possible, and the most advantageous way of procuring this is to select at intervals the most forward plants and place them in more growing quarters.

It is not advisable to remove the plants from their resting quarters and to place them immediately into the hottest house. This change must be brought about gradually by first placing the plants into an intermediate temperature and then

conveyed into the position where they may be allowed to flower. Only sufficient water should be afforded until the flower buds are formed, after which more liberal treatment may be given. All the available light should be afforded, and a liberal amount of humidity in the atmosphere maintained. But the latter must be subject to the outside conditions and the temperature of the house.

Cumhuri.

H. J. CHAPMAN.

SOCIETIES.

THE GARDENERS' ROYAL BENEVOLENT INSTITUTION.

THE sixty-first annual general meeting of the members and subscribers of this institution will be held at Simpson's, 101, Strand, London, W.C., on Friday, January 12, 1900, at 3 p.m., for the purpose of receiving the report of the committee and the accounts of the institution (as audited) for the year 1899, electing officers for the year 1900, and for the purpose of placing sixteen pensioners on the funds, ten of whom will be recommended to receive the benefits of the institution without election, and the remaining six by votes of subscribers.

The chair will be taken by Mr. Harry J. Veitch, treasurer and chairman of committee, at three o'clock. The poll will open at 3.15 and close at 4.30, after which hour no voting papers can be received. The voting papers have been issued; any subscriber not having received a copy should communicate with the secretary. The annual friendly supper will take place also at Simpson's, 101, Strand, W.C., at 6 p.m. on the evening of the same day, when Mr. W. A. Bilbey, of Weybridge, will preside.

G. J. INGRAM, Secretary.

175, Victoria Street, S.W.

ROYAL HORTICULTURAL SOCIETY.

THE first meeting of the committees of the Royal Horticultural Society in 1900 will be held as usual in the Drill Hall, James Street, Westminster, on Tuesday, January 9, from 1 to 4 p.m. The Scientific Committee will meet in the library on the same day at 4 p.m.

NATIONAL ROSE SOCIETY'S CATALOGUE.

WE have received from the hon. secretaries the official catalogue of the society, which is something more than a mere catalogue, rather a guide to the selection of Roses for the exhibition and garden, with illustrations. All who intend to cultivate Roses for show should consult this catalogue, in which the various sections of the Rose are distinctly set out, and we may say that it is almost indispensable. Copies may be obtained by those who are not members of the society and extra copies by members, post free for 2s., of either of the hon. secretaries, the Rev. H. Holywood D'Ombraun, Westwell Vicarage, Kent, and Mr. Edward Mawley, Rosebank, Berkhamsted, Herts.

BRISTOL GARDENERS' ASSOCIATION.

THE fortnightly meeting of the society was held at Redland on Thursday, the 28th ult. A large number of members were present, and the chair was taken by Mr. Cary Batton, jun., in the absence of the president of the society (Mr. H. Cary Batton). The subject for the evening was "Mistakes in Gardening," introduced by Mr. Charles Lock, of Keynsham. The president kindly offered prizes for plants. Messrs. McCulloch, Raikes, and Ross were the prize-winners. Mrs. Cary Batton distributed the prizes.

THE ROYAL HORTICULTURAL SOCIETY OF IRELAND.

THE annual meeting took place recently, when the chair was occupied by Lord Ardikam, president. The report was read by Mr. W. H. Hillyard (the hon. secretary), and showed a falling off in

subscriptions of £52 8s. 11d. We hope this society will prosper in the future, and it will do so if the members take to heart Lord Ardikam's advice and increase the membership.

* * * Secretaries of societies are invited to send notes of meetings, exhibitions, and forthcoming events.

TRADE NOTES.

EARLS COURT EXHIBITION, S.W.

MESSES. JOHN LAING AND SONS, of Forest Hill, London, S.E., have been awarded the diploma and gold medal for the manner in which they carried out their contract during the run of the Greater Britain Exhibition.

We hope nurserymen will send their catalogues for advertisement, and may even be likely to interest horticulturalists. Their assistance will be greatly valued.

FORTHCOMING EVENTS.

- Jan. 9. Royal Horticultural Society. First meeting of the year.
- .. 12. Gardeners' Royal Benevolent Institution. Annual meeting at 3 p.m. Dinner at 6 p.m. (Simpson's, Strand).

NOTES OF THE WEEK.

Some good winter shrubs. The past hot season suited *Raphiolepis ovata*. It flowered well, and now its ripe fruit stands in loose upright grey-black bunches. The round leathery leaf reminds one somewhat of *Arbutus* and *Escallonia*. It is a neat-growing interesting shrub for a warm place under a south wall. Here it is grouped with *Rosemary* and *Japan Privet*, these three shrubs being among those that look at their leafy best in midwinter. The *Privet* is specially cheerful with its highly-polished sharp-pointed leaves, much like those of the smaller-leaved *Oranges*.

Are the berries of *Gaultheria procumbens* edible? MR. S. ARNOTT need have no fear in eating or tasting the berries of that interesting little Canadian plant, *Gaultheria procumbens*. It is a very common plant in the Canadian bush, covering the rocks in damp, shady places. The berries are largely used for flavouring sweets both in America and Canada, and also in some patent medicines. Unfortunately, the birds are very fond of the berries, and there are few if any left on the plants here as I write. G. R. T., *Cheshirefield*.

Passion Flower in bloom on New Year's Day. I beg to enclose for your "Notes of the Week" what is perhaps a record, viz., a couple of sprays of *Passiflora coriacea* cut in the open air on New Year's Day. This Passion Flower is usually evergreen here except in exceptionally severe winters. We have had some frost one night about ten degrees. I would like to draw attention to one fact respecting this plant which is, I think, not generally known, that is, that if a spray with well-developed buds be cut and put in water in a room the majority of these will expand, the spray continuing in beauty for a long time. I also enclose a fruit of *Physianthus*, one of several produced in the open air this season. It flowered most profusely, and in one instance I saw a butterfly caught by its proboscis in the flower and quite dead. GREENWOOD PIM, *Easton Lodge, Monkstown, Co. Dublin*.

Azalea Illuminator. This is one of the numerous hybrids obtained by intercrossing the little *A. amena* with some of the larger flowered Indian section. It is of a dense, twiggy growth, but the flowers are larger than those of some varieties of this class, and are entirely without the hose-and-hose character characteristic of *A. amena*. The colour is a kind of deep rosy magenta, and little plants in the greenhouse at Kew are laden with flowers. It should prove a useful kind for forcing. Though little known it is by no means new, having been awarded a first-class certificate by the Royal Horticultural Society about fourteen years ago.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers. *The Editors intend to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITORS OF THE GARDEN, 20, Tavistock Street, Covent Garden, London. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.*

Names of Flowers. Not more than six specimens, carefully packed, must be sent at one time. *B. B.*—1, *Chimonanthus fragrans*; 2, *Gaultheria procumbens*; 3, Rosemary.—*T. J.* *Taxus baccata aurea* (Golden Yew).—*Don.*—*Odontoglossum crispum* (very poor form).—*Senec.*—*Helleborus fetidus*.

Names of Fruit. Not more than six specimens, carefully packed, must be sent at one time. *R.*—Lamb Abbey Peppermint; 2, Cox's Orange Pippin; 3, Baumann's Red Winter Renette.

INDOOR GARDEN.

Cyclamens not flowering (ABBESS). It is not unusual for *Cyclamens* to be coming into flower if the plants be late. But when did you sow the seeds? Many amateurs think that these plants will flower from a spring or early summer sowing, just as Chinese Primroses will; but that is an error. Growers of *Cyclamens*, to have the plants in bloom before the end of the year, have to sow the seeds in August of the preceding year, and for plants to bloom after Christmas, early in September. Practically the *Cyclamen* must be treated as a biennial. The plants produce seeds freely in May, and therefore it is always possible to have new seeds to sow in the late summer. They should be sown in 5-inch pots filled with sandy soil, each seed being dibbled in singly and just buried, yet firmly pressed in. When germination takes place the young plants have ample room to grow.

Lily of the Valley (PRESTON). You may safely lift your Lily of the Valley roots and transplant them now. Select a site that is partially shaded by a wall or fence, but which is not full of tree or shrub roots. Trench it 2 feet deep, and burying down to the bottom soil, well mixing it with a good dressing of half-decayed manure. Then, when all the piece of ground is done, spread over it a good coat of that manure and well-decayed vegetable refuse or leaf soil. Fork that in, and as you do so, chop down with a small spade at intervals of 4 inches furrows 2 inches deep, and plant in the strongest of the rooted crowns, lifted from the old bed, treading them well down and covering with soil. Keep the weakest crowns to the last. Give during the summer occasional soakings of liquid manure.

Stephanotis in large border not flowering (M.). The large border may be the cause, as the roots having such an extensive run, shoots and leaves are produced at the expense of flowers. Curtail the border, and thus restrict the root run. A border about 4 feet square and 2 feet deep should suffice for a large plant. Of course it must be well drained, and so arranged that the water supply can be increased or diminished as required. At the same time some forms of *Stephanotis*, whatever treatment may be given, are shy flowering compared with others, and yours may be one of this class, in which case the most satisfactory way will be to root it out and plant a specimen of the Elvaston variety in its place.

Blue Gum losing its leaves (TOWN GARDENER). The plants may have been kept too wet or too dry at the roots; the latter is the more likely, but in all probability the loss has been caused by the heavy sulphur-laden fogs we have experienced in the London district, which, judging by your signature, has doubtless prevailed in your neighbourhood. The leaves of plants affected by the fog present the appearance of having been scorched. Many Australian plants, including all the species of *Eucalyptus*, are especially liable to be injured by London fogs.

Cannas resting (R. P.). Cannas of this class should not be kept quite dry during the winter, as the rhizomes, or underground stems are apt to suffer if too much parched up. At the same time they must not be kept very moist, but receive just enough water to prevent shrivelling. The pots must not be placed too near the hot-water pipes. Some of the varieties, with the finest flowers, especially the yellow-spotted kinds, have the weakest rhizomes, and are consequently the first to suffer if kept too wet or too dry during the resting period. If kept in the greenhouse the young shoots will make their appearance on the return of spring, when the plants may be divided if it is required to increase the stock, or they may, if necessary, be shifted into larger pots.

Fuchsias for greenhouse rafters (ENQUIRER). A selection of the best varieties would include General Roberts, a very long flower, with bright red sepals, and dark corolla; Monarch, nearly a self-red flower; Olympia, salmon-pink tube and sepals, and red corolla; The Shah, red sepals, violet-blue corolla; Mrs. Kundle, pink tube and sepals, salmon corolla; Mrs. Todman, white sepals, scarlet corolla; Alexandria, red sepals, white corolla; Phenomenal, bold flower, with large double purple corolla; Sir Garnet Walsley, double flower with plum-coloured corolla; Mme. Jules Chretien, double white corolla; Luster, very long white tube and sepals, scarlet corolla.

FRUIT.

Forcing Strawberry plants (MONA). It does not at all follow that because you have numerous Strawberry plants in 7-inch pots that you can force them with success. If the plants have filled the pots well with roots and have produced good stout leaf crowns, then you may have success. If such be not the case, then you may get no fruit. We should for early forcing have preferred plants in 6-inch pots, and they should have had in them very early runners. The soil should also be of good loam and decayed manure, and be very firm in the pots. In any case we advise you to put some of the plants into a frame for a fortnight, then shift them into a very moderately warm house for a couple of weeks, then get them on to shelves near the light in a warmer house to bloom and fruit.

Planting Raspberries (JUSTICE). It is a mistake in making a new plantation of Raspberries to use strong canes, as these seldom have the most fibrous roots. We prefer canes that may reach to about 4 feet in height and have plenty of roots. Then you may plant at any time, when the ground is moderately dry and devoid of frost up to the end of March, but it is always preferable to plant in the early winter if possible. If you prefer to do so fix in at each side of your garden quarter stout larch or oak posts, and drive in a line with those about 10 feet apart other smaller ones. To these secure as tightly as you can four stout wires at intervals of 12 inches, and then plant the canes against these in a single row 12 inches apart. Cut the canes down almost to the ground in the spring.

KITCHEN GARDEN.

Early Peas (S. T.). Few gardeners sow Peas in November, or indeed, before Christmas. They should be sown in January only, on a warm sheltered border, and close under a wall or other protection. For more open ground the second week in February is early enough. Two of the most early and best-flavoured varieties are Chelsea Gem, 2 feet high, and Gradus, 3 feet high. Both are wrinkled narrows. The first-named is the best one to sow under a wall or fence in January, as, aided by a few sticks to support it, the bloom is well protected. The chief difficulty in getting Peas into pod very early is the harm sometimes done to the flowers by late frosts. As a rule, even in the most favoured places, it is difficult to get Peas fit to gather outdoors until June. American Wonder will pod earlier in pots under glass.

TREES AND SHRUBS.

Overhanging trees (E. C.). You may cut off branches from a neighbour's trees that overhang your garden, but only in a line with your fence, and do so without his consent. But it is better to advise him of your desire, and ask him to do it. In the case of lopping large Elm and Lime, or, indeed, any other big trees, it is best to do it in February. Trees of huge size may be cut back to branches as big round as a man's body safely then, especially if some thin tar be coated over the surface of the cut portion to protect it from the weather. The stems will very soon begin to put forth shoots, and in three years there will be quite a dense body of growth and branches formed, quite hiding the stumps, and forming fine trees. We have seen many apparently dying trees brought into new life and vigour by this drastic treatment.

The Sea Buckthorn (Hippophae rhamnoides) not producing berries (R.). The Sea Buckthorn is dioecious, that is, the male and female flowers are borne on separate plants. Should it be a female, and no male or pollen-bearing plant is in proximity to it during the blooming period, the flowers are not fertilised, and consequently there are no berries. It is a shrub which is seen at its best in a mass or clump, and if half-a-dozen females are planted in a group, a single male specimen in the central position will be sufficient to ensure the production of berries on the whole of them. Unfortunately, till flowers are borne the male and female cannot with certainty be distinguished from each other, though, as a rule, the male is characterised by stronger habit and larger leaves, but this is not an invariable guide.

Propagating the double pink Bramble (J. P.). This Bramble is readily propagated, like most of the others, by pegging down the tips of the long arching shoots, and covering them with a little soil. They will soon root and push up shoots of their own, thus forming an independent plant in the same way as a Strawberry plant is produced on the runner. This way of increase may be often observed in the Bramble of our hedgerows and ditches, of which this pretty pink kind is but a variety.

Clematis indivisa mildewed (PERPLEXED). This New Zealand Clematis is in low-lying or damp districts liable to mildew. Take the plant in hand as soon as possible, pick off the worst leaves, and freely dust the entire plant with flowers of sulphur. This must be kept up till the disease is stamped out. If done at once many of your flowers may be yet saved. A free circulation of air encouraged by slightly warming the pipes, even if it is not required to maintain the temperature, will often ward off an attack of mildew. Is the border really well drained? as, if not, this may have a good deal to do with the matter, while *Chrysanthemums* under glass are often troubled with it, and it soon spreads to neighbouring plants.

Hydrangea paniculata grandiflora (R. M.). To obtain those huge pyramidal-shaped heads which make such a show towards the end of summer, the plants are cut back hard in the spring, and only from four to six of the strongest shoots allowed to develop, the rest being pinched off. During the growing season the plants are fed with occasional doses of liquid manure, and as their whole energies

are concentrated in such a limited number of shoots, the result is seen in the huge proportions that the flower-heads attain. Secure the shoots to suitable sticks, even before the flower buds appear, as if broken, the loss of only one head is an important consideration.

GARDEN DESTROYERS.

Ferns and Primulas dying (M. P.). The roots of your Ferns and Primulas are attacked by the grubs of the black vine weevil (*Otiorhynchus sulcatus*). As far as I know the only way of destroying these grubs is by uprooting the plants and picking the grubs out from among the roots, as insecticides cannot be made to reach them in sufficient strength to kill them, for the ground naturally acts as a filter. These grubs will also attack Begonias, Cyclamens, and other soft-rooted plants. The weevils are also very destructive to the foliage of many plants. Vines, Ferns, Dracenas, and other plants grown for their foliage are often much injured. The authors of these injuries are not often seen, as they feed only at night, hiding themselves so cleverly during the day that they are most difficult to find. The plants that they are attacking should be laid on their sides on a white sheet, and soon after dark a bright light should be thrown upon them. This startles them, and they fall as if they were dead. If they do not fall, the plant should be given a good jarring shake and be well searched. If the plant be of such a nature that it cannot be placed on the sheet, the latter must be laid under it. If small bundles of moss or hay be tied to the stem of the plant or laid on the soil at the base of the stem the weevils will often hide in them during the day. These traps should be examined every morning. The weevils are about three-eighths of an inch in length, and are nearly black in colour.—G. S. S.

Eggs on Apple tree shoots (YORK).—The so-called eggs on the shoots of your Apple tree are not eggs, but one of the scale insects (*Mytilaspis pomonum*), the mussel scale, a common pest on Apple trees, and so named from its resemblance in form to mussel-shells. When this insect comes to maturity it lays its eggs beneath the shell, and then dies, the shell remaining as a shelter to the eggs and young scales. Lather the affected parts over with soft-soap and water, and then scrape off the insects and the lather, and dress the parts with paraffin emulsion, one part to ten parts of water.—G. S. S.

CHRYSANTHEMUMS.

Good late white Japanese Chrysanthemums (R. S. K.). It is unfortunate that more attention is not given to the late-flowering Japanese kinds, more particularly those white or creamy white. Your mention of Ethel carries us back many years, but this is rarely seen now-a-days. L. Canning, which is a pretty paper-white sort, has been the popular December white variety for some years. Princess Victoria is largely grown, this being pale creamy white, with a green tinted centre. Western King, when propagated during May and June, develops large, pure white flowers throughout December. Mrs. C. Bown is another large white sort of Australian origin. Mlle. Therese Pankoucke is supposed to be the finest late white Japanese variety. The still popular Souvenir de Petite Anie is late, and in this case, as in other mid-season kinds propagation in the spring or early summer is essential. The selection may well conclude with Nivern, a flower of the purest white.

CATALOGUES RECEIVED.

Dobbies Competitors Guide. *Dobbie & Co., Rotterdam, N.B.*
Sweet Peas, Culinary Peas, Vegetable and Flower Seeds, &c. *Henny Eckford, Wren, Shropshire.*
Garden Seeds.—*J. R. Pearson & Sons, Chilwell Nurseries, Notts.*
Garden Seeds.—*Webb & Sons, Wardsley, Stonebridge.*
Horticultural Buildings, &c. *Foster & Pearson, Boston, Notts.*
Seeds, Trees and Shrubs, &c. *Veitch & Sons, King's Road, Chelsea.*
Flower and Vegetable Seeds. *Wm. Catbush & Son, Highgate, London.*

BOOKS RECEIVED.

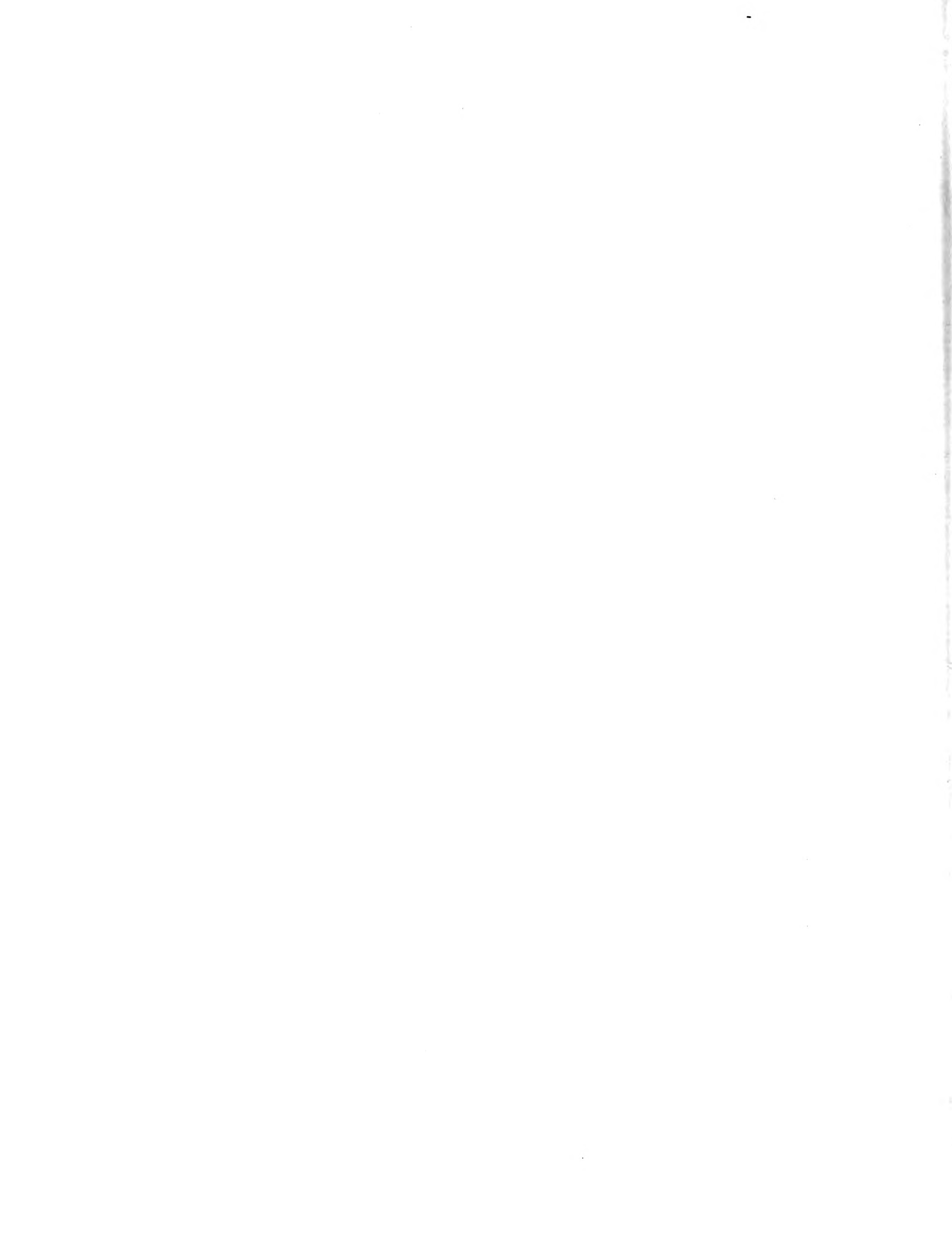
"Fruit Farming for Profit" (4th edition). By George Binnyard, V.M.H., Maidstone, Kent. Price 2s. 6d., or free by post, 2s. 9d.

PHOTOGRAPHS AND NOTES. *We shall welcome very much any photographs and notes sent to us, and hope readers who thus give practical assistance in making THE GARDEN interesting and useful will give their full names and addresses, not necessarily for the sake of publication, but to enable us to thank them for their kind co-operation in our work.*

THE COLOURED PLATE. *In future the coloured plate will not be given weekly, only when some new or rare plant likely to create general interest is introduced. It will, however, always be given with the first number of each volume.*



ROSE MAISON DE SAISON. PT.



THE GARDEN.

No. 1469.—VOL. LVII.]

[JANUARY 13, 1900.

HORTICULTURE IN 1899.

A GAIN the march of time brings us to the beginning of another year and the threshold of a new century. Over the later months the cloud of war has hovered, darkening many a home in our wave-lapped isles and beyond the seas, but we who pursue the peaceful art of gardening are not unmindful of those brave sons fighting for their country's honour and glory and for our advancement. It is no uncertain sign of a nation's prosperity under severe trial when a horticultural year of conspicuous progress can be recorded, a year of commercial activity, and abundant evidence that, although horticulture receives scant State consideration, we are advancing steadily in improving its aspect in many ways—in fruit culture, hybridisation, to acquire greater variety of flowers and improved forms of fruit and vegetables, and in working out the principles of true horticulture.

Thus we commence our work upon *THE GARDEN*, knowing that a true spirit of gardening is made more manifest at this time than when the year that has closed was ushered in, and let us hope that this gardening spirit, a wholesome, healthful, and life-giving recreation, will extend its influence to the benefit of humanity. The British are a gardening nation, more so at the present age, perhaps, than in the early days of the Victorian era, and those who at one period considered the garden as a shop from which to draw daily stores, now find enjoyment in its poetic aspect, and grow the flowers and fruits with a keen sense of satisfaction in the knowledge that a world hitherto veiled in mystery is being explored and is yielding undreamed-of pleasure.

The hybridisation conference held in the Royal Horticultural Society's Gardens at Chiswick was a notable event, not merely of the past year, but of the entire century. When the horticultural history of the nineteenth century comes to be written, plant-hybridisation should form its most splendid chapter, and every month almost we receive gifts from those who have made this their especial study. In the hands of the hybridist, distinct and beautiful flowers and improved forms of fruits and vegetables are moulded, and our gardens made to yield a more bountiful produce. To those nurserymen and gardeners who have given to the world so many good things our thanks are due. Horticulturists from abroad came to this conference to take their part in an important

event which concerned not merely our own land, but the nations of the world, who have contributed to the storehouse of new and improved forms of plant life.

It is with no mixed feelings of pleasure that we see the Royal Horticultural Society pursuing its steady and correct course of true horticulture, and whilst its direction remains in the present hands, this policy will remain. When a society founded for the good of horticulture forgets its mission to indulge in showmen's tricks, then it is time to so reform it that a new organisation is practically raised upon the wreck of a false and unworthy constitution. The Temple show was again a complete success, financially and otherwise, and the fruit exhibition at the Crystal Palace was a remarkable display of British productions, which must bring strong influence to bear upon the fruit industry of this country. Whilst writing of the exhibitions of the Royal Horticultural Society, we must remember that other societies, too, have played a large and good part in the horticultural year—societies devoted to the Rose, Chrysanthemum, Auricula, Picotee, Dahlia and others, and we are thankful that greater artistic exhibits are displayed of the various flowers. It is becoming almost a pleasure to visit some exhibitions, where simple groups are arranged to show the true beauty of flowers, hitherto cramped into a set space or jammed together in masses. The object of an exhibition is not to put petals on a box, or to create splashes of colour by fuzzy muddling representations. Exhibitions have a great power for good, and it is a power that has not been used to the best advantage in the past. It is no unreasonable wish to expect a still greater development of the policy of remembering that a flower is a thing of beauty, and should be displayed to show forth that beauty in its fulness.

Gardens and nurseries suffered severely from the heat of the summer, and drought teaches gardeners wholesome lessons. Those who fail to thoroughly trench their soil, and therefore never provide a foundation for the roots to live upon in times of drought, will always grumble when rain is absent for weeks and even months.

The records at Greenwich show that the total rainfall for the year in the London neighbourhood was 22.1 inches, and this is less by 2.4 inches than the average. It is interesting and important to know that during the past seventeen years only three years have shown any excess. August was the driest month, the total measurement being 0.35 inch, and this is a record for the past sixty years.

Of the legislation affecting the Agricultural Ratings Act we shall have much to say in the future, also of the restrictions regarding the sale of insecticides and weed-killers. An attempt has been made to cripple or destroy an industry of importance to the trade and gardeners—unthinkingly perhaps, but that does not satisfy one's desire for reasonable consideration.

In many a gardener's home the Angel of Death has beckoned to higher realms the worker we knew and respected—some stricken in almost youth and in the prime of life, others after long and busy years spent for the good of horticulture. John Lee, a great nurseryman and supporter of the Royal Gardeners' Benevolent Institution, has gone, at the age of 94, and amongst other familiar and famous names must be mentioned Kelway, of Langport, Lord Pezance, Henry de Vilmorin, Francis Rivers, Charles Naudin, the French botanist and hybridist, T. J. Saltmarsh, William Thomson, W. H. Protheroe, Malcolm Dunn, prince of Scottish gardeners, Major Mason, A. Outram, and T. W. Girdlestone. Their good works will ever remain, for each in his own branch of horticulture achieved lasting results, as notices of their life-work in our columns at the time of their death have shown.

This restless age urges the younger horticulturists to follow in the footsteps of those good men whose earthly work has not been completed, but remains for others to take up and again hand down to future generations.

The names of many famous hybridists are recorded in this list. That great leader, Kelway, of Langport, has enriched English gardens with a hundred noble flowers—Delphiniums, Peonies, Gladioli, and other plants precious to the gardener; and of Lord Pezance one may write that his name will be perpetuated, not by judicial acts, but by the work performed in leisure hours in promoting a race of hybrid Briar Roses to perfume the English garden.

But many articles could be written upon all these worthy horticulturists, of that famous rosarian, T. W. Girdlestone, whose knowledge of Roses and charm of style are lost to *GARDEN* readers; Francis Rivers, of Sawbridgeworth, and Henry Martin, whose work amongst florists' flowers is written large in the greenhouses of the world. We mourn their loss, but are ever reminded of their good work by the flowers and fruits about us—memorials, ever tending to our pleasure and comfort.

GARDEN THOUGHTS.

CYCLAMEN COMM.

HERE is a fascination about the earliest flowers of the year which is difficult at times to account for if we compare their charms with those of the summer. It lies not in their brilliance nor in the size of the blossoms they display. Many of them have small flowers, and many have pale colours which seem akin to the faint sunlight which looks wanly upon them. To the former class belong the flowers of *Cyclamen comm.*, but it cannot be said that its blooms want for bright colouring. As this is being written the flowers are yet concealed from the passer's view. If, however, we raise the stems which ere long will bring them into view, we shall see, tightly packed in a spiral form, the flowers already showing the crimson-purple which looks so bright against the dark earth or, it may be, the snow, when they are in the prime of their beauty. One would think that this colour would have vanished before that time. Not so; the dyes which make up the colour of this Sowbread or Bleeding Num are less evanescent than the lovely, yet fleeting, tints given by our aniline dyes. When they are fully open these flowers will show no traces of having withstood the stress of all "the rough weather," as dear, quaint George Herbert puts it. It is little short of marvellous to see these pretty flowers so early in the year. Exquisite as are the marbled leaves of the Neapolitan *Cyclamen* at present, we can admire still more when they are open the blooms of the winter *Cyclamen*. We have no dearth of leaves, winter though it is, but flowers and, above all, flowers of this colour are dearer still. The leaves of *Cyclamen comm.* are dull and unattractive when compared with the others. Their flowers are no better, but then they come at a time when we are wearying to see them appear among the harbingers of the floral year.

It is a flower one would fain see more largely grown in our rock garden or in cosy nooks where it would not be hidden by rank growth of other plants. It is not difficult to grow in light soil mingled with leaf-mould. In these places and in such soil it will give much pleasure when it sends up its dark stems, from which depend I do not know that "depend" is a good word, but I cannot think of a better, the bright flowers. It is a quaint fancy which has called the *Cyclamen* the Bleeding Num, but it is a more grateful name to our ears than the old one of Sowbread, which may be true enough in some of its native habitats, but is unpleasant to those who grow it for its beauty. I prefer the typical flower with its crimson-purple blooms, but appreciated also are the white, the rose, and the lilac varieties which are to be had as well. One may, perhaps, have been thought too enthusiastic in thus writing in praise of this *Cyclamen*. It is not easy to write coldly or in faint praise of such gifts of the time. S. T.

SEDUM BREVIFOLIUM VAR. POTTSI.

I HAVE been favoured with several interesting and valued letters upon the cultivation of this pretty, but little-known Stoncrop. It is to be feared, however, that the diversity of experience they reveal is not particularly satisfactory to those who have had similar troubles to those the writer has experienced in attempting to grow it. It is, notwithstanding, pleasant to find that it can be grown with success under conditions of the most opposite kind. The correspondence with which I have been favoured shows in a marked degree the truth that success with many plants cannot be secured by following any one method. Climate must remain a factor which sets at defiance our impressions derived from other gardens.

The last remark is dictated by Mr. E. C. Buxton remarking, in reply to a suggestion of mine that possibly the wet climate here was the cause of the failure of this *Sedum* with me, that he found it could hardly be kept too wet in summer. He also pointed out that the rainfall in his district was

from 60 inches to 70 inches. This is a great deal more than we have here. This remark would probably have made one come to the conclusion that the wet was not the cause of the loss of this Stoncrop, had it not been that a note from a good friend in Roxburghshire informed me that he did not think that it was quite hardy there. This was followed by a second note, which told of the experience of Mr. Potts, the original introducer of it to our gardens in Britain. It appears that it is quite hardy in his garden at Lasswade, near Edinburgh, but that it requires to be protected from wet in winter by a plate of glass overhead. In North Wales it seems to enjoy all the rain it can get in a wet climate, while near Edinburgh in a dry district it needs to be kept dry in winter. It is all rather puzzling, yet encouraging to those who have lost it in the past. One is anxious that so pretty a Stoncrop should find its way more largely into gardens of choice alpinists. It may appear to some that a Stoncrop is too insignificant to trouble about. That will not be the opinion of those who have studied the beautiful colouring of the one under notice.

I am also glad to have had an opportunity of finding out something about the history of *Sedum brevifolium* var. *Pottsi*. It has transpired that Mr. Potts got it about twenty-five years ago from the Jardin des Plantes in Paris along with some others. It has probably another name, but it will not be easy to discover what it is. It has found its way into commerce in Britain under the above name, which associates with it the name of a good lover of flowers. S. AENOTT.

Carethron, by Dumfries, N. B.

HYACINTHUS AZUREUS.

THE little spikes of the pretty *Hyacinthus azureus* are now coming on as quickly as the weather will allow, and soon we shall see at their best the cone of flowers it gives. It is more like a Grape Hyacinth or Muscari than any of the other plants we grow as *Hyacinthus*, and it might, for purely garden purposes, have remained under its old name of *Muscari azureum*. It is in form a Grape Hyacinth and gives us the earliest hardy flower of the shape so familiar to all who care for the *Muscari*. It is not equal in beauty to some of the true Grape *Hyacinthus*, but then its earliness commends it in our eyes and makes one glad to see its flowers appear. It is quite hardy here, although some winters its spikes decay before the flowers open through the ice which forms at its base. This loss can be avoided by placing a piece of glass above the plants so as to throw off the rain. The worst enemy, however, that one has to face is the slug. It is exceedingly fond of the flowers just as they peep through the soil, and, if let alone, will soon destroy all one's hopes of a display of the soft blue flowers. This season some plants left unguarded by their zinc rings until too late are pitiful to look at and give one an oft-needed lesson of watchfulness and care being required in our garden work. Though it is not hardy in every garden, it is well worth a trial if it were for nothing but the pleasure it gives when flowers are scarce. A.

NEW AND RARE PLANTS.

KALANCHOE FLAMMEA.

I AM very pleased to see this beautiful new plant so highly praised. It is one of the finest things of 1899. There was a most attractive group at Kew last year, and it was also well shown from the same source at the hybrid conference held at Chiswick. True, it had flowered previously at Kew for the first time in 1897, but last year was the first occasion on which its great merits were generally recognised. When exhibited it was generally understood that the entire stock had passed into the hands of Messrs. James Veitch and Sons, and as they are already offering seed, it will doubtless be soon extensively grown. This

Kalanchoe, which is a native of Somaliland, is a near relative of *Crassula* or *Kalosanthes coccinea*, and, like that, is a plant of easy culture. It forms a branching specimen about 18 inches high, of erect growth, and clothed with green spatulate leaves, from 2 inches to 3 inches long, disposed in pairs. The flowers are arranged in a compound umbel nearly a foot across, and have four petals, very much like a *Bouvardia*, about three-quarters of an inch in width, and of a very charming shade of orange-scarlet. Owing to their succulent nature the individual flowers remain bright and fresh for a considerable period, and a large number are borne in each head. T.

CYPRIPEDIUM SIR R. BULLER.

THIS hybrid is said to have been derived from the intercrossing of *C. Smithi* and *C. insignis*. Though somewhat uncertain as regards the parentage, it is, however, remarkable. The dorsal sepal is $3\frac{1}{2}$ inches long and 3 inches broad, the upper portion being white tinted with rose, thickly spotted with deep rosy purple. The basal two-thirds is pale green, densely covered with deep brown spots. The petals are $3\frac{1}{2}$ inches long and 1 inch broad, pale green at the base, becoming suffused with purple on the apical halves. There are numerous large purple-brown blotches as seen in *C. Swinburnei magnificum*. The lip is $2\frac{1}{2}$ inches long, pale brown, shading to green at the base; the lower sepal pale green, lined with a darker shade of green with some brown spotting at the base. It is a most desirable acquisition. From Mr. W. M. Appleton, Weston-super-Mare. First-class certificate, Royal Horticultural Society, January 9.

LELIA ANCEPS VAR. LEEANA.

THIS is one of the oldest of the white section of *L. anceps*. The sepals and petals are each about 2 inches long, pure white, of good form and substance. The lip has the apical lobe faintly tipped with rose in front; the central area white in front of the yellow disc; the side lobes of a rose tint shading to yellow. On the yellow there are numerous rich purple veins extending from the base outwards. A cut raceme of four flowers came from the collection of Sir T. Lawrence, Bart., Burford, Dorset (gardener, Mr. White).—Award of merit, Royal Horticultural Society, January 9.

ZYGOCOLAX LEOPARDINUS (WIGAN'S VARIETY).

THIS is of remarkable colour. It is the result of intercrossing *Zygopetalum Gautieri* and *Colax jugosus*. The sepals and petals are each rather more than 1 inch long, pale green, beautifully marbled and spotted with rich brown; the lip nearly 1 inch broad, reflexed at the base. The front lobe is pale blue, veined with darker blue, the raised portion which forms the side lobes being of a deeper shade of colour, mottled with white at the base. It is a distinct and desirable form from Sir F. Wigan, Bart., Clare Lawn, East Sheen. Award of merit, Royal Horticultural Society, January 9.

ZYGOCOLAX WIGANIANA.

THIS is a pretty hybrid between *Z. Mackayi intermedia* and *C. jugosus*, the flowers being about 2 inches in diameter. The ground colour of the sepals and petals is bright green, thickly covered with light brown spotting, the lip white, lined and blotched with deep violet-purple. From Sir F. Wigan, Bart.—Award of merit, Royal Horticultural Society, January 9.

CHINESE PRIMULA GEN. FRENCH.

THIS is one of the most distinct of the semi-double varieties; the flower is of charming form and intense crimson in colour, a rich velvety and welcome shade, so deep that in a group it is remarkably telling. Shown by Messrs. Sutton and Sons, of Reading, at the last meeting of the Royal Horticultural Society, and given an award of merit.

THE FLOWER GARDEN.

A USEFUL HARDY PALM.

CHAMEROPS EXCELSA.

THE Palm that withstand open-air culture in these isles are few in number, and *Trachycarpus Fortunei*, perhaps better known as *Chamerops excelsa*, is the hardiest of this small decorative group. It is a Chinese and Japanese plant, introduced to this country nearly half a century ago, and a large well-cared-for plant is handsome, few ornamental-leaved plants being more effective on the lawn, as the large fan-shaped leaves

being a valuable preventive against insect pests. During the growing season copious supplies of water should be given, as the plant delights in plenty of moisture at the roots.

THE FOAM FLOWER (*TIARELLA CORDIFOLIA*).

This plant, so suitably named the Foam Flower, is not nearly so often seen as it ought to be, although it was introduced to this country from North America over 150 years ago. The accompanying illustration represents quite a small patch, but when seen in a mass 20 feet square it is a most beautiful sight. It is of the simplest culture, requiring a fairly light soil and a plentiful supply of rotten

the leading classes at such exhibitions, we have a far more authentic and reliable selection than all the prophets and oracles in the Chrysanthemum world can possibly produce.

During the past season it has been curious to note the frequency with which some varieties have been shown at our autumn shows, and the almost total absence of some much-lauded novelties. Taking the winning stands in twenty-four classes at our best exhibitions in the United Kingdom, which seems to me to be a fairly representative test, I find the following results:

Mme. Carnot, Australia, shown 22 times each; Mrs. G. W. Palmer, Phoebus, 20 times each; Mrs. W. Mease, 19; Mrs. C. Harman Payne, M. Chenou de Leche, Viviani Morel, 18 times each; Edith Tabor, Mme. Gustave Henry, 16 times each; Mrs.



THE FOAM FLOWER (*TIARELLA CORDIFOLIA*) IN MR. KINGSMILL'S GARDEN.

are of a pleasing shade of green, and give quite a tropical aspect to the surroundings. Although not particular as regards soil, one composed largely of turfy loam and peat suits it admirably, but particular attention should be paid to drainage, as once the roots travel into sour soil, the leaves soon change from the healthy green to an ugly yellowish brown shade. Position is another point of importance. The plants should be sheltered from biting winds, as the young fronds are susceptible to disfigurement by winds from the east and north. This Palm is admirably adapted for subtropical gardening, also for growing in pots for placing in vestibules, lobbies, &c., as gas has little effect upon it. When grown under cover the leaves should be sponged occasionally with soft soap and water, which greatly increases the general appearance of the plant, as well as

wood, in which it spreads literally like a weed, and although its chief charm is, of course, its flowers, its leaves are lovely all the year round.

Narrow Wood, Middlesex.

A. KINGSMILL.

MOST POPULAR CHRYSANTHEMUMS.

It often happens that a young Chrysanthemum grower, bewildered perhaps by the never-ending lists of varieties that come before him, applies to the Press for advice as to the best twenty-four, thirty-six, and forty-eight varieties for show purposes. There can be no surer test of the value of show Chrysanthemums than the show boards at our leading exhibitions, and if we tabulate the names of the varieties on the winning stands in

J. Lewis, 15; Pride of Exmouth, 14; Charles Davis, Lady Harham, 13 times each; Lady Ridgway, M. Hoste, 12 times each; Pride of Madford, Eva Knowles, 11 times each; Mme. L. Rémy, Mrs. Weeks, Edwin Molyneux, Robert Powell, Mutual Friend, 10 times each; Graphie, G. J. Warren, Mrs. White Popham, Miss Nellie Pickett, 9 times each; J. Bidencope, President Nomin, Le Grand Dragon, 8 times each; Mme. G. Bruant, Secrétaire Fierens, M. Pankoucke, N.C.S. Jubilee, Duke of Wellington, 7 times each. Other varieties in order of merit shown less than seven times each are Oceana, Modesto, Mrs. J. Barks, Simplicity, Soleil d'Octobre, Mme. Ph. Rivore, Souvenir de F. Rosette, Milano, Chatsworth, Lord Ludlow, Australian Gold, and Marie Calvat.

C. HARMAN PAYNE.

TREES AND SHRUBS.

THE SHRUBBERY.

PROBABLY there is no branch of gardening more commonly neglected than the shrubbery, and even professional gardeners often appear to consider it no part of their duty to keep it in order; indeed, when they make an attempt in that direction by clearing out some of the ruder growth they are very likely to find their efforts discouraged and to hear a great outcry raised about the destruction which they have caused. The common idea of a shrubbery seems to be that it should be thickly planted and then left to itself, a few choice plants or flowers being introduced on the extreme margin. The result of this treatment is that in a few years nothing is left but the stronger and commoner shrubs, such as Privet, Laurel, and Aucuba, and these are all crowded together in such a way that they cannot take their natural forms, nor show such beauty as they possess; in consequence, it is very rare to find anyone, even though they may be very fond of flowers and interested in their garden, who takes any heed whatever of their shrubs or looks upon them in any other light than as necessary furniture to shut out the view of a road or outbuildings, or at best as a dark background which will enhance the beauty of a Gladiolus or a Sunflower.

I hope, however, to be able to show that this is not the fault of the shrubs, but of the way they are treated, and that if they are carefully planted, judiciously disposed, and well looked after, they may be made a most interesting feature, showing profusion of flower and blossom in the earlier months and even more brilliant colouring from their foliage in the autumn. Many people will say, "Oh! I have only a small garden; it is no use my attempting shrubs, I have no room"; but I would reply that though I have very often heard this speech I have hardly ever seen any garden, whatever its size, without some trees or shrubs which were either ill-grown, unsuited to their position, or damaging to their neighbours, and which would have greatly benefited from their removal and replacement by others of more merit and distinctive character.

Let us, however, imagine someone deciding either to form a collection of shrubs *de novo*, or clearing out and replanting an old neglected shrubbery, and consider what had better be done. The latter is likely to be the more usual, though not in the end the most satisfactory, proceeding, and may, therefore, be first discussed.

In the first place, if there be any large number of old, big forest trees, such as Elm or Beech, and the owner is not willing to sacrifice them, it is perfectly useless to introduce a lot of fancy plants into their vicinity, as there are not more than about half-a-dozen shrubs of any kind that will do well in such conditions; but supposing that the trees are not very big nor very numerous, and are of such a nature as Birch or Acacia, which are two of those that are least hurtful to the undergrowth, then I would look them carefully over and remove all that I could possibly spare without laying the place too bare, seeing that all the condemned trees were stocked clean out and their roots extirpated. Very often people content themselves with having trees cut down close to the ground to save expense, but this in a garden at any rate is false economy, for it

should be remembered that a tree occupies, generally speaking, as much room under ground as it does above. Though the mere cutting of it down will relieve its neighbours from the disadvantage of shade and drip, it will not render the adjoining ground a fit receptacle for young and tender shrubs, nor in the case of most deciduous trees will the operation kill the roots at all, and consequently an unsightly coppice growth will take place, accompanied often by a quantity of suckers for a considerable circumference. No one without actual experience would believe the distance to which the roots of old trees such as Elms will travel, nor the mischief which they do by exhaustion of the soil. Sooner or later, therefore, the stool will have to be stocked out, and this will be found more laborious and expensive than it would have been with the weight of the tree helping the task of extirpation.

I would never recommend anyone who was attempting to clear out a garden with a view to renovation to take it all in hand at once, both on account of the devastated appearance at first necessarily produced, and because of the loss of accustomed shelter which must be involved. It is far better to work in sections, doing a piece every year, and starting by turning the worst planted part into the best by filling it pretty full with as large an assortment as it can hold of choice trees and shrubs. In two years' time these will have closed up sufficiently to provide a nursery from which to draw for improving other parts of the garden, and the gaps so made can be filled by smaller specimens of plants lacking to your collection. It is desirable to buy your shrubs small in the first instance from the nurseryman, both on the score of expense and because the loss owing to removal from a distance is both less frequent and less important. On the other hand, small and weakly plants are less fitted to live alongside old overgrown stuff than those which are well rooted and five or six years old; therefore the advantage is obvious of starting by filling up the barest and worst section of the garden with a shrubbery that will really form your private nursery, from which you can draw out duplicates and vigorous plants, which, owing to the short distance to their new quarters, can be removed with a large ball of earth and with only a few minutes' exposure of their roots to the air.

It should be borne in mind that a good loamy soil is all important to almost every shrub in its young state, though many of them, if they be given a good start, will, when once well established, fight along very well and push their roots through barren or heavy soil, whereas they would have been quite incapable of such an effort after the first shock of removal. It therefore follows that if disappointment is not to result, you must, unless your soil is exceptionally good, see that your new purchases are hospitably received and treated to the best nourishment you can provide until they have made themselves at home. The clearing out of an old vine border or the top spit of grass-land, where for any reason pasture is being broken up, will provide you with a useful fund for this purpose. Not one penny which is spent on trenching and draining of the ground (assuming it to be properly done), or on care in planting the young shrubs will be found to be thrown away, and in a few years you will be rewarded by your friends saying, "I can't understand why all the things do so well with you, what a splendid soil, climate, &c., you have, if only I were equally well situated, but I find that all my so-and-so's die off," &c., and you will have to bear with becoming resignation the fact that the last thing which it

will occur to your visitors to credit you with is any exceptional supply of brains or pains.

Now, to turn to the consideration of the planting of a new garden with shrubs and trees, here too most of the above remarks will apply, and the task will really be at once easier and more satisfactory. Your main object at first ought to be to secure as rapidly and efficiently as possible for your choicer plants good shelter from the wind. For this purpose *Pinus austriaca*, Larch, Hazel, and even Balsam Poplar should be freely intermingled, as they will serve the purpose well and cheaply, but it must be on the implied understanding that you will harden your heart and ruthlessly clear them out when that purpose has been served and before they have begun to inflict injury instead of benefit.

You will have also to pay regard to the class of plants which are likely to thrive in your soil and climate, and in the first instance, at any rate, confine yourself to these. Thus, if your soil is very heavy, you would do wisely to avoid all delicate conifers, and to remember that even such ordinary trees as Beech and Larch are not likely to give a very good result, whilst, if your soil is light and shallow, to plant Oak would be a waste of money, and though none of your trees will in such a case ever assume enormous proportions, yet among the best will be found those mentioned as unsuitable to clay.

Of course to give a list of all trees and shrubs suited to particular grounds would be quite outside the limits of an article like this, and, feeling that I have already trespassed on the editor's indulgence, I will conclude with a word of warning to beginners not to attempt the growth of half-hardy plants, as in most places in England other than on the seacoast a collection must be a very large one that includes all the beautiful trees and shrubs which can be grown without needing any protection.

VICARY GRASS.

Abraham House, Elstree, Herts.

Hibbertia dentata. In any selection of greenhouse climbers, however small, this should have a place, as it flowers in the depth of winter and continues for some time, and its leaves are handsome also. It is of a slender, twining habit of growth, while the oblong-shaped leaves are deep green in the adult stage, but when young tinged with bronzy-red. The bark of the young shoots is also of the same tint. The flowers are from 1½ inches to 2 inches across and of a bright yellow colour. Their general appearance reminds one of a *Hypericum*. The *Hibbertias* are nearly all natives of Australia. Some form little twiggy bushes, while one species, *H. volubilis*, is a bold-growing climber, with large showy yellow flowers, which are, however, unpleasantly scented. As a garden plant *H. dentata* is far and away the best of them all.

Stokesia cyanea in Devonshire.—On page 480 "E. J." writes that he was not aware that this plant was generally flowered in Devonshire. He is right about South Devon—North Devon gardens I am but little acquainted with—but this is owing to its being so little grown, and not to its failing to produce bloom in the open. During the past five years this plant has flowered well in a flat bed of heavy loam in a very open situation, and was an exceedingly pretty sight during the last week in September, a period at which *Aster grandiflorus*, another late-blooming autumnal plant, had not attained the full measure of its beauty, which generally reaches its zenith about mid-October. Both plants are sufficiently attractive to deserve pot culture in localities where climatic conditions are unfavourable to flower-production. In a damp and semi-shaded position the *Stokesia* not unfrequently perishes in the winter even in South Devon. In mild seasons it flowers through the greater part of October and often into November.—S. W. F.

STOVE AND GREENHOUSE.

CARNATION MME. THERESE FRANCO.

No other Carnation probably has created such a diversity of opinion as to its merits as this variety. To the market grower it may not be so profitable as some others, owing to its successional habit of flowering, as growers for profit like those varieties best which make a display all at once, and which can then be put on one side to make room for others; but the habit which market growers like least of all is the very one which makes such varieties the most valuable for private growers, who have to keep up a constant, if limited, supply from comparatively few plants. Personally, I look on this as quite the best winter-flowering Carnation I have ever grown, and I do not think it is likely to be soon beaten, for in colour, size, and form, combined with a good constitution, it meets the requirements of most growers. Certainly, the colour is not quite so clear as that of Miss Joliffe, but the flowers are superior to those of that once popular variety, and when cut in the young stage there is not much to choose between them, and for those who care for deeper colour the flowers may be allowed to get a few days older before cutting. The question of identity between Mme. Therese Franco and Mrs. Leopold Rothschild has never been definitely settled; but, as far as I can see, and I have grown this year batches under both names and obtained from different sources, they are absolutely the same. The nearest approach to Mme. Therese Franco in colour is Reginald Godfrey, but this lovely variety does not deepen so much with age and is a little paler when opening; but I cannot see that it will ever take the place of the older variety with private growers, as it does not make so much grass or give so many flowers, though those borne by each plant come in practically together, and this may enhance its value for market.

J. C. TALLACK.

a bright orange-red, produced from the axils of the leaves on the tops of the shoots.

Diosca juncata.—A native of Chili, also known under the name of *D. chamaedifolia*, *Baillonia juncata*, *Dipyrena dentata*, *Lippia juncata* and *Vervena juncata*. It is a curious and interesting trailing shrub, producing numerous bunches of small pure white tubular flowers, many bunches of which crown the extremities of every shoot. It is hardy at Kew and flowers in the month of June.

Rhododendron arboreum var. Kingianum. A native of Manipur. A beautiful bright Indian species, named after Sir George King, and bearing fine trusses of tubular flowers of an intense scarlet, with rose-coloured stamens, resembling those of *R. Thomsoni*, but rather smaller.

The first number of the 26th volume of *Revue de l'Horticulture Belge et Etrangere* for the month of January contains portraits of the following two plants (the first of which should not have appeared

by accurate descriptions by a learned Belgian botanist, of the most interesting and uncommon plants bloomed in his rich collection, and bearing the title of *Icones selecta horti Theuensis*. The second part of this work is just on the point of publication.

The January first number of the Paris *Revue Horticole* gives a group or bunch of the well-known Shirley single Poppies, so popular in English gardens. W. E. GUMBLETON.

CREEPER-CLAD COTTAGES.

More of the charm of many a wayside cottage is owing to the way in which it is graced and embowered with climbing plants. Such a bountiful adornment is not only a delightful sight in itself, but in the earlier years of its growth gives to the modest cottage home a sentiment as of a place well loved



A CREEPER-COVERED COTTAGE.

RECENT PLANT PORTRAITS.

THE *Botanical Magazine* for January contains portraits of the following five plants, all bloomed in the Royal Gardens, Kew, and described by Sir Joseph Hooker, the editor:

Coryphantha or Gonopora verticillata. A fine double plate of this noble Orchid, which is a native of Guiana and Venezuela, and produces handsome and most curiously spotted flowers usually in pairs, and somewhat resembling in shape those of a Stanhopea.

Haylockia pusilla. A native of Uruguay, also known under the names of *Sternbergia americana* and *Zephyranthes pusilla*. A most beautiful and interesting little Amryllid, first bloomed by the late Dean Herbert, of Manchester, in his celebrated garden at Spofforth, and named after his gardener. The flowers resemble those of a small *Colehiemum*, and some of them are primrose-yellow and some rosy-white.

Machaonia lasignis, a native of Mexico, is a handsome vacciniaceous greenhouse shrub, with bunches of from three to four tubular flowers of

(till the next number, but is now published, as the plate that should now have appeared is not ready, owing to an accident in the printing):—

Cytisus nigricans.—A graceful pretty Broom, with long upright spikes of yellow flowers, distinctly spotted with reddish-brown on the outer petals.

Entaria myrtifolia. A curious and free-blooming greenhouse shrub belonging to the family of the Podalyric and a native of Western Australia. Its flowers are orange-red in colour and small in size, but most freely produced. This plant was figured in the 31st volume of the *Botanical Magazine* in 1810, but has long ago been dropped out of cultivation, save in botanic gardens, till re-introduced by the Belgian amateur, M. Leon van den Bosch, of Tullefont, who writes a long and interesting article to accompany this plate, on other members of this family and kindred West Australian plants, with which he seems to be most intimately acquainted. This enthusiastic amateur is now also publishing for private circulation only, amongst his friends and botanists generally, a series of beautifully-executed uncoloured plates, accompanied

and well cared for. Then, as the years go by, and the wreathing of beautiful vegetation becomes fuller and stronger, the impression changes; for now it seems as though the climbing plants, with their beauty of leaf and bonny of bloom, had taken upon themselves as a dutious office the guarding and cherishing of the humble dwelling—thus paying back in their time of mature growth their debt of gratitude to those who had kindly and carefully nurtured their youth.

DRACÆNA EECKHAUTEI.

This *Dracæna*, belonging to the same section as *D. rubra*, &c., is undoubtedly the best and most graceful of all the green varieties. It has pretty arching leaves, which often attain a length of 2 feet. The great feature of this plant is that it does not drop its leaves in the way that most of the other varieties do, tall plants retaining their foliage to the bottom. We saw a fine specimen lately at Messrs. J. Veitch and Sons' Nursery, Chelsea.

DOUBLE ROCKETS.

A LETTER FROM IRELAND.

I HAVE seen with interest Mr. Arnott's paper in *THE GARDEN*, December 30, p. 518, on double Rockets, although it contains the somewhat chilling intimation that his "taste does not lie in that direction"! Where does he expect to go to? I solemnly pray that he may be judged with mercy. Why, what June flowers can be placed above (I had almost said along with) them? Not only are they beautiful, but their scent is delicious. To stroll out on a fine June evening about eight or nine o'clock where some large clumps are in full bloom is a joy. The whole air is laden with perfume, and they smell nearly as powerfully in the daytime. Mr. Arnott mentions varieties, and although I know that picking holes in colours is like dancing on eggs—very delicate ground

I must ask him for some clear description of "a double scarlet or crimson" variety! "Double scarlet or crimson"! I can hardly believe my eyes. I thought I knew as much about double Rockets as most people, as I nearly worship them, but anything approaching to such a colour I never saw or heard of.

I at present possess in quantity six varieties: The French white; the Scotch or Eglinton, as it is often called (this kind has, I may say always, a faint trace of lilac at the top of its spike); the true old pure double white; the pale lilac, the most vigorous grower of all; the true old lilac, now nearly extinct (I was searching for it for thirty years, and at last discovered it to my great joy in an old garden in Westmeath); and the lower growing, shorter-spiked purple. This, I recollect, used to be called Parke's Rocket. I wonder whether my old lilac could by any possibility be Mr. Arnott's scarlet! I should be happy to give him a plant in April if he cared to write and ask me for one.

I have had (in a place I lived at thirty years ago) the old pure white and the old lilac 24 inches in spike. Here I have never gone beyond 19 inches. Many people make the mistake of allowing the side shoots to remain on. This gives the plant rather a weedy appearance, and of course takes from the length and majesty of the main spike.

Double Rockets are essentially plants for rich, deep, moist soils. I know that Miss Jekyll finds them difficult to grow on her sandy soil, but she has gone to great trouble with them, and imported strong soil specially for them from a distance. They are plants that cannot be left alone or left long in the same soil. Every third year at least they should be taken up and divided, placed in new soil, with which plenty of well-rotted cow manure and some lime rubbish have been incorporated. They strike very freely from cuttings put down as soon as they begin to push in spring, but they divide so satisfactorily, that now that I have plenty of them I do not go to the trouble of making cuttings. They have an enemy in the shape of a nasty white grub, which attacks them and eats out the blossom-spike when they are about 9 inches or so high. It must be searched for and destroyed. The curling of the leaves infallibly shows its presence.

It would be indeed a pity were such delightful flowers as double Rockets to pass out of existence. We have to deplore the loss to the

world of several favourites which I remember long, long ago. I may mention the double white Hepatica and the late double white Primrose.

Virginia Rectory, Ireland.

DENIS KNOX.

WHITE ROCKETS IN THE SOUTH.

ON page 518, vol. lvi., Mr. S. Arnott writes of the double Rockets, and views with regret the possibility of their loss. Whatever may be the case in Scotland, I do not fancy that their disappearance is imminent in the south-west of England, for, although they are not everybody's flower, they are still to be found in numbers of gardens. In a certain South Devon village many garden plots contain Rockets, a row in a narrow border in front of some almshouses containing, two years ago, some of the most vigorous plants it has ever been my lot to see. Personally, I am extremely partial to the double white Rocket, which I have now grown with success for nearly twenty



M. HENRY DE VILMORIN.

years, and would not willingly miss its delightful perfume on the dewy summer evenings. Its culture certainly involves a little more labour than is requisite in the case of the majority of hardy perennials, since continued robustness can only be maintained by dividing the plants in the autumn (some growers prefer the spring) and replanting in fresh soil. When treated in this manner, and provided with a deep and moderately rich root-run, the plants will attain a height of almost 3 feet, and produce fragrant bloom-spikes a foot in length. If these spikes are cut as soon as they commence to fade and become unsightly, the flowering period is extended for some weeks by the formation of bloom-bearing side shoots. Many years ago I grew the double purple Rocket, but gave it up, as I considered it far inferior to the white variety. At the same time I endeavoured to obtain the double crimson of which I had heard, but was unsuccessful. Now that the taste for old-fashioned flowers is spreading, the double Rocket, an especial favourite in our grandmothers' gardens, should be one of the first plants to benefit from extended culture, since its merits are undeniable. Single Rockets when grown in masses in the wild garden have a simple and pleasing effect.

S. W. F.

M. HENRY DE VILMORIN.

WE this week print a portrait of M. Henry de Vilmorin, which was engraved to accompany the dedication of the last volume of *THE GARDEN*, and some particulars of whose life will be found in the number for December 30, 1899. The engraving was delayed owing to the congestion caused by the Christmas traffic.

WOODLAND AND FOREST.

BIG FIRS.

THE big Oaks and Spanish Chestnuts have often been chronicled, but, so far as I have read, the big Larches, Spruces, and other members of the Pine family are not so well known. The Silver Fir, I believe, ranks first for size among the coniferae in Great Britain, and the largest are on the Duke of Argyle's estate at Rosneath Castle. One day not long since, while walking on the road to Inverary, I inquired of a man working on the roads if there were any fine trees in the neighbourhood, and his reply was: "Man, ye should see 'Adam and Eve.'" These, I learned, were two Silver Firs standing in a wood near the extremity of the peninsula which, near Helensburgh, on the Clyde, is separated from the mainland by the Gareloch. I was not long in getting a skiff and crossing over to the point indicated, where, growing close to the salt water's edge, I found one of the finest Spruce woods I have ever seen. All the trees were huge, running, I should say, to 400 and 500 cubic feet in bulk, and near the middle of the wood I found "Adam" and his partner, each carefully protected by a spiked pading. The tops of both trees had long ago been snapped off by gales some 40 feet or 50 feet up, and from the breaks on each huge limb, containing many cubic feet, had sprung. I was told that each tree contained about 700 cubic feet of timber, and their height would be about 120 feet. The plantation in which they stand is one of the oldest of the kind in this country. Argyle and Dumbarton are noted for their Spruces. On the highway to Luss, and close to Loch Lomond, are extensive woods in which are fine examples of both the Spruces, almost equalling in size those of Rosneath. At Paxton House, near Berwick-on-Tweed, are also some grand old specimens of the Silver Fir, as old, I should think, as those on the Clyde, but not quite so large. The east does not suit this tree so well as the west, and when I saw the Paxton House trees they were evidently in a state of decay.

The Larch ranks next to the Spruce for size. The two well-known trees in the grounds of the Duke of Athole at Dmkeld are popularly supposed to be the first Larches planted in Britain and the largest of their kind. That, however, is not the case. The biggest Larches, of which there are a number, are at Monymusk, in Aberdeenshire, on Sir Arthur Grant's estate, noted for its timber, especially its Scotch Fir, said to be the best in Scotland. I had the opportunity of looking over the woods there last year by the kindness of Sir Arthur Grant, and had the measurements given me of the Larch, one or two of which exceeded the Dmkeld trees in cubic feet, and, if I remember rightly, the latter measured together nearly 700 feet. They are

fine trees in both places. Close by the Dunkeld Larches is one of the largest Douglas Firs in the country also. This tree was planted in 1845, and contains about 100 cubic feet. I have measured it twice within the last fifteen years, guessing the height, and it cannot be much less than I have stated. This tree shows what the Douglas Fir may be expected to do as a timber tree. If a lawn specimen will produce 100 cubic feet in fifty years or less, plantation trees, reckoned at half that in the same time (an ample allowance), should produce a crop of from 15,000 feet to 20,000 feet to the acre and from 7000 feet to 10,000 feet in fifty years. In German forests 17,000 feet is expected in the final yield of Spruce under fair conditions. There are some very big Larches here and there in England and Wales, but none equalling the Scotch trees.

Many grand examples of the Scotch Fir are to be found in Scotland, and there are some fine examples at Monymusk, on the river Don, not far from the Larch trees before mentioned. A great inroad was made in the mature Scotch Fir forests when the Highland railways were made. Sixty thousand pounds' worth was supplied from Athole woods alone from near Dunkeld for sleepers. The Queen's natural Scotch Fir woods near Balmoral are now spared, but there was a time, not so long ago, when trees existed there from which planks 3 feet wide and proportionally long could be cut. The run on big Scotch Fir in England has swept the older trees away, but trees 4 feet in diameter, containing timber every way equal to the best Scotch, have been felled on the Surrey sands. At the present time there still exist on the Beaulieu Abbey estate, in the New Forest, Scotch Firs running from 120 feet to 130 feet in height with clean, model trunks of splendid timber. These trees were planted by John Duke of Monmouth some time in the last century, but they have been grown on a different plan from that practised on the later generations of Scotch Fir there. Plenty of examples are yet to be found, I believe, in Scotland containing from 200 to 300 cubic feet, but such grand trees as were once felled in Glenmore Forest are, I fear, no longer to be found. It is recorded that Scotch Fir once grew there from which planks over 5 feet in width could be cut, a diameter which would mean something like 500 cubic feet in the trunk.

What the dimensions of some of the exotic conifers introduced within the last 200 years may be now we have no good record, but there must be some fine specimens in existence in various parts of the country. I know of no place where such a collection can be seen as that at Murtle Castle, Perthshire. I believe all the conifers likely to grow in this country have been tried there, the different species having been planted as soon as they were introduced, and the extensive grounds, devoted almost entirely to the newer conifers, present the appearance of a forest more than anything else.

The Wellingtonias, Cedars, Douglas Firs, *Pinus mollis*, *P. Lambertiana*, *P. Strobus*, *Abies Albertiana*, *A. firma*, *A. Nordmanniana*, *Arancias*, *Taxodimus*, *Thuja*, &c., are all of large size, showing their comparative merits as growers at least, in a climate that must test their hardiness as far as severe winters are concerned. Mr. Murray Latley, of Murtle, and now head forester on Lord Powerscourt's estates in Ireland, could furnish much interesting information about the Murtle trees. I spent a very pleasant day with him amongst his trees last year, but had not time to take so many notes as I could have wished.

J. SIMPSON.

THE UMBRELLA PINE.

PLANTED in fertile soil and suitably placed, *Sciadopitys verticillata* (Umbrella Pine) is not only distinct, but one of the most delightful of Japanese conifers. In its native country it is said to grow to a height of 100 feet or more, but few plants in these isles are as yet 30 feet high, although it was introduced nearly forty years ago. It is of slow growth, of pyramidal habit, with stout horizontal branches, and long, narrow, deep green leathery leaves borne in whorls at the points of the shoots, which when fully expanded bear some resemblance to an umbrella, hence the popular name, although, botanically considered, the tree is quite distinct from the Pine family. This uncommon conifer thrives best in a compost of fibrous peat, turfy loam and leaf soil. Perfect drainage and a position shielded from east winds should also be secured.

ASTER, OR CALLISTEPHUS SINENSIS.

A FEW weeks ago several notes appeared in THE GARDEN about this new form of an old friend, but we think that none of them gave it the whole-hearted commendation that so good a plant deserves. We have long wanted a free-growing China Aster, whether single or double, and here is exactly the noble plant of handsome habit and abundant bloom that answers the need.

If seed growers would only give some attention to producing forms of plants that are really desired, how greatly it would add to the beauty of our gardens. As a rule, they seem still to hold to the demands that resulted from the prevalent practice of the bedding system, which required that all plants should be dwarf and compact. Much of this influence was destructive to true utility, derogating the plant from its true place and character as a thing of beauty to a lower position as a mere impersonal unit in a space of colouring of some even height. And though bedding is still practised and in its own place quite rightly, it has now given way to the better garden knowledge, which desires that each good plant should preserve its own individual dignity and present itself in the best and handsomest form that is suitable to its nature. And as year by year the eyes of more people are being opened to the delights of good gardening, so they are learning to see for themselves what are the qualities that go to the making of a good plant, and so also they become impatient when a thing that is capable of displaying the highest beauty is driven into a form that is no longer approved, and therefore is no longer wanted.

Many a time we have heard of late of the owners of good places forbidding their gardeners to grow China Asters, on the ground of their being stiff, ugly, and uninteresting. It cannot be denied that, judging by the best standards of taste, they are so. Here is a plant, whose fault already was a certain over-rigidity and stiffness of form, stunted into still greater stiffness.

We do not want a plant to be weak or loose or sprawly any more than we want it to be of the inevitable dwarf and compact shape; but we wish it to be of fair size without being gross, well balanced without being stiff, and handsomely set with good flowers without being crowded. We want the plant to be developed to the *best point of beauty of which it is capable*, but not to be driven beyond that point. Some races of plants can be bred into several kinds of good forms. Nearly all are capable of distortion and of being driven by ill-judged selection into shapes that are undesirable.

It has always been one of the chief aims of THE GARDEN to give encouragement to everything that will promote the beauty of plants as individuals as well as of gardening in broader views. We therefore make an earnest appeal to seed-growers to give us the beautiful plants that we want rather than to continue in pursuit of an unworthy ideal. How gladly we should hail the coming of a race of double China Asters with flowers of the older forms, but still more with those of the later and more free and desirable shapes, such as the Comet class, on large, free bushes such as we have in this fine new or, perhaps more correctly, new-old *Aster sinensis*. We have little hesitation in saying that such developments would without doubt meet with the success that they would deserve, and would not only prove of sound commercial value, but would give to thousands of people who love their gardens a greatly desired form of what might be a much more popular plant.

The dwarfed kinds need not be abandoned. Against their use by cottage folk, whose simple minds are attracted by the very qualities that make them unwelcome to those whose views of gardening are wider, we have nothing to say. The compact forms will always find favour with market growers, for the plant can be cheaply grown and potted up when in flower straight from the open ground, when it is gladly bought by poor town-dwellers for a few pence off barrows in the street.

We want first a good white single flower in all ways like the present purple. The many varieties already to hand show how willingly the plant breaks into varied forms. But we want to retain the handsome bush size and shape, and the strong, wholesome constitution which is shown not only by the length of time the whole plant remains in beauty, but by the long life of the cut blooms. We had three successive pickings, each of which lasted in water for a time that was nearer three weeks than a fortnight.

ON page 501 of last year's GARDEN there is a note by Mr. Jenkins, of Hampton Hill, which speaks disparagingly of the desirability of growing species of plants. He is writing of *Callistephus hortensis*, of which I have at present had no experience, but taking it that it is, as he assumes, "the original kind," it is extremely unlikely that the cultivated forms will "revert exactly to the original if left alone." Very often it is an undoubted fact that the species is much more beautiful and graceful than the plants that are raised by the hybridists from the original, and garden lovers are very pleased when a species is re-introduced, and surely such re-introduction ought to be encouraged as much as possible. To take one solitary instance, I may mention the case of *Chrysanthemum coronarium*, which was originally introduced into this country in 1620—oddly enough, exactly the same period which Mr. Jenkins gives for the introduction of *Callistephus*. In 1882 I saw this *Chrysanthemum* growing in profusion in Algeria, and brought home two small seedlings from which I ultimately got a good supply of seed. From this seed I raised a large patch of the plant, and Mr. Robinson, the late editor of THE GARDEN, was so charmed with the flower that he figured it in his paper, and alluded to me as having re-introduced it. It was greatly admired, and rightly considered much better than any of the many coloured varieties, the work of hybridists during the last 170 years. I had so many applications for seed from gardening friends and correspondents, that I had to have printed labels made for the packets which I sent them. Up till now, that is after seventeen years' trial, the plant comes absolutely true from seed.

A. KINGSMILL.

Harbour Wadd, Middlesex.

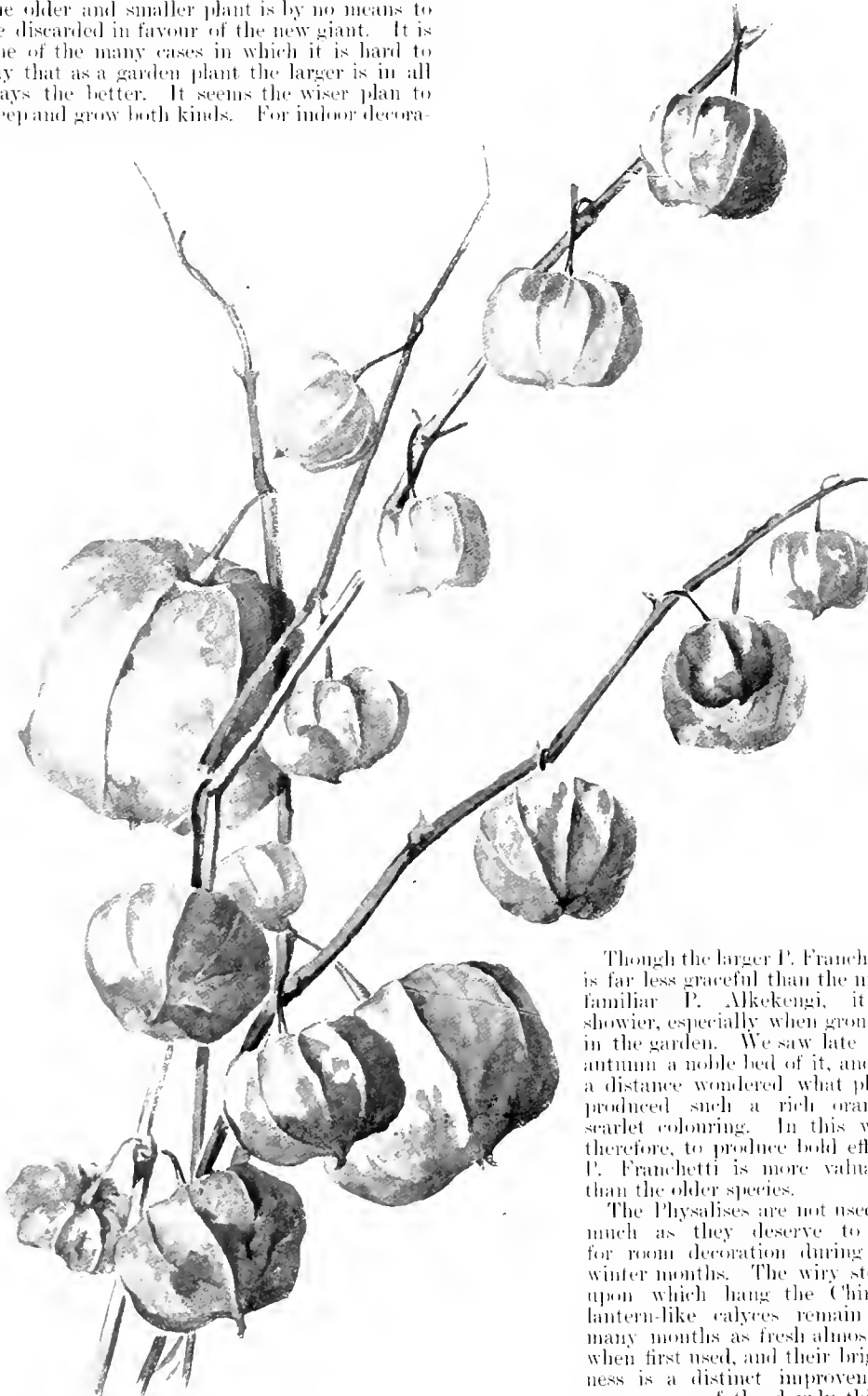
A coloured plate of this fine plant was given in THE GARDEN of November 22, 1887.

AN ARTIST'S NOTE-BOOK.

THE HARDY PHYSALIS.

THE merit of the old favourite Winter Cherry (*Physalis Alkekengi*) has been temporarily eclipsed by the glory of its newer big brother *P. Franchetti*. This is certainly a grand thing, larger in every way and just as easy to grow. But now that it has been with us a year or two, many good gardeners see that the older and smaller plant is by no means to be discarded in favour of the new giant. It is one of the many cases in which it is hard to say that as a garden plant the larger is in all ways the better. It seems the wiser plan to keep and grow both kinds. For indoor decora-

tion the old kind is the neater and handier to arrange, and it seems likely that as time goes on the smaller *Cerise en chemise*, as our French friends call it, will quite hold its own in general favour. It appears doubtful whether there is any botanical distinction between these two plants. *P. Franchetti* came a few years ago from Japan, and is a very handsome form, bolder and larger altogether than *P. Alkekengi*. They are both represented in the accompanying illustration. Both like a warm place in rich loamy soil.



PHYSALIS ALKEKENGI AND *P. FRANCHETTI* (LARGER KIND).
(From a Drawing by Aynes Cook.)

Though the larger *P. Franchetti* is far less graceful than the more familiar *P. Alkekengi*, it is showier, especially when grouped in the garden. We saw late last autumn a noble bed of it, and at a distance wondered what plant produced such a rich orange-searlet colouring. In this way, therefore, to produce bold effect, *P. Franchetti* is more valuable than the older species.

The *Physalises* are not used so much as they deserve to be for room decoration during the winter months. The wiry stems upon which hang the Chinese lantern-like calyces remain for many months as fresh almost as when first used, and their brightness is a distinct improvement upon many of the dowdy things used as "everlastings" in the winter. Associated with the

silvery *Honesty*, the *Physalis* is distinctly pleasing, but there are other ways in which it may be employed.

HELIOPHILA SCANDENS.

THE plant illustrated is an acquisition of no slight importance: it is a climber of free growth, with a profusion of white Jasmine-like flowers in the winter months. We recently noticed it in beauty in the succulent house at Kew, the twining stems falling down gracefully and creating an unusual effect. Where *Clematis indivisa* succeeds, *Heliofila scandens* is happy also.

IRIS STYLOSA.

SUCH rare blossoms as brighten this dull season are all the more precious owing to their infrequency. The touch of frost that we have already experienced has acted prejudicially in destroying and retarding bloom in more northern localities, and also in such southern and south-western gardens as lie in exposed situations. In sheltered nooks, however, the lovely Algerian Iris (*I. stylosa* or *unguicularis*) and its white variety are in flower, and, where some slight protection is afforded, remain uninjured except by severe frosts, a mulching of some light material round the clump and an inverted hamper placed over the plant at night generally sufficing to preserve the unexpanded buds—in which condition they should be cut for indoor decoration—from injury.

BEGONIAS AFTER FLOWERING.

As the plants of that popular winter-flowering Begonia, *Gloire de Lorraine*, go out of flower they should be taken from the flowering house, and after having shortened back the growth so that they may be stored closely together, placed in a pit where they can enjoy an intermediate temperature, a light position and an atmosphere in which there is a moderate amount of moisture. Very little water should be given to the roots during the next few weeks, as the best cuttings are given by plants which have been allowed to rest for a time, and nothing is gained by hurrying their production. The best and the only cuttings that should be used, except, perhaps, where stock plants are limited in number, are those thrown up in the form of sucker growths from the base of the plants; these grow away freely from the first and do not give half the trouble that stem cuttings give in picking off flower buds while the plants are small; they also make growth of the best character for basket plants, and it is in baskets that this plant is seen at its best. Fumigate the pit frequently to destroy any of the little yellow thrips which are so partial to Begonias, and do not allow any other plants which these insects infest to be brought into the house, for they are difficult pests to destroy, and do more harm than any other insect pests to plants which they attack. It is rather late to advise selection of plants for propagating as the flowers will be getting over, but the best types certainly should be picked out, as the stock is decidedly mixed and contains forms poor by comparison with others.

CARNATIONS.

Winter-flowering Carnations must be struck early to get good plants by the autumn and probably most growers will have already secured an early batch, but successional plants are very useful when room can be found for them, and the present is an excellent time for putting in the cuttings, as most varieties will now be producing plenty of the side growths which are the most satisfactory for the purpose. I like to pull out the shoots in the form of "pipings," and do not use a knife. Use sand freely in the cutting pots, make each piping firm, water well in, and after having allowed the pots to drain, plunge them in a fairly brisk hot-bed. The tops should be kept cool and the soil warm, then they root well without becoming drawn.

J. C. TALLACK.

Shipley Hall Gardens, Derby.



HELIOTHELA SCANDENS.
(From a drawing by H. G. Moon.)

INDOOR GARDEN.

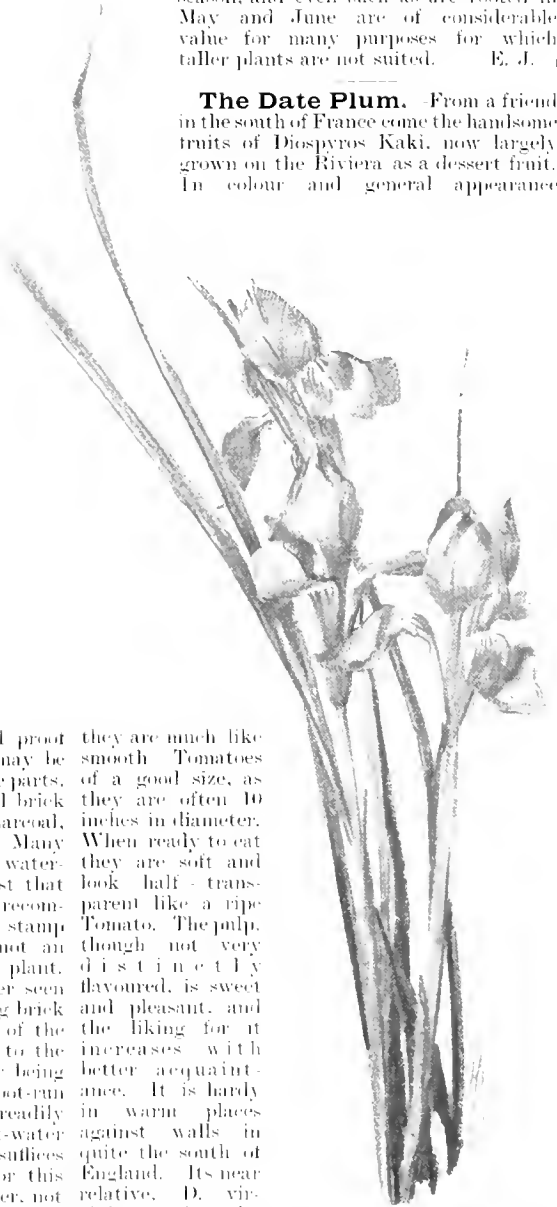
EUPHORBIA JAC-
QUINLEFLORA.

FEW plants flowering through the mid-winter season and the early year are more generally prized than the subject of this note. The brilliancy of its floral bracts borne on gracefully arching racemes renders the plant one of the most valuable for the season indicated above. The chief enemy of the plant is water given usually largely in excess of the actual needs of the plant. As one of the rather numerous company of the Spurge or Milk-wort family, it is obvious that much moisture is at once detrimental to it. Equally dangerous, too, is a temperature that wavers frequently between two extremes. It is due to the way the plant suffers from the latter that its use as a pot plant is much curtailed, unless, indeed, as the outcome of experience, a gradual diminution is resorted to. The plant suffers most when taken from the usually warm and moist conditions of the stove, and is better able to endure vicissitudes of temperature when grown in warm though dry surroundings. Small plants in 5-inch pots or thereabouts are those usually seen, and are generally propagated in spring from cuttings, propagation being necessary each year, as the older plants resent interference of the roots. Being generally a feeble, or perhaps more correctly a sparse-rooting subject, dryness of the soil is at all times the safest from the cultural standpoint. Waterlogged plants are rarely long-lived, and for this reason water must be always given with exceeding care. Much may be done to avoid over-watering by a free, perfect drainage and

an admixture of soils that may be regarded proof against a waterlogged state. Such a soil may be made up as follows: Rather clayey loam three parts, the fourth part consisting of well-pounded brick rubble or burnt clay, silver sand, leaf soil, charcoal, and old cow manure in equal portions. Many use peat for this subject, but frequently the water-holding capacity of many peat soils is almost that of a sponge, and for this reason peat is not recommended unconditionally. Peat of the right stamp is not objectionable, but it is certainly not an essential detail in the culture of this plant. Indeed, the most vigorous plants I have ever seen were planted out for stock purposes in strong brick earth warmed by an old brick flue. Some of the success of these plants may have been due to the warm and dry condition of the soil, water being very rarely given owing to the free root-run obtainable. Such conditions are not readily imitated with the present system of hot-water heating. At the same time the experience suffices to show the value of dry and warm soil for this plant. The plants referred to were, however, not the best for producing cuttings, as the growth was too vigorous, and stopping of the shoots had to be resorted to, this forcing the axillary buds into

growth. These latter secured when 4 inches long made excellent material for propagation, and were always taken off with a heel attached. With such as these few failures occur. As soon as detached from the parent plant the cuttings may be plunged into dry sand to stop the exudation of the sap. A sharp, brisk bottom-heat is absolutely necessary to root the cuttings successfully, and if covered with a bell-glass all the better. Always insert the cuttings with the heel intact as taken from the plant. Pots nearly half-filled with drainage and the other half clean sand are more serviceable than soil, retaining less water and more generally ready to hand. But whether soil or sand is used it should be quite up to the temperature of the house, or a chill may be given. Such cuttings root in three weeks or a month on a bottom-heat of 85, and when slightly hardened off may be potted at once in the mixture already given. After-culture is a matter of choice. In all cases where the finest racemes are most appreciated it is a good plan to grow four to six plants in a 6-inch pot, selecting at the start plants of uniform strength. These may be grown without stopping at all, and especially well suited for grouping among Palms or in numerous other ways that readily suggest themselves at the moment. Cuttings of these things may be rooted over a long season, and even such as are rooted in May and June are of considerable value for many purposes for which taller plants are not suited. E. J.

The Date Plum.—From a friend in the south of France come the handsome fruits of *Diospyros Kaki*, now largely grown on the Riviera as a dessert fruit. In colour and general appearance



THE ALGERIAN IRIS.
(From a drawing by H. G. Moon.)

they are much like smooth Tomatoes of a good size, as they are often 10 inches in diameter. When ready to eat they are soft and look half-transparent like a ripe Tomato. The pulp, though not very distinctly flavoured, is sweet and pleasant, and the liking for it increases with better acquaintance. It is hardly in warm places against walls in quite the south of England. Its near relative, *D. virginiana*, is the Persimmon of the United States.

GARDENING OF THE WEEK.

ORCHIDS.

ONE of the most interesting and beautiful sections of cool-house Orchids comprises those of the tall-growing Oncidiums to which such kinds as *O. macranthum*, *O. loxense*, *O. serratum*, *O. superbiens*, &c., belong. These are useful in summer, especially when required for exhibition. They are easily cultivated if a suitable position to meet their requirements be found, but unless grown under suitable conditions they are very difficult to manage. I find that the coolest end of the Odontoglossum house is the best place, where there is at all seasons of the year a great amount of moisture about the roots. Shade also, especially from overhanging trees, often proves beneficial during summer. The plants have in many instances commenced to produce their flower-spikes, and are also freely making new roots. This is a good time, therefore, to examine the plants for any potting or top-dressing. If the roots are allowed to become vigorous, it is a difficult matter to deal with the plants without injuring the points of the tender roots. When the compost has become sour and the plant too large for the pot, remove the potting compost first, and then carefully extract the roots, avoiding as far as possible any injury during the operation. After removing all decayed material and cutting away any dead matter, again place them into clean, well-drained pots, which should be sufficiently large to contain the plants comfortably. After the drainage has been brought up to within about 2 inches of the rim of the pot, the remaining space may be filled up with a potting compost composed of equal proportions of chopped living Sphagnum Moss and fibrous peat, pressing moderately firm and mounding towards the centre, so that the new roots can get hold of the new compost, and are thus enabled to re-establish themselves in their new surroundings. As the spikes of these species advance and the flower-buds begin to form, it is desirable that the spikes, which have previously been allowed to roam at will, should be tied securely to three or four neatly painted sticks placed at intervals into the potting compost around the edge of the pot. If this be done before the flowers are too far advanced, they will expand in their proper position.

TREATMENT OF IMPORTED ORCHIDS.

Of these, deciduous *Dendrobiums* are frequently very numerous. One of the first generally to arrive is *D. Wardianum*. The plants may be potted up in pans or placed in baskets as soon as received. The receptacles should just contain the plants comfortably, giving ample and clean drainage. Too much material about the base must be avoided, only sufficient being used to properly secure the plants in the pots. Fix the straggling bulbs securely to suspended wires. Too much heat should not be given at first, and let water be sparingly applied until the growths get well away from the base and new roots are being emitted. While in the cooler division ready for transferring to the stove, let the plants be perfectly dry at the roots, and the atmospheric moisture in the house should be sufficient for their requirements. Other species needing similar conditions to the above are the lovely violet-scented *D. aureum* (*heterocarpanum*) and the white and purple-tipped *D. Devonianum*. The handsome *D. Falconeri* is also freely imported, this species succeeding under cooler conditions, such as a Mexican house, where there is a free circulation of air and plenty of light. They do better in the intermediate house than when cultivated under the same conditions as the deciduous *Dendrobiums*.

H. J. CHAMMAN.

INDOOR PLANTS.

HARD-WOODED PLANTS.

GREENHOUSE hard-wooded plants are somewhat difficult to manage at this time of the year, as on the one hand one has to prevent sharp cutting draughts, and, on the other, stuffiness of atmo-

sphere. Both are bad, and the latter is productive of mildew among the *Ericas*, *Genistas*, *Boronias*, and many others of the section. The preventive is a circulation of air at all times with only just sufficient fire-heat to maintain a minimum temperature of 40°, and the cure is to dust the plants over now and then with the sulphur-duster, which should be applied directly there is the least sign of mildew spots or leaf-shedding. Great care with the water-pot is necessary, for it is easy to make mistakes, especially when the plants are growing on open stages, as the bottoms of the balls of soil are apt to get too dry, while the upper portion is quite wet enough. If the plants are standing on ashes or shingle by far the better practice they will be more easy to manage as regards watering, for the lower roots are able to gain moisture by absorption, and one can better judge of their condition and needs. The atmosphere of the house should be cool and dry, and no water should be allowed to spill or drip, especially among the plants with small leaves and feathery habit.

POINSETTIAS.

As these plants lose their bracts they should be removed to an intermediate temperature and allowed to dry off gradually. If room is scarce, they may be laid on their sides under the stages of any house where the temperature does not fall below 50°, and there remain until they are wanted to make growth again for the supply of cuttings. *Euphorbia jacquiniiflora*, too, may be dried off, but not quite to the same extent or in so low a temperature, as the more slender stems of this plant are liable to die back if subjected to any great changes.

SOWING SEEDS.

For the majority of plants it is full early to think about sowing seeds, but some things, such as hybrid *Streptocarpus*, *Saintpaulia*, tuberous *Begonias*, and others which flower as annuals, if allowed plenty of time to grow, can hardly be sown too soon if space and other conveniences can be given them. All the above-mentioned have very fine seeds, which must be sown on the surface in pots carefully prepared by being well drained to within 2 inches of the rims and filled up with a nice sandy mixture of soil, of which well-decayed and very fine leaf-mould forms the greater part. The soil should be quite level and well watered before sowing the seed. Place the pots in heat, half plunging them in the hotbed material, cover with glass, and shade always during the day. The *Streptocarpus* are especially impatient of sunlight, and will brook no neglect in the matter of shading at any time.

Shipley Hall Gardens.

J. C. TALLACK.

KITCHEN GARDEN.

EARLY PEAS.

FEW vegetables are more appreciated than early Peas, and there are several modes of culture open to the cultivator. The best results are usually obtained from pot plant sown at this date under glass, the seedlings being planted out in suitable weather early in the spring. Care should be taken with pot plants raised under glass not to employ too much heat at first, as this results in weak plants and a poor crop. It is far better to give the plants a little more time, and by so doing secure a strong growth. My previous remarks, of course, apply to plants to be fruited in the open ground, as if the plants are fruited under glass, more warmth may be given at the start. Peas may be forced in various ways. I prefer the seed sown in the fruiting pots if grown in pots from start to finish, three to five plants being put into 7-inch or 8-inch pots. If the plants are to be grown in frames, we sow in 5-inch pots and plant out when large enough. To save time the seed may be sown in rows in the first instance, but frequently the frames or pits needed are in use till the last moment, and there is a great saving of time by starting the seed as advised.

For pot or frame culture I do not know of better varieties than *May Queen*, *Chelsea Gem*, and *Daisy*; the last named, though not so early as the others, is so good as regards size, quality and crop, it cannot be omitted. But as regards forcing varieties there is no lack of excellent kinds, as the new introductions of late have been a great advance on the old white round varieties.

Use a good-sized pot, not less than 5-inch, as this gives more root space, and put six to nine seeds in a pot. If these be planted out during the early part of March, they will give pods the end of May. With dwarf kinds, such as *Chelsea Gem*, *Harbinger* and *Early Morn*, I have, to gain time, sown in 3-inch pots placed in heat till the seeds were well through the soil, and then placed them in cold frames till planting time. Treated thus the plants may be sown much later, and if the land is heavy and cold this may be a gain. It is important to have the land in good condition for planting, and as this vegetable, given pot culture at the start, makes its growth in the open in so short a time, a rich root-run is necessary. In heavy cold soils it will be a great advantage if drains are added and the natural soil lightened. The labour thus spent will not be lost, as after the Pea crop is taken the land will be in good condition for the crop which is to follow, such as salads or other shallow-rooting vegetables. The land should also be got ready for the first sowing in the open, the soil being trenched or turned up roughly in ridges in order to become pulverised by the weather, and in better condition for sowing early next month. It is also well to select the sites for the summer crops, as more time can now be given to the manuring and preparation needed.

TURNIPS.

These are invaluable in April and early May, as at that season the old stored roots are growing out badly and become flavorless. Turnips are not grown in frames as much as they deserve, and few vegetables can be grown more readily, the chief points in their culture being ample ventilation, light, and moisture. Bottom-heat is not a necessity, providing the top temperature is genial at the start to effect germination quickly. I would advise a temperature of 60° at this period, with plenty of ventilation in mild weather as growth increases. The soil should be fairly rich, and of a depth of 6 inches to 8 inches for the long-rooting kinds. For frame culture I find *White Gem* and *Sutton's Forcing* both excellent, as they do not age so quickly as the shallow rooters. For quick growth the *Extra Early Milan* is one of the best, and is also an excellent forcer. Whatever kind is grown, avoid thick sowing, as, unless the plants have room to develop, they run to seed before swelling their roots. If bottom-heat is given, avoid over-heating or dryness at the roots, and if manure is the heating agency it is well before making up the hotbed to get rid of the rank steam, and if procurable to mix some leaves with the manure to make the heat more lasting and less violent.

G. WYTHES.

Syon Gardens, Brentford.

NEW FERNS.

DAVALLIA ILLUSTRIS, a very attractive Hare's-foot Fern, with gracefully arching fronds about a yard long, was the only Fern to which a first-class certificate was awarded last year, and is likely to prove of considerable value for decoration. *Davallia intermedia* is described by Messrs. Veitch as a supposed hybrid between *D. Mooreana* and *D. decora*, and its general appearance would suggest that such was the case. The typical form of *Poly-podium irioides lobatum* has stiff, erect, undivided fronds; it is a plant of wide geographical distribution in a native state, and is a good garden Fern. From this the variety *lobatum* differs in the tips of the fronds breaking up into lobes, some of the fronds having ten to twelve segments at the apex. *Adiantum Burnii* was shown well last year. The slender partially drooping fronds are from 2 feet to 3 feet long, and suggest a certain amount of relationship to *A. amabile*. As a basket Fern it is likely to be of considerable merit.

February Chrysanthemums.

Your correspondent "C. N." calls *Julie Lagravere* and the *Anemone-pompon Marie Stuart* two indispensable Chrysanthemums, but I consider *Maud Dean* better than either in colour and habit, and it is especially suitable for this time of year on account of its brightness and lasting properties. I shall be able to cut flowers of *Maud Dean* until the end of February, if not later. M. JONES, *Undermount Gardens, Banchurch*.

RIVIERA GARDENING.

WE have been reminded of winter lately by one or two chill and cloudy days, and a sudden drop in the temperature at night has brought a white frost in the low-lying grounds, where damp fingers utter cold rain. It is curious to see how northern plants have enjoyed a change, for Wallflowers and Stocks, that seemed at a stand-still, have grown more in a week than in the previous month of fine, hot weather, and bulbs that refused to stir are now showing signs of renewed vigour.

It is at first decidedly perplexing to find one's ideas must be entirely reversed. Iris *stylosa*, for example, is far finer in a shady and cool position than in the open, and Iris *reticulata*, which my French gardener insisted in planting in strong clay soil and in the wettest position he could find, has entirely justified his insistence, for those he has planted are strong and vigorous, ready to flower in a few days, while those I put in a shady dry part are hardly stirring and look droughted and unhappy. No doubt in its native Algeria it grows near watercourses that are dry in the summer.

Tulipa *saxatilis* has flower-buds as big as a large pea, while *T. Kaufmanniana* and *T. Greigi*, planted at the same time, are not yet above ground. Evidently *T. saxatilis* must enjoy warmth much more than other Tulips, and would force easily when fairly strong.

To-day I have been planting a shady walk which will be pleached when the trees are sufficiently grown, as I cannot allow them to grow high in that position. I have chosen for that purpose the Indus Tree and the well-known *Acacia dealbata*, as both these trees flower all the better for being cut well in after flowering. In old days, before the railroad was made and modern French gardening, with its Palms and *palmas*, did not exist, there were many such shady alleys in Nice gardens which in April were a real delight to those who love to look up to the sky through a maze of tender rose-purple colour. *Acacia dealbata* was then practically unknown, and for many years was confined to granitic and sandy soils, such as are found at Cannes and St. Raphael, because it will not grow on a calcareous or clayey soil. Now-a-days, thanks to the gardener's art, it grows and flourishes anywhere when grafted on the hardy *A. floribunda* that is at home on all soils and situations. English gardeners who wish to grow this very attractive tree should certainly ask for grafted plants, as then there is no need to bother about soil. Moreover, it flowers more freely in a young state, which is not without its advantage.

These two trees will not flower exactly at the same season, but between them there will be abundance of flower from early February till the month of May, so that with climbing Roses and various climbers to help, the display will be continuous all the winter.

The demand for flowers at Christmas-time is, of course, very great on the Riviera, and the much colder and less bright weather has prevented any but the hardier flowers from opening quickly. The paper-white Narcissus, so largely grown in spite of its disagreeable smell, is at last being supplemented by an equally early yellow *Tazetta* Narcissus which is so closely like the well-known *Soleil d'Or*, that I daresay it is generally called by that name in England. It is, however, so much earlier, that when in the beginning of December the first blooms of the yellow Narcissus were open in my wild garden, where it grows naturally and has never been destroyed, the tips of the green leaves of the true *Soleil d'Or* were hardly showing above the ground. The heads of the

flowers are larger and slightly paler in colour than *Soleil d'Or*, which should also distinguish it.

Caroline Testout is a Rose of decided promise for winter blooming on this coast. Its clear pink colour, stiff stalk, freedom of bloom and indifference to cold weather are quite remarkable, putting it on a par with the old *Safrano* in that respect, while being a far finer Rose and of better lasting power. So far I have not seen any blooms of Mrs. W. J. Grant or Mme. Jules Grolez, varieties said to be of such great promise, which apparently has not been fulfilled.

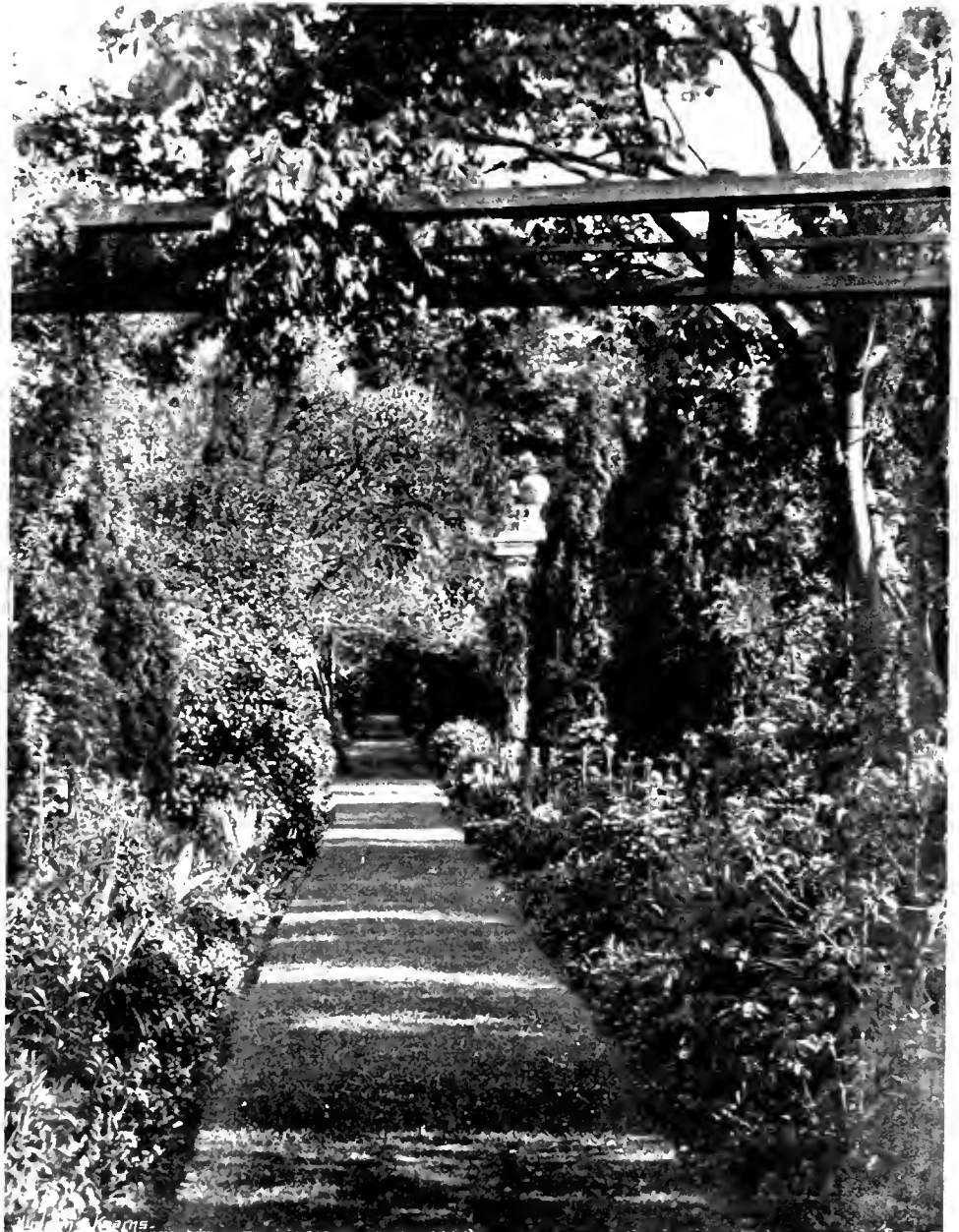
E. H. WOODALL.

SOME GOOD HOLLIES.

A NOTE FROM GLASNEVIN.

THIS has been in Ireland a very good year for Holly berries, and one cannot but notice how much more suitable for decorative work some varieties are than others. This is notably the case with the large-leaved, almost spineless varieties. The berries of these are also larger and different in colour from those of the small-leaved spiny kinds. Amongst the best may be named *camelliaefolia*, *Marnocki*, *platyphylla* and *Lawsoni*. There is here a very distinct variety with orange-coloured berries which is quite different from the ordinary yellow-berryed form, and very ornamental.

F. W. MOORE.



BORDERS OF FLOWERS IN THE FAIRHILLS GARDENS, PARLHAM.

A GARDEN OF FLOWERS.

THE accompanying illustration needs few words of description. It displays borders of flowers, with at one end a pergola, over which may be trained a host of climbing plants, Rose, Clematis, Wistaria, Honey-suckle, Vine, and other things precious for their graceful growth and abundance of sweet-smelling flowers. During the winter is the season to make such beautiful borders as here depicted.

[With this note Mr. Moore sends us some well-berryed twigs of some of these good Hollies, pleasant to see in a year when in most parts of England Holly berries are scarce. Amongst them the most noticeable are the golden-variegated *Lawsoni*, with very broad flat leaves, *platyphylla*, with leaves of rather small size, perfectly flat and even-edged, and the one with orange-coloured berries, of a tint quite unusual in the fruit of the Holly. Etc.]

THE FLORENTINE IRIS.

AMONG the many garden varieties of what are broadly classed as the flag-leaved Irises, none is more welcome than the grey-white Iris of Florence. It is one of the easiest to grow, and is quite the most generous in abundance of bloom. With the exception of the common blue, it is also the earliest. Coming as it does with the Oriental Poppies in the month of May, it seems to be the herald of the large flowers of early summer. This noble Iris is beautiful in many ways; in the flower border, among dark-leaved shrubs, or in close association with masonry. But its dignity and nobility of character are best seen when, as shown in the illustration, it is grown in a bold, simple group, away from other flowering plants, on some quiet space of lawn, where large neighbouring trees give wide breadth of reposeful shade. In such a place and against such a background, the flower's noble shape and tenderness of petal-structure may be seen and enjoyed to the full.



GROUP OF THE FLORENTINE IRIS.

Like everything else, this excellent way of displaying the beauty of one good thing at a time should not be overdone or made into a sort of rule throughout any one garden. It would result in a monotony of treatment that would not be desirable. But when a garden has shrubs in reasonable variety and flowering plants in well-planned mixtures, a few fine things isolated in such places as not only show them handsomely, but are also well graced by their presence, are much to be desired. Moreover, when the mind and eye are occupied by the consideration of the one group only, its whole effect and its beauty in detail are presented in circumstances that are undoubtedly the most favourable for the enjoyment of both.

PRIMULA FLORIBUNDA.

SPRING, summer, autumn, and winter seem to be all alike to this pretty little Indian Primrose, which commences to flower as soon as the plants are sufficiently strong, and continues till quite exhausted. It is now about fifteen years since this species was recognised as a very useful plant, and it has been steadily gaining in popularity ever since. It is essentially a greenhouse plant, but its cultural requirements are not at all exacting. A distinct variety of this Primula was exhibited last year under the name of Isabella, in which the flowers are somewhat larger than in the type and of a pale yellow tint.

KITCHEN GARDEN.

DEEP CULTIVATION AND ITS BENEFITS.

THE value of deep trenching for the production of high-class vegetables is now generally understood, and if proof be wanted to bear out this, I would ask my readers to remember the last two dry summers and compare crops which had been treated in the ordinary way with those grown on thoroughly well-trenched ground. The results will, I am sure, convince even the most sceptical. By following out the trenching system thoroughly, the most unfavourable land may be brought into such a state that it will produce almost any kind of vegetable of the best quality.

bringing the bottom to the top, which was almost pure sand and probably had never seen daylight.

I was careful to work in plenty of manure, garden refuse, and indeed anything in the way of rubbish which came to hand. This is by far the neatest, easiest, and best way of getting rid of garden rubbish that I know, besides improving one's garden.

I well remember the remarks passed by older heads than mine: "Ah, young man, you are making a great mistake here." But, if I may say so, I not only proved to myself, by results, but to them also, that I was not very far wrong.

Now, one more instance to bear out what I say. When I took charge of these gardens, nearly 16 years ago, I found the soil here quite different to what I had been accustomed to, viz., a stiff London clay, and anyone acquainted with this kind of soil will, I think, agree that it is one of the poorest to work; and to illustrate more fully what I am trying to convey to those that do not agree with me, my predecessor had established a kitchen garden, two or three miles from here, on the estate, which was a light sandy soil, stating that it was quite impossible to grow early and many kinds of vegetables here. I quietly considered it over, and soon came to the conclusion that I would have a very good try to grow our vegetables at home. I lost no time in following out what I believed to be the right course, trenching 3 feet deep and bringing the clay to the top.

If ever I wavered it was then. The old hands with one consent exclaimed, "I am sure you are making a mistake; we shall not be able to grow anything at all." "Never mind," I said, "go ahead; you haven't had much here lately, and if we are to have less I am responsible." One piece of land in particular, which had been a garden for at least 50 or 60 years, I took in hand, and found a dark worn-out soil about a foot deep underneath a pure yellow clay. This I treated in exactly the same way during 1892, repeating the operation each year. The result is 3 feet of good workable soil, which will now bring to perfection any crop one cares to grow.

EDWIN BECKETT.

Abdenham House Gardens, Elstree, Herts.

EARLY CARROTS.

NOR everyone having a garden can afford to devote a frame in the late winter to the growth of young Carrots; frames are so often needed for other things just then. But a capital makeshift for the benefit of the Carrots can be found in some stout strips of wood, if but 1 inch thick and 3 inches deep, stood on a warm border to fit any ordinary frame-light, and kept upright by the aid of small pegs or stakes driven into the soil beside the strips. If a frame-light not otherwise in use can be utilised for this purpose, so much the better; if none such be at liberty, then the temporary frame may be larger or smaller in area. When made, the soil, having been previously well dug and manured, may be sown with seed of either the Early Gem, Short Horn or the Early Nantes thinly, in shallow drills 6 inches apart. After being watered, the bed should be covered up, some strips of wood being laid across the frame, on these placing two or three mats. There the covering may remain until the seed has germinated, when the bed must be uncovered in the day, but may be covered up again during the night. By the time the plants have become 3 inches in height covering may be dispensed with. When the tops are 6 inches high there should then have been formed to the plants small roots about the dimensions round of a man's little finger. These may be pulled, trimmed, and cooked whole, and are most delicious. Such a sowing may be made at once; and if the first be of the Early Gem, a second one close by may be made of the Early Nantes in rows 6 inches apart with or without a frame. That sowing can be made at the end of February. A final spring sowing of the Intermediate on a larger scale in the open garden should be made early in April, and a summer sowing of the Nantes again in July to form the delicious young Carrots to pull during the winter from the open ground.

A. D.

GLOBE ARTICHOKE.

This vegetable deserves to be cultivated more generally than it is. Far too often it is grown in some out-of-the-way corner, and more often than not inferior kinds take the place of the best varieties. As far as I know, only two are worth attention, the best being the large Green Globe, a variety rounded at the points and almost free from prickles, and a good form of the Brown Globe. This is hardier than the first named, but not so good either for exhibition or the table.

To have these in the best possible condition, liberal treatment should be afforded them, and the old stools should not be allowed to remain in the ground for more than three years. Choose a site which is quite open. This should be heavily manured and deeply trenched during the autumn or winter, and on stiff, heavy land quantities of cinder ashes, road-scrappings, and old mortar rubbish should be worked in. By the end of March or the beginning of April the ground should be forked over, and in genial weather the planting should be performed. Procure suckers from a reliable source, which should be planted singly, allowing a distance of 3 feet from plant to plant, and 4 feet between the rows. Make firm, and earth up with finely-sifted cinder ashes. I have proved the Globe Artichoke to be very partial to these, and I know of nothing so distasteful to slugs. Mutch the whole of the surface with long stable manure and water abundantly in dry weather. As before mentioned, the best variety is somewhat tender, and in early autumn each year a few suckers should be potted up, wintered in a cold frame, and planted in spring. This will ensure the keeping up of a good supply.

The old stools should be protected during severe frosts with long litter or bracken, which should, however, be removed during open weather, or as much harm will accrue as if the plants were left unprotected. Where suckers can be obtained they are always to be preferred to seedlings, as these cannot be depended upon, and worthless kinds are only too often the result of using them.

E. BECKETT.

FORCED ASPARAGUS.

This is one of the best vegetables at this season and readily forced, but is somewhat costly, as one forcing destroys the growth of three or more seasons. To get a regular supply it is well to place roots under glass every three weeks. Many growers lift an old bed and force every year, sowing or planting another in the spring to make up for the loss of plants. One bed will not go far if regular supplies are needed. I prefer to force roots three years old, as these give splendid results, but all have not space to grow their own roots. I would in all cases advise slow forcing, as if too much heat is used the growth is much weaker. I use leaves and manure for early batches, and the top portion of the pit does not exceed 60°. By using leaves the heat is slower and retains moisture. From this date bottom-heat is not necessary, as roots placed on the floor of a warm house, though longer coming in, give strong "grass" if near the light. No matter how forced, to maintain regular supplies there must be no lack of moisture. This given in a tepid state promotes growth. Now is a good time to force permanent beds, which may be done with any heating materials at command. I use leaves largely, but in gardens where flues or hot-water pipes can be utilised there is less trouble.

G. WYTHES.

AN AUSTRALIAN SUNDEW (DROSERA BURKEANA).

ALTHOUGH of world-wide distribution, the Sundews, of which over a hundred have been described, are fairly uniform in character, and the three which inhabit the swamps and marshes of this country resemble very closely the majority of them. Several are included amongst the plants grown by lovers of the

curious, and some are sufficiently beautiful to rank with the choicest of pot plants. Unfortunately, these latter are not yet in cultivation, although one of them, viz., *D. cistiflora*, the most beautiful of all Sundews, was introduced from South Africa, where it is a native, by Miss North in 1889, and flowered the following year at Kew, but died soon afterwards. This has a stem from 4 inches to 9 inches long, clothed with linear gland-covered leaves, and bearing a single flower 2 inches across, resembling both in consistency and colour one of our wild Poppies. Another Cape species, *D. grandiflora*, has equally large flowers of a bright rose colour.

D. Burkeana is a native of Natal, and resembles our native *D. intermedia*, but is larger and its flowers are pink. It is not unlike *D. spatulata*, an Australian species which is frequently to be met with in botanical collections. Other species in cultivation are *D. capensis*, *D. binata* (*dichotoma*), and *D. auriculata*. This last is a slender climbing species with a pea-like tuber, which enables it to support the drought of the sandy wastes of Australia where it is a native. Most of these plants can be multiplied by means of bits of the fleshy roots planted in sand in a warm house. The best position for *Droseras* is a sunny corner in a greenhouse, and they should be planted in pans of chopped sphagnum and peat, which should be well watered daily all through the summer. *Roridula dentata* is a shrubby Sundew, which has been introduced and grown into a bush nearly 2 feet high. In some parts of South Africa, where this plant is a native, the bushes are hung in the houses to serve as fly-catchers.

Kew.

W. WATSON.

sight of the wax-like flowers of *Erica carnea alba*, and one has bent over it with keen delight. It looks too pretty and delicate to be exposed to the inclemencies of the time, yet it suffers not from the weather, and will for long give us the pleasure of a sight of these exquisite tiny little bells, which look like little pearls strung on the slender green branches. Growing in favour though *Erica carnea* is, it is yet needful that it should again and again be brought under the notice of those who take pleasure in their gardens in order to draw from them the fullest enjoyment they can derive from the hardy flowers they contain. It is cheering to see this little Heath in many more gardens now than was at one time the case. It is not difficult to grow in the border or rock garden. In beds, either as an edging or by itself, it is delightful also. So far as one's observation goes, it appears to have less objection to limestone than have some of the Heaths. No one who has ever grown *Erica carnea* will willingly be without its beauties in the dull season of the year.

S. ARNOTT.

Caresthorn, by Dumfries, N.B.

GALAX APHYLLA.

NORMING in the garden just now is much prettier than the leaves of this neat North American plant. They are heart-shaped and prettily toothed at the edges, of thin but firm texture, and boldly carried on strong, but slender wire-like stalks from 4 inches to 9 inches high, and sometimes higher still when well-established clumps are growing in the moist peat leaf-mould that suits it best. The bloom is a slender spike of white flowers in July; but now in mid-winter the beauty of the plant is in the high colouring of the leaves. Some are of a fine red tint throughout; others are spotted and marbled with red upon a ground of pale green, and have a border that is almost scarlet. One may look at a dozen leaves and find in each a different proportion



AN AUSTRALIAN SUNDEW (DROSERA BURKEANA) AT KEW.

ERICA CARNEA ALBA.

AMONG all our winter plants I value none more highly than *Erica carnea* and its variety *alba*. Long before the flowers attain to their perfect beauty they show thick on the pretty branches, and give us a welcome and ever-filled promise of a feast of pleasure in due time. The coloured form is generally a little later here than the white form that I have. This year is no exception to the rule. Christmas Day brought with it a welcome

and disposition of the red colouring, but all have the same aspect of neat and well-ordered beauty. It is perfectly hardy; a plant for all Great Britain, in cool rocky nooks or peat-bed edges.

The Blackberry crop of 1899. It is interesting to know that the Blackberry crop of last year was one of the heaviest on record. One man sent to the market fruit collected by neighbours to the value of £400. On many a waste acre this wholesome fruit could be grown with profit.

FRUIT GARDEN.

CULTIVATION OF BUSH APPLE TREES.

THE planting of bush Apple trees is considerably on the increase both in private and market gardens. Bush trees can be readily sprayed with insecticides for the destruction of insect and parasitic enemies. Moreover, their fruit is less liable to injury from wind, is more easily thinned and gathered; the tree also affords a quicker return and is more readily pruned than the standard. It is essentially the tree for the amateur, as a good collection of varieties can be grown on a limited space, and the pleasure of watching the development of their crops can be obtained without difficulty. A skilfully managed plantation of these trees, comprising a collection of the best varieties—such, for instance, as may be seen at Glewston Court, Ross—is a good object-lesson. Many might profit by inspecting such before planting if we draw conclusions from the badly managed trees to be often met with. Far too frequently trees are badly planted and left with but little further attention. Accommodating as the Apple undoubtedly is, its crops cannot be reaped in this way, and I will note briefly some of the most important points to be observed in its management. In

PREPARING FOR PLANTING.

efficient drainage should be ensured and the ground be trenched at least 2 feet in depth, keeping the top spit on the surface. This should be done early enough to allow the soil to become sufficiently settled before November, which is the best time for planting. When selecting trees, young ones that have been replanted the previous season should be preferred. If their roots are dry when received, they should be for a time plunged in water. In planting, place the trees 12 feet asunder, as this distance permits the sun's rays to penetrate amongst ordinary-sized bushes without space being wasted. Any damaged ends of roots should be removed by a clean upward cut and holes made sufficiently deep to allow the stem being placed in the soil to the same depth as before being lifted. Spread out the roots regularly in a horizontal position. The trees should also be firmly staked and mulched with short manure. In giving a description of trees for planting I omitted to mention

STOCKS.

Opinions about these are divided, but for the ordinary-sized bush and pyramid I prefer what is known as the English Paradise. Trees worked upon this are more moderate in growth, require less attention as regards root-pruning, and are more prolific when in a young state (too prolific in some cases, but this evil, if it may be so termed, can be easily remedied by thinning) than are those upon the free stock. The fine bushes at Cardiff Castle are upon the Crab and have never been root-pruned, and no trees bear better crops. It should be added that they have been planted twenty or more years, and possess heads as large as ordinary-sized standards. It would be interesting to know from Mr. Pettigrew if they bore freely or not when young. The

PRUNING

of the Apple is not difficult. In winter, after planting, cut back the young wood a few inches to

a bud pointing outwards, and this rule of cutting to an outward bud should be followed until the tree has grown to full size. The centre of the tree should be kept free, and crowding of branches, which is not an infrequent error, must be avoided. I will conclude these notes by giving a short

SELECTION OF VARIETIES

suitable for bushes and pyramids. Numerous equally valuable varieties are necessarily omitted. Dessert kinds: Beauty of Bath, Worcester Pearmain, King of the Pippins, Cox's Orange Pippin, Ribston Pippin, Adams' Pearmain, Ross Nonpareil, Braddick's Nonpareil, Egremont Russet, Brownlee's Russet, Allington Pippin, Claygate Pearmain, Court pendu Plat, Fearn's Pippin, and Sturmer Pippin. Kitchen kinds: Lord Suffield, on cold soil substitute Lord Grosvenor; Ecklinville, The Queen, Stirling Castle, Peasgood's Nonsuch, Lord Derby, Warner's King, Blenheim Orange, Bis-



A NEW APPLE: MR. LEOPOLD DE ROTHSCHILD.

marek, Lane's Prince Albert, Schoolmaster, Belle de Pontoise, Sandringham, Newton Wonder, and Danclow's Seedling. TITOS, COOMBER.
The Hendre Gardens, Monmouth.

APPLE MR. LEOPOLD DE ROTHSCHILD.

ONE of the interesting new fruits of the past year was this Apple, named after Mr. Leopold de Rothschild, and it is the result of a cross between Cox's Orange Pippin and that brilliantly coloured Crab, John Downie. It is a tree that should be planted in the future, not for the sake of profit, but to give beauty and colour to the garden. The fruit is yellow in colour and of a very agreeable flavour, pleasantly acid, not mawkish and mealy. The Crab parentage is more plainly marked than that of the Pippin. That this new fruit bears abundantly is evident from the illustration, which shows a tree heavily burdened with fruit.

STEWING PEARS.

A NOTE ON RECENT NEW KINDS.

IN *THE GARDEN*, vol. lvi., p. 512, "A. D." has a useful note on stewing Pears generally, and on two varieties, which recently gained awards of merit from the Royal Horticultural Society, particularly. With respect to the one he calls Notcutt's Winter Orange one would like to ask, Why Notcutt's? Winter Orange is an all-sufficient name that there is no need for disturbing, seeing that the Pear under that name is quite an old, though perhaps not well known, inhabitant of East Anglian gardens and orchards. The apathy shown towards stewing Pears pointed out by "A. D." must be the reason that it is not well known. For many years it was my most valued variety of its class, for, in addition to its good quality, it was always the best cropper, and I do not remember ever having had a failure. I showed it in March some years ago at the Drill Hall among a collection of Apples, but it was not then recognised by some of our greatest authorities on hardy fruit.

With respect to Double de Guerre, recognition has also been tardy. Loudon mentions it as having been introduced from Belgium before 1815. It is also figured and described in *Hort. Trans.*, 2nd ser., i. Loudon gives as a synonym Double Krijgs, and describes it as large, oblong-obovate, brownish russet and red; season November to February; stews tender, good bearer, and succeeds well as a standard. J. C. TALLACK.

PEAR NE PLUS MEURIS.

THIS is a good winter Pear where it does well, but I must agree with a recent writer that it is capricious as to locality and soil. In Suffolk I found it far from good, and it was generally used for stewing just before it ripened; only once or twice was it fit for dessert, and it usually showed spots of decay in the skin when it approached ripeness. At Galloway Mr. Day used to grow it well, and the high quality and large size of the fruits he grew were a surprise to me, and I can fully understand its being a favourite where it does so well, as it is always a good cropper. Galloway, though well north, has a favoured climate, and Pears that grow well there could not, perhaps, be recommended for culture further inland. Here in the midlands all the specimens I have seen of the variety in question have been poor and scrubby. A Pear that will surpass this and most other late varieties is President Barabe. J. C. T.

LATE WHITE GRAPES.

APART from the Muscat of Alexandria the supply of good late white Grapes is meagre, and, as far as I know, little progress has been made in this direction with new varieties. I do not think the old White Tokay and Trebbiano have been beaten when well finished, and another late white which is good when skilfully grown, as all late Grapes must be to get them really fit for table, is the old Raisin de Calabre, for it keeps splendidly and is handsome when well finished and clear in the skin. Mrs. Pearson does not appear to make much headway, as it takes as much growing as Muscat of Alexandria and is just as capricious; for one only sees it in good condition now and then. One would like to hear more about the keeping qualities of Lady Hutt, as if it would hang well, its popularity for planting would soon increase. I have never had any experience with it nor have I seen it hanging later than October, but I was impressed with its good quality for eating, and hope its qualities for hanging are equal. J. C. T.

ORCHIDS.

THE VANILLA.

NO one could make the Vanilla plant profitable in this country—at least, such is my experience—but it may be grown sometimes in the place of plants less interesting. There are only a few species, and I shall not consider at length more than one—that here illustrated—namely, *V. planifolia*, which is of chief commercial value; indeed, I think the others have no economic value whatever. The Vanilla is the only Orchid that gives fruit of any value, and though *V. aromatica* is sometimes grown for its fruit, I have been told by travellers who have studied the plants in their native habitat that the species illustrated and *aromatica* are so much alike, that they can be placed in the same class. The Vanilla is a native of the Tropics, and is a climbing plant with dark green rooting stems with fleshy leaves, and the flowers are borne on short spikes produced at the axils of the leaf and on the well-matured wood of the previous year. As regards the flowers, few Orchids are less interesting, as they are of a dull green colour, and the individual flowers on each spike are never open all at one time, and only last a few hours during bright sunshine. The pods when ripe are valuable for flavouring ices, chocolates, sweets, and form one of the best aromatic perfumes. The best of the species for its bloom is undoubtedly *V. Phaknopsis*, a most interesting plant and a species well worth culture in all collections, the flowers being large and beautifully coloured. The fruiting variety with us grows very freely indeed on the back wall of a warm house devoted to Bananas, and though we have it in other positions, such as on the end of warm plant houses, it is not so satisfactory, as it gets less sun, and I find that unless the new growth is well ripened by exposure to the sun, few pods are obtained the next season. There is, however, no difficulty whatever in getting ample growth, and slight shade must be given during the hottest part of the day and also abundant supplies of atmospheric moisture. We have frequently secured growth 10 feet to 12 feet long in a single season, showing its usefulness for covering a wall.

To make my meaning clear, one season, the sun being hot, we covered the roof with a permanent, though light, shade through the summer months, and were pleased to note the splendid growths made, also the better colour of the leaves; but the next year the crop of fruit was very poor, owing to the new wood not maturing properly. Anyone can grow this plant if given a brisk heat and ample moisture, not so much at root as in the atmosphere. The plant roots freely from the stems and fastens its roots on either wood or brick-work which affords moisture. About 6 inches of soil are provided for the roots. The soil, consisting of fibrous peat, sphagnum, charcoal, and clean potsherds, is placed in a kind of shallow box or trough. Every season early in the year a large number of the new growths are detached from the top of the wall and the base is placed in the beds, burying the air roots in the new material given. As the old growths have a tendency to get naked at the base it is well to

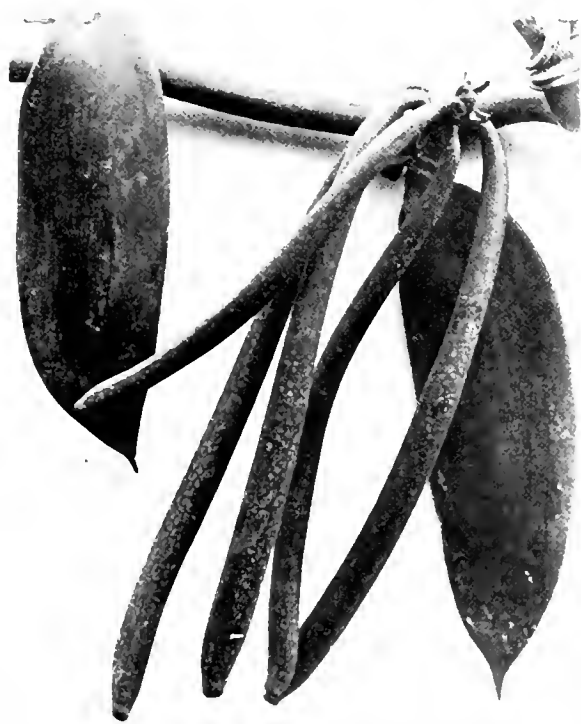
keep the wall furnished, and by annual planting of young growths we get fruit much lower down the wall than if the top growths were left, as there is always an upward tendency and the growth is stronger at the top. As regards the

PROPER TEMPERATURES.

a few degrees of heat more or less are of little consequence providing there is no lack of moisture. We frequently allow the temperature, where the Vanilla does best, to run up to 100 or more, at the same time syringing freely and flooding all parts of the house with water. The new growth is made from February to August, after the last-named date no shade of any kind being needed, and only during the hottest part of the day, say from eleven to two, in May, June, and July. From September to February the plants may be given a tempera-

ture of about 60 at night, increasing 5 to 10 by day, with less moisture at the roots and in the atmosphere. During the time the plants are in bloom they should be kept on the dry side as regards syringing.

G. WYTHES.



FRUIT OF THE VANILLA.
(Photographed at Spau House.)

I have not referred to the most important period, namely, when the plants are in bloom and the setting of the fruit, which is the most difficult part of the cultivation, as unless some knowledge is obtained of the structure of the flower there will be loss of fruiting-pods. I have never seen a single pod fertilised by insect agency, though I have kept a strict look-out, as we have never obtained pods unless fertilised by hand. Of course the work needs considerable care, and it is necessary to fertilise about mid-day just as the sun is shining brightly. In dull weather the pollen is not easily distributed, and care is needed that in opening or lifting the column no injury is done to the anther and stigma. The pods soon attain their full size and are usually from 5 inches to 8 inches long. A good set is from six to nine pods in a cluster. We

CORRESPONDENCE.

DWARFING PERENNIAL FLOWERS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, As one who has been interested in the article by Mr. E. H. Jenkins on the subject of cutting down *Pyrethrum uliginosum* and other flowers for the purpose of reducing their height, I would like to make some remarks on the general subject. I may premise, however, that the plants I have tried have been retarded in the time of their flowering, which is contrary to the experiments of your correspondent. The results may have been affected by different climatic conditions. With me they were in the same direction as cutting back *Delphiniums* or *Campulaks* to secure later flowers.

Generally speaking, I am averse to dwarfing our stately and effect-giving flowers, and prefer to have them as near their average height as possible.

Now that we have so many Asters of different heights it is almost unnecessary to cut these down, except, it may be, in the case of some of the Nova-Englie section, whose colours are not readily obtained among the Starworts of dwarfier habit. There are also so many Phloxes now-a-days, that it is not difficult to select a sufficient number of naturally dwarf habit, so as to avoid increasing the work of the garden unnecessarily by cutting them down. Of course, this cutting back can be done, but a garden generally supplies plenty of work without undertaking that which can be avoided. *Pyrethrum uliginosum* is quite a different flower, and one has seen it dwarfed by being cut back, to the great advantage of the garden. So far as I can at present remember, we have no flower of perennial habit which can take its place at the time it blooms. Unfortunately, in old gardens this period is too late to permit of this process being carried out satisfactorily. The true remedy will be secured by the seedling raiser giving us a variety of dwarfier habit which would require no cutting back.

S. ARNOTT.

POT CULTURE OF PLUMS

[TO THE EDITOR OF "THE GARDEN."]

SIR, It was pleasant to read at page 7 that so thoroughly good a gardener as Mr. Hudson was advocating growing Plums in pots, as it was an old weakness of mine. Last year, owing to the hard frosts in May, there was a very short crop out of doors, but we had good Plums from trees which had been in pots for about 45 years. I fear that these must be now feeling rather confined in their pots; they have not had a shift for some years and cannot have another, as they are now as much as a man and a boy can carry when put out to ripen their fruit. In old days at the Crystal Palace they thought most of size. I got Pond's Seedling and other big Plums so as to be able to show them, but sent in Transparent Gage, pointing out flavour, and got a second prize. I agree with Mr. Hudson that

this is a most desirable Plum, as, besides being of excellent flavour, it is very pretty in a dish. I used to think that why orchard houses did not become so general as they deserved is that they require hard work, especially in watering, and there is not so much honour and glory to a high-class gardener in growing cool-house fruit as first-class Grapes, Orchids, &c. I used to recommend to friends putting up orchard houses to put them in the hands of a sensible man, though not a highly-trained gardener, and give him the work and the credit. Two friends, great Orchid growers of those days, offered me their orchard-house trees if I would pay for their carriage. This confirmed me in the above opinion. I gave the same advice to Mr. Barron when he put up the orchard house at Chiswick, that was paid for by the results of the Royal Horticultural Society's show at Bury St. Edmunds. Many years ago, when Mr. Dunn showed me the Dalkeith gardens, knowing him to be a great authority, I asked what he thought of orchard houses. His opinion did not seem favourable. When I began to take the other side, he stopped with "I'm not speaking of *your* orchard houses." GEORGE F. WILSON.

Weybridge.

BOOKS.

FRUIT FARMING FOR PROFIT.*

THIS practical book upon fruit farming by a master of his subject has gone into a fourth edition, and we shall be surprised if further editions are not called for in the near future. Fruit farming has gained many adherents during recent years. Those who enter upon this industry do so with a greater knowledge than heretofore, realising that fruit culture is no mere fancy gardening that can be undertaken with a very superficial knowledge of stocks, varieties, and other matters necessary if the fruit basket is to be filled to overflowing. Such books as Mr. Bunyard's do much towards promoting a proper knowledge of fruit culture in its many forms, and may be recommended as a guide to the beginner and to the many who have failed through want of knowledge. It must be remembered that fruit farming is an industry requiring careful training, and is not always a gold-mine. So many false statements have appeared to the effect that fruit farming spells "fortune," that the more quickly they are upset the better for those who embark in the business. That fruit growing is a national industry of importance is unquestionable, and books of the same worth as Mr. Bunyard's will make smoother the beginner's path.

The following extract will show the nature of the information given. It concerns

FRUITS NOT MUCH GROWN.

and forms chapter xv., p. 95.

"No one can see the laborious efforts of the Vine growers on the Continent, with their miles of terraced hillsides where a lodgment is effected for their favourite fruit by sheer labour, without thinking that there are many wild places in England where not only Grapes, but Figs and possibly Peaches could be grown in quantity. In Devonshire and the south there are many wild places where, with protection, much useless rocky land could be utilised, and old disused quarries, gravel pits, and sand-holes be made luxuriant; while there are many ponds and damp situations which could be planted with Quinces. These sell well, and a taste for them is growing. Quince marmalade is a very acceptable relish; and a few trees about the farmyard and duck pond would not only be lovely in flower, but produce fine fruit. To return to our plan.

"Grapes. The white Sweetwater and Gamay Noir with the old Black Cluster are generally very

acceptable, and would be more so were they better cultivated and the bunches and berries thinned out. They would then ripen and have larger berries. Many old buildings and sheds are made picturesque by a covering of Vines; and in the case of quarries, &c., they could, perhaps, be made to hang over the edges on wooden frames, if the soil was not sufficiently deep to plant them below; the large south or west gables of houses, barns, &c., could be filled with Vines, and if the situation was very good, Miller's Burgundy and Black Hamburgh could be tried, as well as the White Muscadine, Chasselas Vibert, and other hardy white Grapes. Under glass, if they can be well done, Grapes do pay. The importations of fruit from the Channel Islands and the Continent has brought down the price of hot-house fruit produced in this country by one-half; and further, so many gentlemen's gardeners have orders to sell their surplus crop, that the amateur has little chance of competing with them; though, if the handy man about the garden, or, as sometimes happens, one of the family take a pleasure in looking after such things, they may be grown to advantage, but we should prefer to sell the crop at a price to a dealer and let him take the risk. The high prices good Grapes realise in our large cities and towns, and the low figure they make wholesale, is a most dismal outlook for growers just starting; and as those princes of culture, the market florists, have now taken up the growth of late Grapes by the acre in their usual energetic manner, this matter must be thoroughly weighed before investing in 'glass.

"PEACHES, NECTARINES, AND APRICOTS.—These require so much care on walls, and the spring climate has for several years been so against them, that they cannot be recommended for open-wall culture at a profit, as when a crop is taken, it may be general, and prices consequently low. We have found the large-growing late kinds, such as Dymond, Sea Eagle, Barrington, and Princess of Wales, the best. Among Nectarines, Lord Napier and Elruge, white fleshed, and Humboldt and Rivers' Orange, yellow fleshed, are the best. The orchard house system of culture gives better results. Here with partial heat, or even without it, good crops are taken, and when water is abundant for syringing, they can be well grown. We would prefer, however, to have them trained flatly, 4 foot under the glass; and if attention is paid to thinning the shoots and fruit, wonderful examples are produced. The best results are obtained from trees planted out, and the marvellous 18-oz. fruit grown at Bexley have astonished all growers. Remember always to send Peaches to market before they are fully ripe. As before alluded to, we are inclined to think early Peaches might be grown on bushes in favourable spots in the open air,* especially where there is a mixture of chalk in the soil. Probably if for a few years tacked to a sandstone bank or rock, and then allowed to grow naturally, merely thinning the boughs, a result might be obtained. The same remarks apply to Apricots, but the Orange and Breda only should be experimented on. Nothing is more injurious to these stone fruits than high cultivation in outside trees, as we generally get a wet time after the first growth is completed, and they then make fresh wood freely, which our short English summers prevent from becoming ripe enough to resist the rigours of winter. Probably a covering, such as is used for Vine borders, would obviate this, by throwing off excess of moisture from the roots. In all cases the soil must be firm, and no stimulants should be used till the fruit is set.

"Figs are like Tomatoes and oysters, a taste for them has to be acquired, and when a person begins to like, they become greedily fond of them. In many parts of Kent they grow well on bushes or standards, on land where there is but little depth of soil, and only require a partial thinning of the branches annually, while along the southern and western coast of Britain they flourish and make trees. They delight in a dry corner; the hardiest are the Brown Turkey, Malta, and Marseilles, but

Osborn's Prolific and others might be tried. When Fig trees are heavily cropped, a free use of liquid manure in a dry season will assist the fruit into size. As in most large gardens a Fig house is now the rule, there will probably soon be a demand for a cheaper class of fruit; none is more acceptable on the breakfast-table. Good Figs were 12s. per dozen in May in London.

"A very interesting account of the Fig orchards in Sussex appeared in THE GARDEN, May 10, 1890, from which we extract the following notes: "The best kind for open-air culture is the Brown Turkey, and the trees are allowed to grow naturally without pruning, and among them is one said to have been planted by Thomas à Becket, which has barely survived being struck by lightning in 1885. They prefer a gravelly subsoil, and lime rubbish and similar materials are added as a dressing to the rich surface loam. Just before ripening, the Figs are placed into bags, to protect them from birds, otherwise they are sure to be spoiled. The larger trees have stakes and cross pieces to keep the boughs from the ground, and so greatly are they now appreciated, that they sell for as much each as they formerly fetched per dozen." Chalk rubbish appears to form a good foundation for their roots to work in, and no doubt the introduction of broken bricks, stones, cinders, &c., would keep the trees from making too gross shoots, and enable them to ripen their wood.

"MULBERRIES. These are seldom seen in market, they so soon spoil after picking. So far as we know, no use has yet been made of them as a preserve. They may become useful in dyeing, the stains being very intense.

"BLACKBERRIES. One of our most delicious fruits as a preserve—in fact, with cream, quite an exotic dish is produced; but these are generally suffered to grow wild. Many stony banks, probably the heaps of refuse from quarries, chalk works, lead works, &c., might be planted with them to advantage. The jam-maker who first had a stock would be able to command a large price after the flavour became known. On Lord Sudeley's estate the Brambles are allowed to grow in the hedges, and Blackberry jelly and jam have yielded large returns. They are also cultivated in Kent. The selected British one is very fine, but the American varieties have failed to succeed in this climate. The cut-leaved kind is very productive and free in growth. Many sides of railways, roads, &c., would grow these well. Can be propagated by cuttings made from the roots and long shoots. The new Logan Berry will be a gain in this direction.

"QUINCES might be planted as before alluded to. Cheap trees of these as two-year-old cuttings could be at first planted, or half standards. They require no pruning for some years; merely thin the branches. The best kinds are the pear-shaped and Portugal, both large-fruited varieties.

"MEDLARS.—We have sold trees of these for market. The large-fruited kind forms a flat-headed tree, and the Royal an upright tree; the former is the best for market. As the green fruit is quite uneatable, they could be planted in the hedgerows; and those who are expert could graft them on the Whitethorn already there, but to save time they should be purchased from a nursery. They are marketed in quarter sieves and in punnets, and are reputed to produce a fair return, and are becoming greatly sought after both for dessert and jelly.

"BILBERRIES, CRANBERRIES, and WATERCRESSSES are crops which those having especially suitable places could cultivate, and even the Heath could be grown for broom-making with advantage."

THE GARDEN ANNUAL.

This useful annual, almanack and address book for the present year has been recently published. It is an excellent reference book for the garden library and full of good general information such as a gardener requires occasionally in his work. Addresses are given of gardeners in the British Isles, nurserymen, societies with their secretaries, and the new plants and fruits of the past year are recorded also. It is published at 37, Southampton Street, Strand, W.C., and will be sent post free for 1s. 3d.

* Fruit Farming for Profit. By George Bunyard, The Royal Nurseries, Maidstone. From the author, 2s. 6d., or tree by post, 2s. 9d.

* Wonderful crops have been obtained by Mr. Blackmore, at Toddington, from the early American sorts, but he states that it was not till the trees were 8 feet high that they cropped and perfected their fruit.

THE GARDEN.

No. 1470.—Vol. LVII.]

[JANUARY 20, 1900.

FALSE IDEALS.

NOTHING is more frequent in seed lists than to find the words "dwarf and compact" used in praise of some annual plant, and used with an air of conviction, as if to say: "There! now we have got it 'dwarf and compact.' We have done our whole duty by it; buy it and grow it, and be happy."

Is it an ungenerous and ungrateful act on the part of some of us that we are not content to accept "dwarf and compact" as the end of all beauty? Is it not rather, as we venture to think, a question that demands the most careful consideration and the exercise of the most well-balanced judgment in the case of each individual kind of plant that is commonly grown for the adornment of our gardens?

For planting beds in a geometrical garden, where the object is merely to fill spaces of certain shapes with a mass of some chosen colour, these dwarfed plants are all very well, and no doubt this is a way of gardening that has its uses. But because the dwarfed form may suit such use in perhaps one garden out of a hundred, it is not a reason for denying the best possible form that the plant might have to the other ninety-nine. May it not be one of the many cases in which the practice of what is easiest has falsely taken the place of what is best?

For any one of the great firms who benefit us by growing acres upon acres of beautiful plants for seed, to accept as a general article of faith that all annual plants are the better for dwarfing, is certainly to adopt an attitude of mind which does not put an undue or fatiguing strain upon the imagination.

It is, no doubt, very easy to make this mistake, for here and there is a plant that just does want a certain degree of dwarfing, and when such a form occurs in a seed-bed, the condensing of the mass of bloom at once gives the dwarfed plant the appearance of being better furnished, and the idea, adopted with good reason in the case of one seed-bed, is apt to draw away the mind from other considerations, and to fix also, in the case of others, on that special quality as the one most worthy of encouragement. So it goes on from plant to plant, until it has come to be much too readily accepted among seed-growers, seed-merchants, and gardeners that "dwarf and compact" is necessarily a term of praise, and in the greater number of cases the most desirable habit for an annual plant.

It is true that with many plants we are still at liberty to choose, and that in seedsmen's lists we are offered both tall and dwarf kinds of such plants as Larkspurs, Marigolds, Zinnias, Salpiglossis, and so on. But, on the other hand, there are good things of which only the dwarfed forms remain, and though a great many people who love their gardens would be glad to have the plants in the bolder shape, the desired form is denied them.

Part of the difficulty also comes from the pursuit of novelty as a quality that is thought to be desirable in itself. When, in the course of its cultivation, a plant does come to have some high degree of beauty of form and flower, how rarely do the producers seem to recognise the fact that here is a beautiful thing to be treasured and guarded, and not driven further into directions that detract from that beauty, merely for the sake of some newer, but not necessarily better, development.

During the past autumn we have been more than ever struck with the beauty of that grand autumn plant, the French Marigold. To the end of October, and even into November, in the half-light of the afternoon of early winter, the gorgeonsness of these fine flowers was unequalled by anything else in the garden. The 2-foot-high plants, of bold and handsome growth, were generously set with glowing bloom of ample quantity, but not crowded. One kept coming back and back to them with a sense of thankful admiration, and a conviction that here was the very best this good plant could do. The individual flowers, of deepest orange and rich mahogany, had the folds of the petals just close enough to give the flower the utmost richness, and to display the glorious colour to the very best advantage. Beside these grand things it was impossible to see without a feeling of regret for good effort wasted, some others, that to judge by illustrated seed-lists, would appear to be considered of more orthodox excellence. "Dwarf and compact" they certainly were, but without an atom of grace or beauty and with tightly folded flowers, looking like sections of cut gingerbread.

Some whole families of favourite plants want deliverance from this thralldom. A note last week dealt with this question as it relates to China Asters, but we also want bolder forms in all the families of Stocks. We want the whole plant more free of growth and more branched; we want them more beautiful. What Wallflowers are so fine as the great bushy ones in cottage gardens on a fairly stiff soil! What dwarf garden Wallflower can compare with them?

The over-doubling of flowers is another matter that is often fatal to beauty. Many a flower is the better for a judicious degree of doubling, but when it is carried too far it turns what should be a handsome flower into a misshapen absurdity. This has been done in the case of Zinnias. In this fine thing moderate doubling is a gain, on a well-grown plant a couple of feet high. But there is a monstrous form where many rows of petals show one above the other. In this the flower is robbed of all its natural beauty and becomes an absurd cone of quite indefensible ugliness, and it is all the more deplorable an object when this monstrous flower is grown on a dwarfed plant. The orthodox Hollyhock is also much too tightly doubled, so that it becomes a tight wrinkled hemisphere. The beautiful Hollyhock has a distinct wide outer petticoat, and the inner portion is not so tightly packed but that its component petals, though closely grouped and loosely crumpled, admit of the free play of light and colour.

The undesirable influence of a false ideal and of the rage for novelty, rather than a calm judgment of what is most beautiful, is also seen in the matter of colour. Some flowers have naturally only a tender tinting, which seems to be so much a part of their true nature, that attempts to force them into stronger colouring can only detract from their refinement. Such a plant is the delicious Mignonette, with a tender colouring that seems like a modest self-deprecating introduction to its delicious and wholesome quality of sweetness. The slightly warmer shade of the anthers in the plant of normal tinting, with a general absence of any positively bright colouring, is exactly in accordance with the plant's true character, and with that modest charm that gives it a warm place in every good gardener's heart. But when, as in some of the recent so-called improvements, the graceful head is enlarged and condensed into a broad, thickened squatness, with large brick-red anthers, that modest grace that formed the essence of the sweet flower's charm is entirely gone, and in its place we are offered a thing that has lost all beauty and has only gained a look of coarseness. These broad, thick blooms have also a suspicion of rank quality about their scent that was never apparent in the older forms.

All honour and grateful acknowledgment are due to seed growers both at home and abroad for the many grand plants that we owe to their careful labours. We know that

they will take our remarks in good part, and after all it is only by letting them know what is wanted that we may expect perhaps some day to get it.

GARDENERS' ROYAL BENEVOLENT INSTITUTION.

As our report on another page shows, this institution, thanks to the solid work performed by all concerned in its management, has flourished exceedingly during the past year. There must be no standing still. This organisation should increase greatly in usefulness and prosperity, as various country branches are founded to carry its good work into districts far removed from the metropolis. Its work is not "local," though when the chief business is centred around a London office, those far removed from its headquarters are thus apt to regard it. For that reason the great movement taking place of establishing branches in various parts of the British Isles should be encouraged, and the gardener urged to support an organisation founded for his benefit in times of trouble and distress. But gardeners give somewhat half-hearted support to the institution, partly, we think, because they have never studied its working and may be forgetful that health and vigour are uncertain. The annual subscription is small and may generally be afforded by gardeners of all degrees, and it is their duty to think of possible troubles in the future, when the institution may be appealed to for succour.

This benevolent institution is for gardeners, and gardeners only, and they should set their part in contributing towards its maintenance. The past year of progress may not continue in 1900: the nation is plunged in war, and the purse-strings untied for our soldiers fighting for its welfare across the seas. Let the gardeners, therefore, play their part in helping this excellent institution, remembering that its continued and increased prosperity means greater opportunities of giving assistance in time of need. We hope the annual subscribers will increase, as these form a solid foundation, and those who intend to help forward the institution may be reminded that the expense of management (£700) is covered by the interest derived from invested funds, and there yet remains a further £200 from the same source for relief. Every penny received each year from subscriptions and donations therefore goes to benefit the gardener or his widow in distress. During the past few years its good work has been extending, and it remains for the gardeners of the British Isles and those interested in horticulture to declare whether this happy condition of things is to continue in the future.

SOME WELCOME ENCOURAGEMENT.

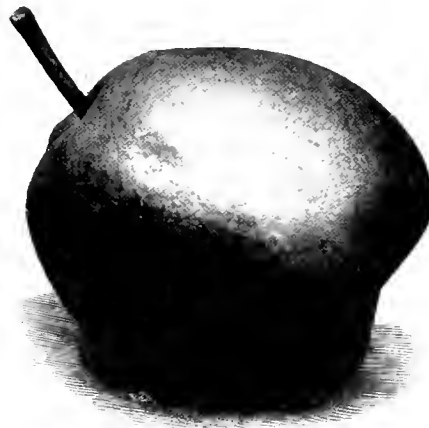
It is extremely gratifying to see how THE GARDEN'S old friends are coming forward to support it in its new life. We take it not only as evincing general interest in horticulture and as a kindly desire to strengthen the hands of those who are now responsible for the paper's management, but as an acknowledgment due to the good work it has done in the past. Of this we have a signal proof, as not unworthy of expression by one who holds his high office, in the sonnet that the Poet Laureate honoured us by writing. No one loves a garden better than Mr. Austin, or has written of it with more delicate and delightful sympathy. Other names honoured in literature will also appear in our pages, and we are receiving cordially sympathetic

communications not only from those who hold the highest places in the horticultural world, but from eminent botanists and other men of science whose learning bears upon the subjects we have in hand. - Eds.

THE FRUIT GARDEN.

LATE PEARS.

IT is not enough that there should be plenty of good Pears. We have such in abundance, but the bulk of them are ripe and over by the end of November, and too often what is left is of inferior quality. To have really good Pears that, besides being of fair size, are clean, handsome, of good colour, and have soft smooth flesh, full of juice and of fair flavour, up to the end of February is indeed difficult, and myriads of even fair Pear growers fail in that respect. At the last meeting of the Royal Horticultural Society one of the ablest Pear growers in the kingdom (Mr. Woodward, gardener to Mr. Roger Leigh, Barham Court, Maidstone) placed before the fruit committee very fine samples of an old variety, Passe Crassane, usually regarded as a December Pear, and the well-known yet comparatively little-grown Doyenné d'Alençon. This latter Pear has been in commerce many years, but till the meeting of the 9th inst. had never received any award from the Royal



A GOOD WINTER PEAR (PASSE CRASSANE) REDUCED.

(From a photograph of fruit shown by Mr. Roger Leigh (gardener, Mr. Woodward), Barham Court, Maidstone, at the last meeting of the R.H.S.).

Horticultural Society, probably because never previously shown in such good condition. But because so shown, and found to be of such comparative excellence on the above date for the time of year, an award of merit was granted to it. These are not, of course, the only good late Pears in cultivation. A further list of capital varieties, where they be well grown, may be found in *Easter Beurré*, *Josephine de Malines*, *Marie Benoist*, *Beurré Rance*, *President Barabe*, and *Ne plus Meuris*, so that there is no lack of good late Pears. But how few can obtain such superb samples as Mr. Woodward does, and the illustration given of *Passe Crassane* shows what these Barham Court late Pears are. But whilst too many persons would attribute the success there obtained to soil or climate, the grower attributes it to cultural attention. The trees of both *Passe Crassane* and *Doyenné d'Alençon* are twenty years old. They are of the usual horizontal-trained form and are on a west wall. It may be said that a wall having a west or slightly north-west aspect is the very best for late Pears. Each winter the soil, some 3 inches or 4 inches deep, is stripped from over the tree roots, and on the latter is placed a good dressing of half-decayed manure. Some of the soil is then cast back over the manure. That dressing has a very potent effect on the swelling and nutrition of the flower buds. Then during the following season,

especially when the fruits are swelling, and particularly in the autumn, the roots get occasional soakings of water, which do wonders in helping to swell the fruits. When the bloom is set in the spring and fruits are well formed, thinning takes place early, and whilst that process is not hard, yet it is enough to enable good fruits in ample quantity to be produced. Thinning is too often left late, when it had better have been done a month sooner. As the fruits attain size (and under such good treatment they soon become double the size late Pears ordinarily are), that they may hang on the trees as long as possible, a piece of raffia or soft twine is tied to the fruit stem and fairly tight to the branch from which the fruit hangs. This is found most helpful in keeping the fruits attached to the tree to the very last moment of their maturation, and with late Pears that complete maturation is a matter of the first moment that is too seldom considered. Even should the fruits become detached from the tree, they are held safe and do not fall and become injured. A. D.

PEAR PASSE CRASSANE.

This excellent Pear was shown in such fine condition by Mr. Woodward, of Barham Court Gardens, at the recent meeting of the Royal Horticultural Society, that a few words as to its value for use at this season, when there are so few really good Pears, may not be out of place. It has been grown for nearly half a century in this country, but I fear in a very few gardens can one meet with such excellent specimens as the fruit illustrated in THE GARDEN.

As the name suggests, it is of continental origin, having been first fruited at Rouen some forty-six years ago, and it has only recently been recognised by the fruit committee of the Royal Horticultural Society, receiving a first-class certificate. It may be asked why such an excellent fruit as regards its flavour is not better known, and my answer is that in many gardens it is not nearly so free bearing as one might wish, and in others it does not crop at all if the trees are hard pruned summer and winter, and even in the most favoured localities it needs wall protection.

I am able to give Mr. Woodward's mode of culture, and it is one very easily carried out. It consists in not pruning too hard and allowing the trees to make a season's growth without stopping or training. Treated thus, I am aware the trees do not present the neat appearance usually seen in a well-kept garden, but appearances must not in this case be considered, and though the trees are cut back in winter, by leaving the wood till that season the buds at the lower part of the trees give fruit, which if the trees were cut back in summer would not be the case.

Even in the renowned Kent soil this variety is grown on a west wall, and I think Mr. Woodward is an advocate of root-pruning this variety, and there can be no question whatever as to the quality of his fruits, as those illustrated were little inferior to those of *Doyenné du Comice* at its best in December. I have tried to grow this variety as a cordon, but failed, and, of course, my failure cannot be wondered at if the trees need the free growth as allowed at Barham Court. I have also tried trees double-worked, but failed to obtain fruits of the size or quality expected; but it does not appear necessary to have the trees double-grafted, as the Barham Court trees are on the Quince stock, and they appear to crop every year and give beautiful fruit. Of course, soils may be answerable in some cases for the want of success, but there can be no doubt whatever that some varieties will not bear such frequent pinching and cutting back as others. Only to-day, when looking over some young bush trees of Pitnaston Duchess, I was lamenting the necessity for such hard pruning, as the points of the growths were a mass of flower-buds, and to keep the trees within bounds it was necessary to take three parts of the fruiting wood away. It is useless to cut the top-growth and allow the roots to ramble at will, so that root-pruning will occasionally be found necessary.

GEO. WYTHES.

DAFFODILS at WARLEY PLACE.

Essex is by no means notable among English counties for its private gardens, the soil over much of its acreage being stiff and cold, and its levels flat and unpicturesque. But even if it contained no other garden worth a visit, Warley Place alone would relieve Essex of being a negligible quantity to appreciative gardeners. The garden is not of the largest—in my humble judgment it is all the better for this limitation of space—but it would probably be impossible to find in England an equal area more absolutely crammed with all that is most beautiful and choice among plants. Indeed, if it were possible to have a quarrel

view, and the garden is fortunate in comprising hill and dale within its modest boundaries, and a soil of super-excellent sandy loam. The Ivy-clad house, built on an ancient foundation, contains a wealth of beautiful things, witnesses to manifold accomplishments. The little chapel may stand as an example of tasteful and restful simplicity, and the whole history of the instrument-making craft may be learned from the rare collection of the music room. The remarkably complete horticultural library tells that the garden has effected a lodgment within the house, and testifies to the truth that other tasks and pursuits, however full and diverse, are overruled and held in subordination to the passion for gardening

rockeries, mostly mean and incongruous stone heaps, which are entirely out of keeping with the gentle lines of English landscapes. But at Warley you walk, all unconscious, over a stretch of green turf, purpled in February with sheets of the rare wild Crocus, until it suddenly slips over into a miniature stream-bottomed valley. The alpinists have entered into possession of their home with a zest which shows how well their wants have been understood. As to the fulness of their numbers, I have a vivid recollection of the arduous task which that past-master of nomenclature, Mr. Wolley Dod, found one spring day in naming the rarer plants. At the lower end of the ravine the streamlet flows through a cunningly built cave,



POLYANTHUSES AND OTHER NARCISSI AT WARLEY PLACE.

with the head gardener, V.M.H., it would be on the score that she can scarcely herself keep accurate count of the contents of so full a treasury, for this is not her only garden. The care also lies upon her of Tresserve, that terraced bower of glorious bloom, fronted by the purple mountains and blue waters of the Savoyard lake. Not that any overcrowding is implied by the word "crammed," but every foot of ground is occupied, as it should be, by some plant which desires that spot and no other for its full contentment; yet none are stinted of soil or sunlight, and there is nowhere any sacrificing of general effect to petty detail.

The site of Warley Place commands a noble

where it has once taken possession. Out of doors the most eminent feature is, perhaps, the alpine garden—if, outside Ireland, anything should be called "eminent" which is sunk below the surface-line. When its construction was being planned, I believe Miss Willmott was counselled to build up the rockwork on the natural surface, but most wisely and success-fully acted on her own better instinct and knowledge, and cut out a deep ravine for its reception. Not only are drought and wind thus largely warded off, but a standing artistic difficulty is solved. Very many otherwise charming gardens seem to me to have been grievously marred by the rage for these

the dimly-lit and ever moist abode of the choicest Filmy and other Ferns.

The true gardener comes to regard plants much as the Roman poet regarded humanity. "I am a man, and nothing human comes amiss to me." If Miss Willmott were pressed to name her favourite flower, she might probably answer, "Every flower in its season." Yet I venture, without her leave, to credit her with a special affection for Roses and Daffodils. Of the former, that is to say, Rose species, the Warley collection is probably unique. Very rare and interesting Roses are met with everywhere on the place, and certainly the search for any lost or out-of-the-way kind would be more

hopeful at Warley than in any other European garden. As to Daffodils, the accompanying photographs are proof enough that at Warley they receive no niggardly share of regard and space. The immemorial existence on the estate of the Lent Lily in complete happiness was rightly taken as an indication of a good Daffodil soil, and a beautiful planting in the grass of the most effective varieties has given results such as are here shown. The picture containing the seat round the Oak shows the value, at a season when the grass is otherwise flowerless, of large, irregular masses of Daffodils, and especially of the Tazetta or Polyanthus Narcissus. This latter flower has of late, for

light, their massed clusters of bloom have an unrivalled quality of glistening pearliness, while their fragrance is delightful in the open air. In another photograph the lighter effect is seen of the starry *N. incomparabilis* and the value of Daffodils against a dark background. But Daffodils are not treated merely in this broadcast manner at Warley. A Daffodil dell has been consecrated to a noble collection of the finer kinds, planted informally in clumps and in small beds of varying size and form cut out of the natural turf. In the Warley loan the bulbs make that somewhat short, broad-leaved growth, with the flowers showing well above the foliage, which Daffodil lovers greet as a

found a home with which they appear well content. That quaint and generally disobliging plant, *N. cyclamineus*, may be seen in considerable colonies, thriving and yielding unusually large flowers. *N. triandrus*, too, is a favourite, and repays the liking and care bestowed upon it. The photograph shows how appreciatively the fastidious requirements of a plant such as this little Spanish Daffodil are understood and indulged at Warley Place.

G. H. ENGLEHEART.

THE WINTER GARDEN.

Our gardens in winter have, speaking broadly, not received that thought and attention that they really deserve. "Now is the winter of our discontent" need not be true of our open-air gardens in December or January, even though they must lack, perforce, the brilliant floral colouring of rosy June.

One of the facts most obvious to those who look at Nature, at our woods and hedges, and stream-margins in winter, is the delicate forms and the tender shades of colour they display in sunlight or in shade. Every artist is aware of this fact, and our tree-planters and landscape-gardeners fail, inasmuch as they but too often confine their attention to spring and summer effects, leaving the late autumn and winter to take care of themselves.

It is not always so, I know, but still, as I have said, it is too often the case in even what are in other ways considered to be our best gardens. Now and then some attempts are made to gain wintry warmth and colour by evergreens, such as Golden Yews, *Euonymus*, Hollies, &c., but even these cannot, as I think, compete with the subtle colourings of some deciduous trees and shrubs, such as silver or paper Birch, golden or Cardinal Willows, the Dogwood, and free-fruited Roses, especially the Sweet Briar.

Red, yellow, and orange-fruited Hollies, *Pyracantha*, *Pernettyas*, and *Cotoneasters* often light up very brightly in the winter sunshine, and more effective use might be made of the Japanese winter Jasmine, the Jonquil-like yellow flowers and Rush-like stems of which contrast effectively with the bronzy leaves of the common *Mahonia*, or with Ivies of various kinds, especially with the dark leaves of *Hedera atropurpurea*, the so-called Black-leaved Ivy. It is during the mild winter season that all the hardy Bamboos are at their best, especially in sheltered glades or dells and near to water-margins.

I know an old garden near the sea intersected by sheltering beechen hedges, 20 feet or 30 feet in height, and these stand out against sea and sky, being when sunlit of a rich warm old gold or warm russet hue, and the same is true in a minor degree of the pleached hedges of Hornbeam, now, alas! so rare in gardens.

In Sussex there is a broad-margined carriage-drive from which extensive and varied views o'er wood and downs and hazy blue distances are obtained. It is fringed with Gorse, Dogwood, Willows, and silver Birch, with here and there clumps of Broom and spreading carpets of different kinds of Heather (*Erica*), and the effect is very delightful all the year. The small low-growing autumnal Furze often flowers through the winter until the larger kind appears, while the Sweet Briar, so fresh and sweet in spring, is now brilliant scarlet with its sealing-wax coloured heps. The Scotch Fir, either singly or in groups, never looks better in colour than during the winter, and the same may be said of all the kinds of conifers and of the various sorts of *Arbutus*, and especially the large and



STAR DAFFODILS (*NARCISSUS INCOMPARABILIS*) AT WARLEY PLACE.

some inscrutable reason, fallen under a quite undeserved ban, as though of merit wholly inferior to other Narcissi. It is true that the Tazettas are not all hardy, but several of the very best, such as Grand Monarque and Gloriosa, are perfectly frost-proof in turf anywhere in the southern half of England. And seen on a showery spring morning, under broken

sign of well-being, and there are few lovelier sights than this dell on an April day of cloud and gleam. In nooks of the alpine garden and other spots are Daffodils of still greater rarity and beauty, many of them not to be found elsewhere. Some of my own seedlings, I am glad to say, particularly the waxen, Fuchsia-like hybrids of *N. triandrus*, have here

handsome *A. andrachnoides* or *A. hybrida*, with its handsome leafage and flower-clusters and its rich red stems.

One of the richest and most remarkable of winter effects I ever saw is that afforded by the Sea Buckthorn, as it grows on the sand-hills near the sea at Countown Harbour, County Wexford. It was introduced near fifty years or so ago, and has spread about freely, some of the older specimens under which one can walk, others only a foot or two high, but all densely covered with orange-coloured fruits, visible and effective half a mile away.

The river Liffey, at Strallan Bridge, is a glowing picture all through the winter with crimson Dogwood and crimson and golden Osiers, with here and there a silver Birch. The same is the case at Carton, Kildare, where the islands and lake margins are likewise planted with Willows and Dogwood, which glisten after rain, or glow with rich colour in the wintry sun, while wild ducks by the thousand sweep round in their flights or settle to roost there.

Longfellow says (or is it Oliver Wendell Holmes?) that deciduous trees are like beautiful big children, and that Nature—the dear old nurse—dresses and undresses them every year. To many, a stately tree in winter has all the beauty of fine sculpture. The subtle grace and noble proportions are seen all the better when their leafage is away. A group of tall Scotch Fir, or of Beech, or of the silvery-barked Birch—MacWhirter's fair "Lady of the Woods"—is worthy of close study in all the stages of illumination they undergo on every winter day. In rain, in snow or frost, in bright sunlight or in misty shadow, in strong winds or in dead calm, all trees possess their beauty as they stand up against an ever-changing sky.

I once saw the great plumed heads of the Swamp Cypress at Syon House on a grey winter day, and as they towered above the mist and fog they stood out clear as an etching or photograph, and added a touch of sombre mystery to the scenery of Thames-side not easy to describe.

In order to obtain the best effects we must group our trees, and not dot them about singly, as is now too often the rule. A single tree is often very beautiful, but let us have, wherever space is ample, groups as well as single specimens for variety and contrast. In all but the most sheltered situations a group of any one kind of tree will grow quicker and become more effective sooner than an isolated specimen, a fact probably due to their mutually sheltering each other. Again, no two groups should be planted exactly alike or at the same distance apart; they should be arranged with feeling, and not by rule and line. Very picturesque groups are often formed when trees are self-sown, or they may be made by judiciously thinning out trees from groups or clumps originally planted in a formal way.

I remember in Ireland a rough rocky valley that formed part of a demesne and came in full view of the upper windows of the house. The bare rocks on either side lacked colour and variety, but on this being pointed out to an old forester, he at once proposed a remedy. "Sow the sunny side with Gorse and Broom," said he, "and the shady side with Birch and Scotch Fir." The owner at once had it done; indeed, having an inborn feeling for landscape beauty, he directed the actual sowing operations himself the following spring, and the result is that a common-place valley is now one of the prettiest and brightest views on the place.

In districts where our native evergreens are absent, they may often be introduced for shade and shelter with good effect, and on cold and

exposed sites will often thrive where exotics fail. Yew, Box, and Holly but rarely suffer from our hardest winters, and make the best of hedges and shelter-belts whenever such are desired for other low-growing things.

A curved river-margin I know in Norfolk is fringed with pollard Willows and coloured Osiers, which slope down to the water's edge where the common Reed (*Arundo*) and black-headed Reed Mace (*Typha*) rustle and sway in every breeze. Between the pollard Willows

perceive that the forces making for life are greater than those which at present make for the mastery of winter. Roots are pushing forth fresh rootlets; sturdy or delicate shoots are rising from the "mother root," and will bring, in due course, graceful or stately stem and charming or noble flower. Winter, with all its dreariness to those who love hardy flowers, is full of budding hopes. It is at this season that we can enjoy to the full the pleasures of hope. The garden year is all before us with its treasures of leaf and flower, colour and perfume—delightful to our eyes and charming us



A COLONY OF NARCISSUS TRIANDRUS AT WARLEY PLACE.

are groups of Dogwood and Bamboos, and when the afternoon sunshine falls on these the colour effect is nearly as soft and as tender as that of a rainbow, and any truthful painting of it would be disbelieved and voted overdone.

It is to be hoped that winter gardening will be soon carried out as well as may be in our London and suburban parks, where all who see may be led to take note of the many hardy trees, shrubs, and other plants that are beautiful in the open air even during the cold winter days.

During recent years much good planting in this direction has been done at Kew, and all interested could not do better than visit open-air Kew during a winter's day, and note for future use the many plants that there lend themselves to the hand and eye of the landscape gardener. Here, at least, may be seen most of the beautiful hardy vegetation that by form or colour of stem and branch, leaf and berry, or even actual flower, lights up and cheers our gardens during the winter days.

Dublin.

E. W. BURBIDGE, M.A.

When winter rules almost unchecked we are apt to forget that his reign will soon come to an end. If we look at our plants we shall see all around us the evidence that the power of the season is insufficient to hold for long in thralldom the forces of spring. The swelling buds, the points of the plants which, even at this early time, are thrusting themselves through the cold earth, are tokens that the time of desolation is fast giving place to the era of brightness and gladness. If we could see underneath the hard surface of the soil we should

with the fragrance they exhale. These hopes are no mere day dreams; they are built upon the experience of the past.

Yet we need not dwell only on the pleasure of the future. It is possible even now to draw from the garden and its surroundings joys of the highest kind. They may be chastened by the hardships of the time, but they are joys none the less. If the eye has been opened to see the numberless charms of Nature, we shall not want for pleasures. The future may not be for us, but the present is ours and it is full of interest. The chill breath of winter has robbed us, it may be, but we are not left desolate. There are yet a few flowers; there will soon be more. There are plants and shrubs and trees whose leaves are proof against the cold; from their colouring and their beauty of form we can draw stores of pleasure and knowledge. There are fruits from the flowers of the past; precious relics are they in their sweet memories, and beautiful and cheering in themselves.

Then have we not the beauty of our deciduous trees, which now stands revealed in a different aspect from that of the sweet summer-time? Their grandeur and nobility, then robbed with grace, now show in all their greatness. Rugged it may be, or, as with some trees, delicate and graceful yet, but it is beauty still. As we gaze upon these trees and admire their noble trunks, their brave branches, and the tracery of their twigs, we think that, after all, winter has his glories, if summer has hers.

S. ARSCOTT.

Citrus Medica var. Limonum. We saw recently some very fine fruits of this in the temperate house at Kew. They measured about 9 inches in length and about 18 inches in girth.

INDOOR GARDEN.

ACALYPHA HISPIDA.

VERY large plants of this are handsome, but it is not everyone who has the conveniences for growing them. Probably the most useful plants are those with a single stem and clothed with leaves down to the pot. This plant appears to have no particular season for flowering, and may be had at any time by striking successional batches of cuttings. As the older plants begin to get leggy the tops should be taken off, inserted singly in small pots, and plunged in bottom heat. If placed under bell-glasses or hand-lights in the propagating pit they root very quickly; indeed, I know of scarcely any other plant which so soon fills its pots with roots, consequently they soon want re-potting and this must be repeated before they get pot-bound, so that they may be kept moving. The soil used should be rich and contain a good proportion of loam. I find that this plant does best in a stove temperature, but the atmosphere should be moderately dry to keep the ornamental tassels in beauty, as damp quickly spoils them. When stock has to be increased one has to resort to side cuttings from beheaded plants, but these do not make good plants right away, and should only be grown long enough to admit of good leading cuttings being obtained from their tops in turn. T.

EUPHORBIA JACQUINLEFLORA AS A CONSERVATORY PLANT.

A NOTE lately appeared on the above striking plant, which in mid-winter provides its brilliant flower racemes, absolutely unique at that season of the year in their vivid orange-scarlet colour. The writer of the note in question recommends entire stove culture, and doubtless such a course is more

7 feet in width from the back wall to the front lights. Two French windows opened from the living-room into the conservatory, and a gentle heat was kept up in the pipes; but on the frosty day of my visit the thermometer was as low as 55°, a heat amply sufficient for the Chrysanthemums, which formed the chief feature of the conservatory, but one would have imagined utterly inadequate for the Euphorbia. The plant, however, was flowering freely and appeared in the best of health. It was growing in a border and covered many feet of the wall, and, I was informed, had blossomed satisfactorily for some seasons. The locality was South Devon, and the exposure of that portion of the conservatory which contained the Euphorbia, and which, doubtless, became intensely hot in the summer months, was due south. Possibly the ripening of the wood, induced by the summer roasting, may have enabled the plant to withstand with equanimity the exceptionally low winter temperature to which it was subjected. Be that as it may, the instance quoted proves the possibility, if not the advisability, of growing and flowering Euphorbia jacquiniiflora in a comparatively low temperature. F.

APHELANDRA NITENS.

Of the numerous bright-coloured Acanthiads that bloom during the winter months this is one of the most brilliant, while the foliage is also ornamental. The individual leaves, which are about 6 inches long and 3 inches wide, are of a deep purple underneath, but on the upper part the colour is a rich bronze which shines as if varnished. The flowers spring from the axils of large adpressed bracts, which form a four-sided spike about 6 inches in length. Their colour is bright scarlet. They do not last very long, but as a succession is kept up for some time from one spike, the flowering season of this Aphelandra extends over a lengthened period. It is a native of New Grenada, and was discovered by Pearce of

of bright orange-red flowers. There is a white-flowered variety alba but plants of this usually show a tendency to revert to the normal form either in the shape of entire blossoms of a red hue, or stripes and flakes of that tint on a white ground. A nearly-related Azalea also in bloom at the present time is *A. calyciflora*, in which the blossoms are of a hose-in-hose conformation, as in the better-known *A. amena*. Their colour is, however, much the same as that of *A. obtusa*. This last is quite an old plant in gardens, yet it received an award of merit from the Royal Horticultural Society as recently as 1898. Though so generally known as Azaleas, all of the above, according to the latest botanical authorities, are now included in the genus *Rhododendron*, that at the heading of this note being *R. indicum obtusum*. T.

EXPERIMENTAL PLANTING.

NO HARD-AND-FAST RULES CAN BE FOLLOWED.

ALTHOUGH in the cultural directions given for various subjects the conditions advocated are those that long experience has proved to be most congenial to their requirements, all lovers and intimates of the garden are able to recall instances in which, under apparently the most adverse circumstances, shrubs and plants have exhibited a vigour that certainly was not to be anticipated in view of the nature of their surroundings. Bearing this fact in mind, the experimental planter who finds himself unable to afford either in a greater or less degree the ideal conditions for some particular subject, should not thereby be deterred from giving it a trial, which, if it be followed by success, will be all the more gratifying on account of the uncertainty attending the result, while, should it prove a failure, the substitution of some plant that has evidenced its adaptability to the immediate environment is easily effected. In advancing the foregoing proposition the last thing in the writer's mind is to advocate a disregard of the justly accepted methods of culture which have, during years of exhaustive trials, proved conclusively that, by implicitly following their details, perfection is more easily attainable than by any other procedure. As far as possible the time-honoured rules as regards soil, situation, and exposure should be followed; but in the same garden the varied accepted requirements of diverse families of plants can be supplied only by the expenditure of considerable labour and money, and in many cases, owing to the configuration of the ground, absence of water, or some other insurmountable difficulty, are impossible of attainment. It is under such circumstances that the experimental planting of subjects in situations and soils held to be inimical to their well-being is worthy of a trial.

Experientia doct is a motto that, although its wording allows its application to experience gained through another, is generally inferred to apply to personal experience, and this is the kind of experience that is particularly valuable in the garden. Plants that succeed in one garden are often found to fail in another where the conditions are apparently precisely similar, while vigorous health is sometimes exhibited under circumstances that would appear to favour premature decease or debilitation.

One of the finest specimens of *Spiraea arifolia* that I have met with is growing on a steep slope of shallow, shaly soil in a southern exposure. During the whole of the summer the soil is practically dust-dry except after rain, which percolates through it immediately, yet this shrubby Meadow Sweet is in as rude health as if it were situated by the waterside, and invariably blooms profusely and makes good growth. In the same garden is a fine plant of *Spiraea flagelliformis*, whose condition is equally satisfactory. To anyone conversant with the needs of the *Spiraeas* the garden in question would appear to be as disadvantageous a site as could well be selected for their culture, yet their behaviour leaves nothing to be desired. Possibly their roots may have got down to a layer of rock, over which some moisture is continually finding its way, but this is mere conjecture.



NARCISSUS CYCLAMINEUS AT WARLEY PLACE.

likely than any other to be followed by satisfactory results. It is, however, a mistake to infer that because a stove temperature is to be preferred for this subject it is useless to attempt its culture in a cooler structure, since it may occasionally be found doing well under far cooler conditions. An instance of this came under my notice a few weeks ago, when I saw a large specimen in full bloom on the back wall of a conservatory that followed an angle of the dwelling-house, the portion in which the Euphorbia was growing being only about

tuberous Begonia fame when travelling for Messrs. Veitch, with whom it first flowered in 1868. Like its allies, this Aphelandra succeeds with ordinary stove or warm greenhouse treatment. H. P.

AZALEA OBTUSA.

This pretty little Japanese Azalea can without difficulty be had in flower by Christmas, at which time it is valuable for the greenhouse. It forms a freely-branched, compact bush with a profusion

TROPEOLUM SPECTOSUM AND T. TUBEROSUM.

In another garden that I am acquainted with, which contains a large collection of rare and beautiful plants, *Tropeolum speciosum* was planted in many positions, care being taken to afford a porous root-run and a sufficiency of shade, for in the south it is almost impossible to establish this *Tropeolum* in a situation exposed to the full rays of the sun. After the planting was concluded a certain quantity of roots remained over, and these were placed in holes dug at the foot of a spreading young Yew tree, the soil not being disturbed further than was necessary for covering the roots. After this was effected, these latter were not given another thought, as they were not expected to succeed, and had only been roughly planted as an alternative to being thrown away. In course of time all the carefully planted and tended *Tropeolums* disappeared, and for a couple of years the forgotten roots beneath the Yew did nothing to advertise their existence. In the third year, however, a vivid splash of vermilion on one of the branches of the Yew drew attention to the fact that the plants were not only alive, but in the best of health, in which state they have since remained, garlanding the sombre foliage during the summer months with an opulence of colour that year by year increases in extent. In the same garden *Tropeolum polyphyllum*, contrary to its usual custom, blossoms as freely in partially shaded spots as it does in open positions exposed to every ray of sunlight.

The handsome *Tropeolum tuberosum* is a somewhat erratic subject as regards its blossoming, apparently flowering considerably earlier in the south-east of England than the south-west. In Sussex I have seen it in good bloom in the second week of July, in Dorsetshire a cloud of orange and scarlet early in August, but in South Devon the majority of specimens that I have met with have rarely been in full flower before October, while in some cases their first blooms have not expanded until November, and in others they have shown no signs of flower. All the instances to which I allude were of plants grown on open walls in sunny situations. In one case in the same locality I saw a specimen in flower during the early part of September, but this was growing in light soil and had but a very restricted root-run.

Montbretias and Tigridias are generally supposed to flourish best in a comparatively dry rather than a damp site, yet the finest specimens of these plants that have come under my notice were growing by the side of a sheet of ornamental water. In the case of the Montbretias the corms were on the level of the water and the plants showed surprising vigour, their leaves being exceptionally long and almost as broad as those of *Gladiolus brechenleyensis*, while they were bearing a profusion of fine flower-scapes. The Tigridias, which were growing on a slightly higher level, were carrying immense blossoms on stems 2 feet and more in height. *Lobelia fulgens* in heavy, damp soils is a hardy perennial, requiring not the slightest winter protection in localities as far distant as Suffolk and South Devon, but in light soil in the latter district I have found it impossible of preservation through the winter even when mulched with leaf-mould, yet I have often seen a porous, friable compost recommended for this subject in preference to one that is of a damp and heavy nature. *Zauschneria californica* and *Plumbago Larpentæ* have grown and flowered well with me in South Devon in retentive loam without the slightest lightening of the staple, the latter plant spreading rampantly and blooming profusely close to the edge of a streamlet. In the same heavy soil I have seen a large patch of *Onosma tauricum* in a flat bed the picture of robust health and bearing hundreds of pendent yellow blossoms, and during the past summer a colony of *Edelweiss* (*Gnaphalium leontopodium*), growing in a slightly sloping bed of the same heavy red loam, was a mass of plush-like white blossom, yet, where other composts were easily available, such a staple would scarcely be selected for the culture of any of the four plants last named. *Campanula pyramidalis* is a subject whose culture, when it is not used as a pot plant, is practically confined to the herbaceous border, but during the past autumn I saw three fine specimens, each carrying a dozen or so flower-

spikes, growing in the interstices of a retaining wall. These plants had sprung from self-sown seeds, and presented a very striking and decorative effect.

Even after the unprecedented drought of the summer, and though growing in a sun-baked situation, the plants in question showed no signs of flagging, their roots having evidently penetrated deeply into the soil at the back of the wall.

This chance instance points to the advisability of making experimental sowings of the seed of stronger-growing subjects than are generally met with in the wall garden in the spaces between the stones, since, should the issue be successful, the diversity of form obtained will add considerably to the charm of the flower-mantled wall. Some shrubs that are almost invariably trained against walls, such as *Pyrus* (*Cydonia*) *japonica*, are very attractive when grown in bush form. This *Pyrus* flowers freely when thus treated, although it is naturally rather later in coming into bloom than in cases where it receives the protection of a wall. Fruit is often produced on bush as well as on wall plants, and a few years ago I saw in the south of Ireland a large specimen some 8 feet high and as much through that was bearing a large quantity of well-developed fruit. *Pyrus japonica* is a hardy subject that will grow in almost any soil or position, and is very tenacious of life. Seven years ago a rocky mound 15 feet in height on which a bush was growing was quarried away to make room for a building, and the shrub, which was of considerable size, transplanted to another part of the garden towards the end of May. The roots, which descended deeply into the rock, were unavoidably damaged in the lifting, but in spite of this, the untimely planting season, and a hot summer, the vitality of the shrub pulled it through. A portion of the roots of this shrub was evidently left in the rock, for during the following spring a tiny green shoot appeared about 5 feet from the summit of the perpendicular rock wall. This increased in size rapidly, and has now developed into a bush, issuing from the solid cliff, with branches over 3 feet in length.

The Winter Sweet (*Chimonanthus fragrans*), generally grown against a wall, does well as a bush in the open in the south-west, and is now bearing its sweetly perfumed blossoms. In places where sufficient space is not available for standard flowering trees, these may be grown against a wall, though the natural grace of contour is unavoidably lost by this method of culture. No comparison exists between a *Laburnum* with spreading branches growing in unrestrained freedom, laden with drooping golden flower-clusters, and the same subject stilly trained to a wall, a system which, indeed, is rarely followed. Only one instance of this use of the *Laburnum* has come under my notice, this having happened a few springs ago, when, seeing a distant house wall clothed in glowing yellow, I made a closer inspection, and found the whole side wall of the end house of a row covered with the blossoms of a closely-trained *Laburnum*. The road was but 6 feet distant from the wall and the tiny front plot, bisected by a path, afforded no room for a standard specimen, so that the proprietor, possibly an enthusiast in the matter of *Laburnums*, had, if he grew the tree at all, to avail himself of the only space at his disposal—in his case a justifiable experiment. S. W. FITZHERBERT.

CHRYSANTHEMUMS IN VASES.

Few will object to the discontinuance of exhibiting cut *Chrysanthemums* on green-painted boards, which has, in the opinion of many, become monotonous, and I think rightly so. We are certainly indebted to our northern friends at Edinburgh for launching out as they did a few years since by offering valuable prizes for vases of cut *Chrysanthemums*. Many had misgivings about it, the principal objection being the doubt as to whether they would last in a fresh condition to the close of the exhibition. All doubts as to this and other objections were dispelled; each year more and more interest has centred in these classes, and the contest has been of the keenest description. The National *Chrysanthemum* Society did well to

follow this example, and by offering such handsome prizes as they were able to do last November, brought together, without doubt, the finest collection of cut *Chrysanthemums* ever seen. Nevertheless, in my opinion, and in that of many others, this style of exhibiting may yet be vastly improved upon; for, as one of our leading authorities justly wrote in the Press a short time ago, have we not exchanged one monotony for another? Each exhibitor might be allotted a given space, each using the same kind of vase, which should be provided by the society, and, of course, stipulating the number of blooms to be used in each vase. He might be allowed to use what natural foliage he chose, and also a groundwork of Ferns or any other small-growing foliaged plants in pots.

I should also like to see a class introduced of, say, twelve or eighteen vases of any large-flowering kinds, including, if thought well by the exhibitor, Japanese, incurved, reflexed, and large *Anemones*. Good judges would be able to determine the relative value of each, and I feel sure such a class would attract much attention. I know many argue that incurved *Chrysanthemums* do not lend themselves to this style of exhibiting, but some of the best vases I have seen have been those of incurved Japanese, and I am perfectly convinced that many of our best incurved varieties could be arranged equally well.

Pompon and pompon *Anemone* varieties should also, I am sure, be encouraged in the same way. This charming section would then be seen in their full beauty. Who, indeed, could have failed to have been struck by the two fine exhibits shown by Messrs. Davis and Jones, both in London and Edinburgh, not so much by the individual blooms as by the charming arrangement made by each?

E. BECKETT.

Abraham House Gardens, Elstree, Herts.

Senecio macroglossus. This is a pretty greenhouse climber with thick, shining, ivy-like leaves. It is in flower at the present time, its large yellow flower-heads being similar to those of the *Marguerite*. It is very useful and welcome at this time.

Antholyza æthiopica minor. Some pots of this South African bulbous plant in the T range at Kew each contain a number of flower-spikes, and form just now an attractive feature. In general appearance the plant bears a considerable resemblance to some of the garden varieties of *Montbretia*, but the foliage is rather wider and of a richer green. The colour of the flowers is brilliant orange-red, with darker markings at the entrance to the throat. Though it is named as above at Kew in their hand list of monocotyledons, the variety *minor* is referred to *bicolor*. A group of half a dozen pots or so of this *Antholyza* would form an attractive feature for the greenhouse at this season, when the *Montbretias* are all at rest.

The Flame Nasturtium (*TROPEOLUM TUBEROSUM*) in Devonshire. Several notes have appeared of late on this *Tropeolum*, in one of which Mr. S. A. Arnott asks if the tubers are hardy in Devonshire. The plan generally adopted is to lift these in the winter after the foliage has withered as described by Mr. James Day (page 389), as in hard winters the tubers often are frost-bitten, but after mild winters it is not at all unusual to find young plants springing up from tubers that have been overlooked. The tubers increase at a great rate, and I have known as many as fifty dug up from the roots of a single plant. In some districts of South Devon this plant is late in coming into flower, in many cases not attaining the zenith of its beauty until mid-October, and retaining its blossoms throughout the entire month of November should the weather be mild. Mr. Arnott mentions that an addition of lime to the soil is held to induce floriferousness. I have, however, grown it in a light, shaly soil which contained a considerable proportion of lime without hastening its blossoming, although the situation was exceptionally warm and sheltered and apparently favourable to early maturation. S. W. F.

AN ARTIST'S NOTE-BOOK.

PHALANOPSIS SANDERIANA AND ITS VARIETIES.

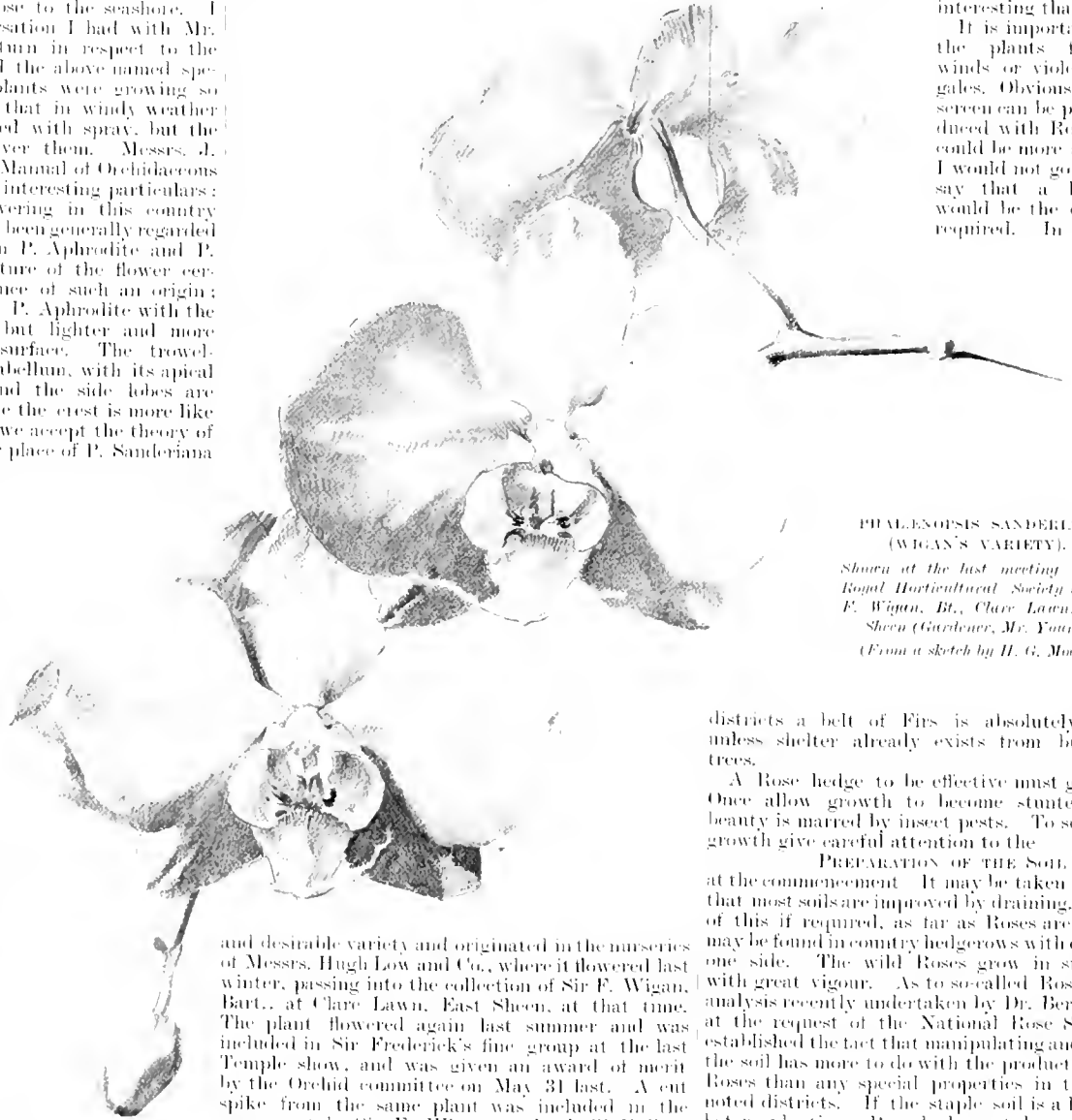
PHALANOPSIS SANDERIANA was introduced to European gardens in 1828 by Messrs. F. Sander and Co. from the Philippine Islands. Almost immediately afterwards, the late David Bark, collecting for Messrs. J. Veitch and Sons, found it in the neighbourhood of Davao, on the south east coast of Mindanao, associated with such lovely species as *Vanda Sanderiana* and *Aerides Lawrenceae*. It has also been detected on the small island of Serangan, growing on trees close to the seashore. I can call to mind a conversation I had with Mr. Bark shortly after his return in respect to the situation in which he found the above named species. He said that the plants were growing so close to the water's edge, that in windy weather not only were they drenched with spray, but the waves frequently broke over them. Messrs. J. Veitch and Sons, in their "Manual of Orchidaceous Plants," give the following interesting particulars: "Ever since its first flowering in this country *Phalanopsis Sanderiana* has been generally regarded as a natural hybrid between *P. Aphrodite* and *P. Schilleriana*, and the structure of the flower certainly affords strong evidence of such an origin; it has the general aspect of *P. Aphrodite* with the colour of *P. Schilleriana*, but lighter and more diffused over the whole surface. The trowel-shaped front lobe of the labellum, with its apical tendril-like appendages, and the side lobes are those of *P. Aphrodite*, while the crest is more like that of *P. Schilleriana*. If we accept the theory of its hybrid origin, the proper place of *P. Sanderiana* would be in the group of natural hybrids of which *P. leucorhoda* is the type, and which bears unmistakable marks of being derived from the same pair of species. Nevertheless, there are other circumstances attending the environment of *P. Sanderiana* that must not be overlooked, of which the most prominent are these: It has been brought from a locality remote from the habitat of the supposed parents, of whose presence in that locality no evidence is forthcoming; it has been imported unmixed in considerable numbers, and not, as in the case of un doubted hybrids, as isolated plants, whose appearance among the assumed parents is comparatively a rare occurrence. On these grounds, therefore, we recognise *P. Sanderiana* as a species in the ordinary acceptation of the term; but whether species or hybrid, it is without question one of the most beautiful of the section to which it belongs." The leaves of *P. Sanderiana* vary in colour, sometimes resembling those of *P. Schilleriana*, whilst others are covered with a beautiful silvery grey suffusion, and some may be found almost identical with those of *P. Aphrodite*, being wholly of a deep green. All this suggests that *P. Sanderiana* may be a natural hybrid. Can it therefore be possible that in these isolated positions *P. Sanderiana* is the offspring of some previous species now extinct?

The typical forms of *Phalanopsis Sanderiana* have flowers about 3 inches in diameter, the upper sepal light rose-pink, the lateral sepals much paler in colour, almost white. The petals are rather darker

in colour than the upper sepal. The front lobe of the lip has two curved tendrils, white, with some tracings of rose at the base; the side lobes white with some yellow at the base, where there are a few small longitudinal streaks of purple.

P. S. alba has pure white flowers, except the yellow crest and a few purple streaks at the base of the side lobes. It might be mistaken for a variety of *P. Aphrodite*, but the foliage is suffused with a distinct silvery-grey suffusion.

P. S. (Wigan's variety). The subject of the accompanying illustration is by far the deepest coloured variety that has been seen. The intense lilac suffusion of the sepals and petals is in striking contrast to the almost white lip. It is a charming



PHALANOPSIS SANDERIANA
(WIGAN'S VARIETY).

Shown at the last meeting of the Royal Horticultural Society by Sir F. Wigan, Bt., Clare Lawn, East Sheen (Gardener, Mr. Young).
(From a sketch by H. G. Moon.)

and desirable variety and originated in the nurseries of Messrs. Hugh Low and Co., where it flowered last winter, passing into the collection of Sir F. Wigan, Bart., at Clare Lawn, East Sheen, at that time. The plant flowered again last summer and was included in Sir Frederick's fine group at the last Temple show, and was given an award of merit by the Orchid committee on May 31 last. A cut spike from the same plant was included in the group sent by Sir F. Wigan to the Drill Hall on January 9 last, from which the illustration has been produced.

P. S. intermedia is a distinct form, having spots along the lower sepals similar to those frequently seen in *P. Aphrodite*, the side lobes of the lip being also marbled with purple.

P. S. punctata is a pale form with deeply tessellated foliage; the flowers pale in colour, and the lower sepals thickly covered with spots like those of *P. Stuartiana*.

H. J. CHAPMAN.

A NEW SNOWDROP.

GALANTHUS ELWESI VAR. WHITTALLII.

This is a valuable introduction by Mr. Edward Whittall, of Smyrna. It grows taller than the well-known *Galanthus Elwesi*, is of more robust habit

and with much broader foliage; in fact, the latter character is very marked. The flowers vary, but are inclined to develop to a large size, some eclipsing all other Snowdrops in this respect. Last year in the Kew Gardens some of the flowers were of extraordinary size. As our illustration shows, the flower is of elegant globular form, while the tube more than half way from the base is of a bright green colour and lightly tipped with the same shade. Altogether *Galanthus Elwesi* var. *Whittallii* promises to be the finest Snowdrop yet introduced.

MAKING ROSE HEDGES.

PERHAPS of all the shrubs employed for hedge-making none are more interesting than Roses.

It is important to screen the plants from north winds or violent westerly gales. Obviously, if such a screen can be partially produced with Roses, nothing could be more appropriate. I would not go so far as to say that a Rose hedge would be the only shelter required. In cold, bleak

districts a belt of Firs is absolutely necessary unless shelter already exists from buildings or trees.

A Rose hedge to be effective must grow freely. Once allow growth to become stunted, then its beauty is marred by insect pests. To secure a free growth give careful attention to the

PREPARATION OF THE SOIL.

at the commencement. It may be taken for granted that most soils are improved by draining. Evidence of this if required, as far as Roses are concerned, may be found in country hedgerows with dykes upon one side. The wild Roses grow in such hedges with great vigour. As to so-called Rose soils, the analysis recently undertaken by Dr. Bernard Dyer, at the request of the National Rose Society, has established the fact that manipulating and manuring the soil has more to do with the production of good Roses than any special properties in the soils of noted districts. If the staple soil is a heavy clay, before planting a Rose hedge put down some drain pipes about 2 feet 6 inches deep. If a clayey loam, then about 3 feet. The ground should be trenched two spits deep for the heavy soils and bastard trenched for those of a lighter nature. Good, well-decayed farmyard manure, together with burnt garden refuse and bone-meal, all favour a vigorous growth in the hedge.

Rather than make the soil sour by too much raw manure, I would advise the liberal application of liquid manure, not only in summer, when growth is active, but also during winter, when usually this valuable liquid runs to waste.

The ground being prepared (and the earlier this is done the better) the question arises

HOW AND WHAT TO PLANT.

Most of the kinds I shall recommend will, in time, support themselves; but, if a tall hedge be desired,

I would advise that some oak posts be set in the ground at intervals of about 6 feet to 8 feet to support two or three lengths of wire. Do not use galvanised wire unless painted. These posts and wires are quickly hidden. Although not absolutely necessary they are a great support against violent gales, and also enable the branches to be spread out.

Crowded planting should be avoided. Give the plants space to extend laterally, then vigorous growth may be secured from the base, and this is essential.

PRUNING.

Rose hedges must be pruned to promote free flowering. How this should be done must largely depend upon the variety. I am no advocate for the trim Rose hedge. I like to see the flower-laden branches drooping with their weight of blossom.

It must be remembered that in dealing with Roses the one and two-year-old growths produce the best flowers, but pruning requires judgment. Some Roses produce healthy laterals from three and four-year-old wood, but one or two of these old branches can well be spared from each plant, and their removal affords to those remaining the benefit of more air and light.

With the majority of Rose hedges the necessary pruning may be wholly or partially done in autumn, to the evident benefit of the plants.

As to the style of plant, where strong own-root Roses cannot be had, then obtain them on the Briar—the seedling for preference—for its roots are so penetrating that they not only are able to withstand drought better, but growth is so much encouraged. Now as to the

VARIETIES TO PLANT.

I have seen what one might term a wall of Roses rising 8 feet to 10 feet high consisting of varieties of *Rosa sempervirens* and the *Ayrshires* (*R. arvensis*).

If a support of some kind be given, these classes are admirably adapted for the purpose. One or two kinds, such as *Félicité-Perpétue*, are almost evergreen.

Crimson Rambler makes a splendid hedge, and, for effectiveness, remains unrivalled; but there are many who cannot endure its garish colouring. This could be toned down by intermingling a white variety, such as *Aimée Vibert* or *Félicité-Perpétue*. A softer tint is found in the rosy-pink Dawson Rose, and it has the additional and valuable quality of fragrance.

How lovely are hedges of the Penzance Sweet Briars! They are now largely employed for this purpose. The exquisitely tinted blossoms are not long with us, but they come very early, and the fragrant foliage remains, followed by the showy fruit. When planting hedges of these Briars I would not advise too many kinds—in fact, one kind only would be best. The best for the purpose are *Annie of Gierstein* or *Meg Merrilies*, crimson; *Amy Robart*, pink-white, has also the finest fruit; and *Lady Penzance* the most charming of all, with coppery-yellow flowers, but rather less vigorous in growth. Of course we must not forget the old

SWEET BRIAR.

which has done duty for hedges so long; but the hybrids are freer and the foliage is almost as aromatic.

There are quite a number of single Roses suitable for hedges, but the flowers of many are not interesting.

Some of them are meritorious on account of their coloured bark in winter. Of these, *R. villosa rubrifolia*, *R. lucida*, *R. polyantha Thunbergii* may be mentioned.

Carmine Pillar is also a capital single Rose for hedges.

If one is seeking for a Rose hedge that is almost evergreen, the best kinds are *Longworth Rambler*, *Aimée Vibert*, *Félicité-Perpétue*, *Reine Olga de Wurtemberg*, *Marie Lavalée*, and *Climbing Souvenir de Wootton*.

The numerous *Rugosa* tribe for vigour and hardness are unsurpassed. They are prone to become bare at the base, but the pruning advised above would remedy this. When growing freely and covered with the glowing fruit they are indeed a beautiful sight.

An excellent Rose to make a hedge is of

R. multiflora de la Grifferaie. It yields large trusses of blossom, somewhat in the way of *Crimson Rambler*, but the colour is rosy-pink, and some flowers change to nearly white when expanding.

Fairly high hedges may be formed with *R. alba Celestial*, *R. gallica Rosa Mundi*, the Austrian Briar *Harrisonii*, or the single *R. lutea*.

Rose-growers are looking forward to the promised novelty of that eminent raiser, M. Pernet-Ducher. He describes it as a new race, being the outcome of a cross between *Persian Yellow* and the *H.P. Antoine Ducher*. It partakes much of the character of *Persian Yellow*, excepting that it is perpetual. It should prove a valuable hedge plant.



GALANTHUS ELWESI VAR. WHITTALLII.

(From a sketch by H. G. Moon.)

The Hybrid Chinese and Hybrid Perpetuals make good hedges. They are of somewhat stiff growth. Of the former, *Charles Lawson*, *Coupe d'Hebe* are the best; and of the latter, *Ulrich Brunner*, *Magna Charta*, *John Hopper*, *Crimson Queen*, *Cho*, *General Jacqueminot*, and *Mrs. John Laing* might be mentioned.

It may be that a hedge is desired that not grow too tall, one—for example—to surround the tennis lawn or to divide the flower garden. For this purpose nothing can be more beautiful than the Monthly Roses. Where a finer flower be preferred for the same object choose the *Teas* and Hybrid *Teas*, *Madame Abel Chatenay*, *Caroline Testout*,

Grace Darling, *Viscountess Folkestone*, *Marie van Houtte*, *Saturno*, *Gruss au Teplitz*, *Eucharistoss*, *Mme. Lombard*, and *Grace Darling* all make delightful hedges from 4 feet to 5 feet high.

A good dense hedge can be made with the early flowering Scotch Roses, not forgetting the single varieties of the same tribe. Not so dense as a plant but very beautiful is the *Stanwell Perpetual Scotch*, flowering as it does nearly all the season. I should like to see a hardy race of single *Teas* raised for making hedges.

PULLOVEL.

ERANTHEMUM NERVOSUM.

The brilliant blue flowers of this *Eranthemum*, produced as they are during the dull days of winter, are admired by everyone, and its value as a decorative plant is still further enhanced by the fact that it is of easy culture. Cuttings struck in early spring will form effective bushy specimens by the autumn. If grown on freely they will require pots from 6 inches to 8 inches in diameter. During their earlier stages the plants should be grown near the glass in a stove temperature, but in summer they may be removed to a frame. Liquid manure is of considerable service as the pots get full of roots. The principal consideration is to prevent the foliage from becoming infested with red spider, as it is rather liable to the attacks of this pest. A fairly moist atmosphere with occasional syringing, directed as far as possible towards the undersides of the leaves, will keep them in good condition. Besides the above-mentioned name this *Eranthemum* is often met with under the specific name of *pulehellum*. It is a native of the lower portions of the Himalayas, and is an old plant in gardens, having been introduced in 1796.

T.

Dædalacanthus macrophyllus.

This is nearly related to the *Eranthemum*, and the entire plant when out of bloom bears a considerable resemblance to the charming *E. nervosum*, but the flowers are altogether different. In the *Dædalacanthus* the individual flowers are about 1½ inches long, curved in shape, and of a purplish mauve tint, the lower lobes being of a deeper hue. They are disposed in a terminal pyramid-shaped branching raceme. It is most satisfactory when propagated from cuttings every spring and grown on freely for flowering during the following winter. — H. P.

Acacia dealbata. This, the Silver Wattle of Australia, is a grand subject for lofty structures, but for an ordinary greenhouse it grows too tall, being in fact quite a tree. The finely-cut leaves of almost silvery whiteness are very attractive, but in this respect there is a good deal of individual variation. This mass of Fern-like foliage serves admirably as a setting for the racemes of bright yellow blossoms. In the neighbourhood of London it is very liable to injury from the dense sulphur-laden fogs which have been prevalent this winter. As a foliage plant out of doors during the summer months this *Acacia* is of considerable merit, while along the Mediterranean shores it is one of the most beautiful of flowering trees. As above noted, the silvery character of the foliage varies, and seedlings raised from a particularly good form were in some instances nearly green, not more than 10 per cent. being equal to the parent. T.

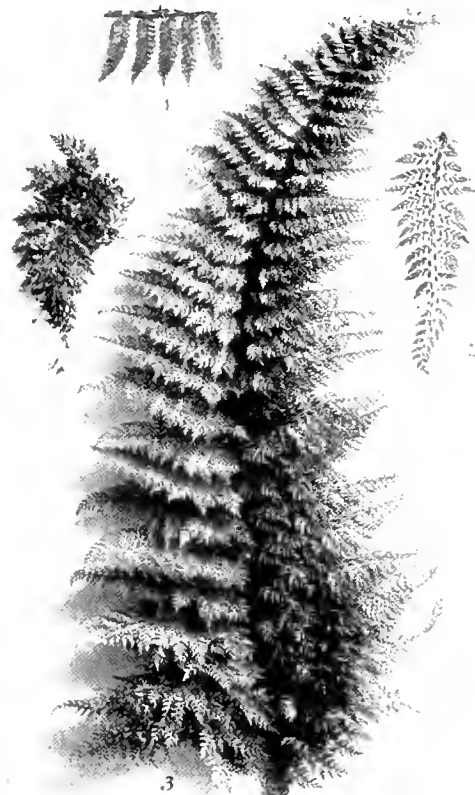
Coronilla glauca. Prior to *Cytisus racemosus* attaining its present popularity, this *Coronilla* was grown more than it is now-a-days. There is, however, ample room in most gardens for both, as they are in all respects quite different from each other, and whereas the *Coronilla*, generally speaking, flowers during the autumn and winter, the other is at its best in spring and summer. The glaucous green foliage of the *Coronilla* is very pretty, while the clear yellow flowers are borne in small rounded clusters. It is more particular in cultural requirements than the *Cytisus*, and quickly resents too much water at the roots, while at the same time it should not be allowed to become too dry. The *Coronilla* is a native of the south of Europe, and was introduced as long ago as 1722. It is readily increased by cuttings of the short jointed shoots put into sandy soil and kept moderately close till rooted. — H. P.

FERNS.

UNIQUE BRITISH FERNS.

ALTHOUGH there is no doubt whatever that all existent species of Ferns are apt to vary, not merely to that small degree which enables the selective cultivator gradually to improve or emphasise the type by judicious choice of seedlings, but also in that markedly distinct way which constitutes "sports," it is a remarkable fact that amongst our comparatively few British species abnormalities have arisen which have no parallels at all in exotics.

In the cultivator's hands other varieties have arisen which also so far transcend the parental abnormal type, as to be also unique in their way. Among the wild finds of the unique class the



POLYSTICHUM ANGULARE VAR. PLUMOSUM DENSUM.

1. The normal form of species. 2. Wild find in South Devon. 3. Frond of densum raised from 2. 4. Pinna of imbricatum raised from bulbil of densum.

Victoria Lady Fern undoubtedly ranks first and foremost among the abnormal Ferns of the world, though, thanks to its fertility and constancy to type, it has long ceased to be rare in collections. The common Lady Fern, as every plant lover knows, is a robust growing plant with large feathery fronds of delicate texture, consisting of a central stalk decked on either side with feathery divisions, once or twice divided on a sort of vegetative crystalline plan, forming a whole of great beauty, the fronds attaining 3 feet to 4 feet in height and about a third of that in width. Such plants in congenial fern localities may be found in myriads, all on precisely the same plan, though apt to differ in detail of cutting.

In 1861, however, a Mr. Cosh, springing over a stone dyke near Loch Lomond, found at his feet a plant of this species constructed on an entirely different plan, each side division being extremely slender, and bearing a fine-cut tassel of many strands at its extremity, and, what is more wonderful, each such division was duplicated, the pair so joined being set on at about right angles to each

other, with the result that the frond, also narrowed to match, was made up of a series of symmetrical crosses, forming a lattice on each side of it, the frond finishing up with smaller and smaller crosses, merging into a handsome many-stranded tassel to match the side-ones. Finally, it was seen that even the small ultimate divisions were also in pairs, forming a really astounding and yet charming freak of Nature's own contriving. Extended and repeated search has failed to find a second specimen from that day to this, and no Fern so characterised has turned up elsewhere in any part of the world.

The spores being sown yield plants of precisely the same type, but while the original find has attained a frond length of 3½ feet in the writer's collection, no seedling grows nearly so large so far as we have been able to ascertain. Another Lady Fern (*Athyrium F. f. acrocladon*) found as a seedling on a Yorkshire moor has also no parallel in exotics, but as simply an extreme form of cristation, ramifying from the base into innumerable divisions until it resembles a ball of moss, it does not rank in uniqueness with the last named; one of its progeny, however (*A. F. f. uncoglomeratum*), so far exceeds it or any other Fern in this capacity of division as to stand alone as a curiosity. This is almost indescribable when well developed. A spherical mass of light green foliage, densely packed and comminuted to the utmost, surrounds an infinite ramification of branches, twigs, and hair-like twiglets, the whole resembling rather a green coralline sponge than a Fern or any other plant. This Fern is rendered still more noteworthy by the fact that its faculty for dividing and re-dividing outlives its annually deciduous character; and pieces cut off in the autumn and layered not only continue to grow, rotting below and growing above, Sphagnum fashion, but eventually produce bulbils and aposporous or prothallie growths by which the type is reproduced without the agency of spores. Here, again, there is absolutely no parallel, taking all the peculiarities together.

In *Scolopendrium crispum Drummondiae*, found wild by Miss Drummond, we have another Fern without a counterpart, and, as in the Victoria Lady Fern, owing nothing of its marvellous character to culture. In this the normal strap-shaped Hart's-tongue frond is lengthened out considerably and reduced in width. It terminates, as in many other Hart's-tongues, with a wide-spreading tassel; but its edges, instead of being smooth, grow out into long imbricated projections with translucent tips, and these, if layered, form prothalli and reproduce the type again without the agency of the spore. Finally, as a further distinguishing feature, the fronds do not grow straight, but bend up and down, switchback fashion, some three or four times in the course of their length. Where is there an exotic, wild or cultivated, presenting such a marvellous combination as this?

Space precludes description of many other varieties which are practically solitary in their peculiar ways, though devoid of the complication seen in the above; but we cannot conclude without reference to several identical types of variation which have appeared in more than one of our native species, and of which as yet no exotic examples have either reached us from abroad or arisen under cultivation. Such, for instance, are the "revolvens" forms, in which the frond and all its parts are rolled backward into tubes, which are correlated with spiral or ringlet-like terminals, due to the adjustment of the upper surfaces to catch the light despite the twist. Of this we have well-marked examples in *Lastrea pseudo-nana*, or the Hard Male Fern; in *Polystichum angulare*, or the soft Shield Fern (see illustration); *Athyrium Filix-femina*, or the Lady Fern; and also in *Lastrea montana*, the Mountain Buckler Fern. In the Lady Fern the character is so marked, that the first frondlet from the prothallus is tightly curled up. Here we have four species out of only forty odd presenting the same abnormal character under wild conditions, while the thousands of exotic species have yielded, so far, no example; hence, to that extent they are unique. Our lovely plumose forms of Lady Fern, Shield Fern, Hart's-tongue, Moun-

tain Buckler Fern, *Blechnum Spicant*, common Polypody, *Asplenium marinum*, *A. Trichomanes*, and *Adiantum capillus-Veneris* embrace not single finds in each species, but many in most, and yet among exotics we can reckon the plumose forms upon our fingers. Hence, though we cannot claim the type as confined to our islands, we can certainly claim the cream of the varieties so characterised as against all the wide world beyond our shores.

CHAS. T. DRIFERY, F.L.S., V.M.H.

CORRESPONDENCE.

THE SWEET PEA CONFERENCE.

[TO THE EDITOR OF "THE GARDEN."]

SIR, The recent letters about this proposed conference should help to cut short any further attempts to raise a large sum of money to spend upon "social observances," prizes, and so forth. To make the Sweet Pea, a simple, beautiful garden flower, the subject of a conference is too bad. One may as well get up a conference with a dinner in honour of the fragrant giant Violet. No one can deny that many varieties are so much alike, that to distinguish one from the other is not easy even to the eye practised in making a variety whenever possible. The work of eliminating synonyms can be faithfully carried out by the Royal Horticultural Society; in truth, this making of "trials" is one of the most important phases of its work. ALPHA.

DEEP CULTIVATION AND ITS BENEFITS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, The advice laid down on p. 32 of THE GARDEN I may say is much too brief, and likely to mislead the novice. I would strongly advise anyone to well consider future results before burying a good top spit 3 feet deep, and replacing it with almost pure sand or clay to be the future top spit for immediate cultivation. Here should come the most important details on the treatment of this hungry surface upon which nothing is said. Surely there must be some mistake. I may say I know what it is to drain and burn clayey subsoil by the acre, but I should be very sorry to advise a novice to treat a plot as stated on page 32 by Mr. E. Bickett. Perhaps the writer will kindly say how he converts his nearly pure sandy and clayey surface into condition for sowing, &c. I personally know that it takes nearly a lifetime to render clay into anything like a suitable surface for general garden crops. JAS. R. HALL.

For Warren, Cobham, Surrey.

THE PROTECTION OF TEA ROSES FROM FROST.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Just as a good many of us, north and south, have reached the conclusion that Tea Roses are about as hardy as any other, we have the very able co-secretary of the National Rose Society, Mr. Edward Mawley, of Rosebank, Berkhamsted, Herts, writing in the first number of the new series of THE GARDEN on this subject.

It may readily be admitted that Mr. Mawley is perhaps our highest authority on Rose weather as well as Roses in general. Nevertheless, probably his meteorological training has given him a list toward the tender side of Roses which even his successful practice and the favourable soil and environment of Herts have hardly enabled him to overcome. Otherwise one can hardly understand the extreme brevity of his list of hardy Roses (p. 12). The old Cabbage or Provence, Moss, Scotch Rose, Stanwell Perpetual, the Ayrshire Briars—two of the pioneer Hybrid Perpetual Roses are still among the hardiest (Jules Margottin and Duchess of Sutherland), and let me add that Baron Prevost and General Jacqueminot are harder than either—some of the Rugosas, the Hybrid Sweet Briars, Crimson Rambler, and the Hybrid Tea Gustave Regis. Then

follows the sweeping assertion that among Rose most largely grown at the present day the Hybrid Perpetuals are undoubtedly the least tender. The general belief of rosarians in the year 1900 is that Teas are just as hardy as Hybrid Perpetuals, and neither more nor less tender, and if our co secretary of the National Rose Society, or rather our joint secretaries, will take a run north to the Rose nurseries at Aberdeen and Broughty Ferry, they will have such powerful demonstrations of the equal hardiness of Teas and Hybrid Perpetuals as shall convert them to the equal hardiness theory of most of our best Roses on the spot. Another lesson may also be learned in the north, viz., the uselessness or injury of most of our modes of protection. Perhaps an exception should be made in favour of Mr. George Paul's mode of increasing the temperature and the dryness of his root-runs the

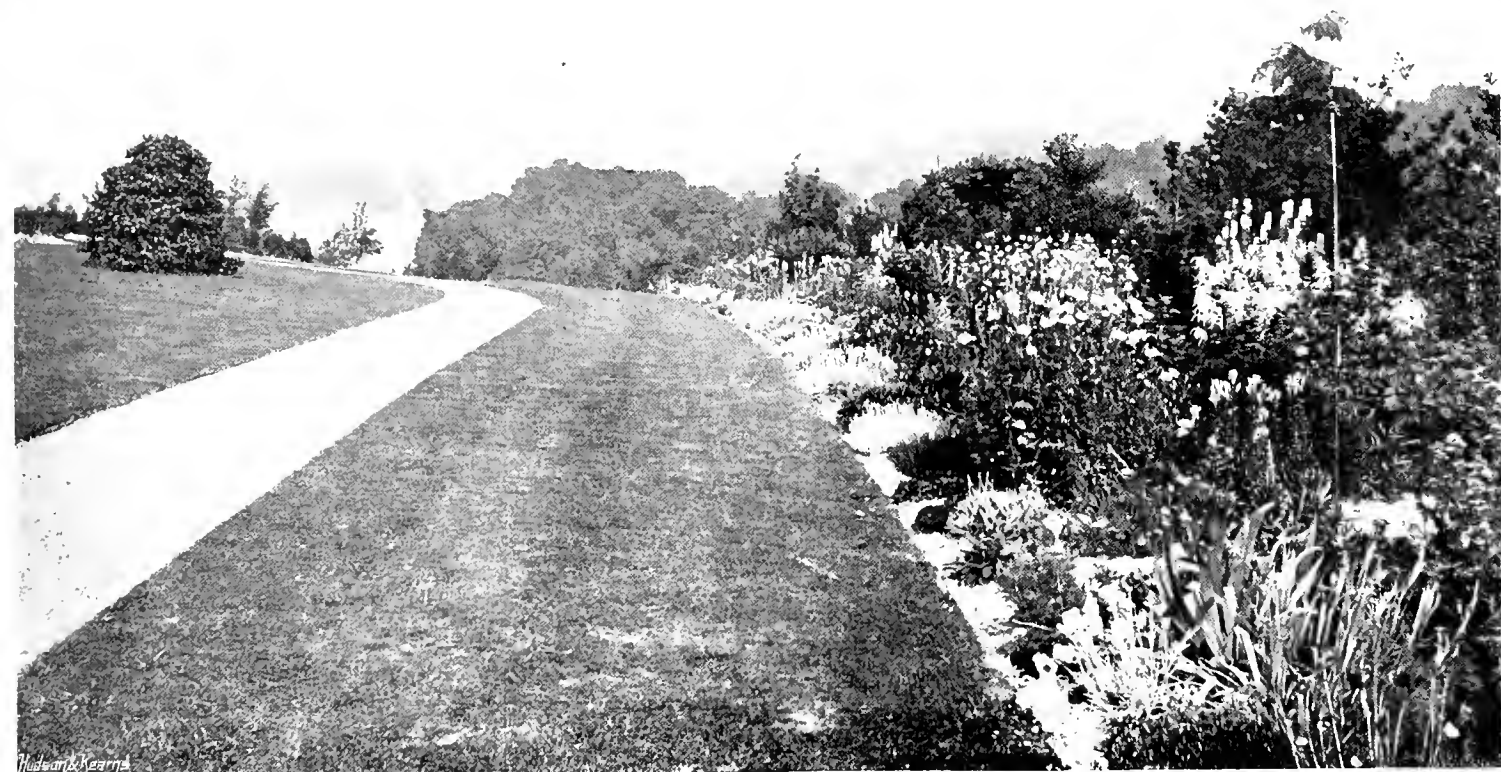
Teas, and Hybrid Teas, and some of the latter, such as La France, are as hardy as the hardiest Hybrid Perpetual.

Among the hardiest Teas and Hybrid Teas or Noisettes are Mme. Lambert, Francisca Kruger, Anna Ollivier, Caroline Kuster, and the finest of all white Teas is Souvenir de S. A. Prince, while Sunset, Perle des Jardins, Mme. de Watteville, and Nphetos—the first three, perhaps without sufficient evidence—have been classed as more tender than the others.

A good deal of the popular judgment of rosarians may have been biased in regard to the smoothness or roughness of the bark of our Roses. From the introduction of the Pride of Waltham and other Roses, such as Countess of Oxford, Reynolds Hole, &c., it was thought and said by many that these were more tender than others with rougher bark, and

A MIXED BORDER AT DOWNSIDE, LEATHERHEAD.

A BEAUTIFUL feature of the gardens at Downside is the mixed border on the hill-top and dipping into the valley below, a mass of colour from the well-chosen hardy flowers distributed in broad groups. Mr. Alfred Tate has, perhaps, a stronger love for the Rose. We have never seen a more sumptuous display of the many classes than in the garden immediately near the house, and in the summer we hope to illustrate some of the richer beds of one variety, but show only at present the border, from whence the eye wanders over the Surrey hills and valleys, a land of tree and shrub, throwing into relief the colouring of the hardy flowers. The border is effective and happily placed, and in summer, when the Roses flood the garden with their perfume



PART OF THE MIXED BORDER ON THE HILLSIDE IN MR. ALFRED TATE'S GARDEN AT DOWNSIDE, LEATHERHEAD.

use of more or less highly raised beds. Overhead protectors, whether of straw, Yew or Spruce branches, or Braeken, and over-crown mulches of earth manure, litter, all entice the plants through coldling, and render them more liable to injury when they are uncovered. As for cotton matting and double or treble fish netting, they are worse than useless as protection from frost, either through creating a draught, whipping and bruising the Rose buds in embryo, or emasculating the natural hardiness of the Roses. Almost the only protective material worthy of a second thought is dry Braeken harvested in an unripe condition. A small handful of that thrust into the heads of standard perpetual, Tea, and Noisette Roses may do more good than evil when the thermometer gets on the cold track from 20 to zero Fahrenheit.

Beyond that all our best Roses are safer without covering or protection. Careful readers of Mr Mawley's article will see that he admits that there are degrees of hardiness even among Noisettes,

more protected by prickles, such as Marie Baumann, Mme. Gabriel Luizet, &c. Then the Teas having fewer prickles and smoother bark than Perpetuals, it might easily be assumed that they would be found equally tender.

Besides, the advance of science and practice have demonstrated beyond all controversy that the so-called hardiness and tenderness of plants may be more a matter of site, soil, stock, culture, season, than of constitution—that is, any natural hardiness or tenderness of particular Roses. Hence were some of the time mostly spent in protecting Roses in the open against frost devoted to improved modes of culture and the selection of more fragrant, floriferous, and yet more beautiful varieties, the Roses in the new century will far exceed all that have preceded them in making our homes and gardens beautiful.

With your leave, next week I will show a shorter, surer way of making Tea and other Roses more hardy as well as more free-flowering and profitable.

D. T. FISH.

and the homely border flowers are in beauty. Downside is in truth a garden—flowers everywhere and in rich variety.

Rhododendron Brilliant.

Several of the Javanese section of hybrid Rhododendrons are now in flower, and amongst them this variety stands out very conspicuous, owing to the bright scarlet of its beautifully formed blossoms. One of the oldest of all Princess Alexandra, which is white, with just a faint tinge of blush—is flowering with great freedom, and all things considered (particularly its vigorous growth), stamps it as still one of the best of that tint. Treated as warm greenhouse or intermediate house plants, these Rhododendrons are not at all difficult to cultivate, while they flower more or less continuously throughout the entire year, and above all they are not affected by that bane of plant life—London fogs. That Messrs. Veitch show them so well from their Chelsea nursery at all seasons is a good proof of this. T.

GARDENING OF THE WEEK.

CHRYSANTHEMUMS.

BY the time these lines are in print the first batch of Chrysanthemum cuttings that is, those which are intended for producing fine flowers and for growing on into specimen plants should be putting forth their roots, and will soon have to be removed from the propagating frame or pit. Many kinds will be found to strike much more readily than others. It is a great mistake to allow these to remain in the propagating frame after they have commenced to root and be subjected to the same treatment as those in a less forward state even one hour longer than is necessary, or premature growth will be the consequence. It is a most important rule to observe that in all stages of their growth no cooling or forcing should be allowed, but strong, solid foliage and wood built up gradually are most essential if the best results are to be attained, so that they should be looked over daily and the more forward ones removed to another frame in the same house, which may be aired more freely, or a heated pit, placing the plants near the glass on a bed of finely-sifted coal ashes. As soon as it is found that the young plants are sufficiently advanced to withstand sun and air without serious results, such as severe flagging, no harm will arise should the leaves droop slightly when exposed to sun and wind, providing they freshen up again during the evening. Remove the plants to a shelf in the greenhouse as near the glass as possible, where they may be aired freely on all favourable occasions. The plants, being in small pots, should be examined twice daily and thoroughly soaked with water when needed. When the weather is bright, spray over with the syringe in the morning and early afternoon. Without delay make good any cuttings which have failed to strike. Those which were not obtainable before should be brought on as speedily as possible, as it is much better to have the whole of the collection quickly rooted so that they may be treated under the same conditions.

POMPON AND POMPON ANEMONE VARIETIES.

These are, in my opinion, the most useful of all sections of the Chrysanthemum, as they lend themselves readily to nearly all kinds of decorative purposes, either as plants or for cutting purposes, and by a judicious selection of varieties the flowering season can be extended easily from October to well into the new year. Framers of schedules would do well to give more encouragement to these sections by offering respectable prizes for, say, eighteen vases, and, stipulating the number of blooms to be shown, their true beauty would then be brought out; whereas generally at the present time small prizes are offered for twelve varieties, three blooms in a bunch, which are crammed on to an ordinary-sized green painted board, thus robbing them of all their elegance and natural beauty. Cuttings of these should now be put in, and they are best struck in 2½-inch pots and treated in precisely the same way as advised for the larger varieties.

SINGLE KINDS

may also be struck at the same time. These are favourites with many people, and a few of the best distinct coloured kinds are useful for decorative purposes, especially those which stand erect when in flower, but to my mind these are not so beautiful and useful as the foregoing. E. BECKER.

Abraham House Gardens, Elstree, Herts.

SOLANUMS.

To have these popular berried plants in good condition they must be raised early from cuttings, as they require a long season, and seedling plants do not bear freely the first year. The best cuttings are to be had from plants which have been prepared for their production by growing them for a few weeks in heat; the tops of these should be taken off, made into cuttings, dibbled into pots of very sandy soil, and plunged into bottom-heat until

struck, after which they should be potted off singly and stood well up to the glass, pinching them occasionally to induce a bushy habit.

KITCHEN GARDEN.

CARRIOTS

are slower in germinating than Turnips, and will also stand more warmth, though hard forcing should be avoided, especially when first sown. Much the same culture is necessary as in the case of Turnips, a rich light soil being used and the plants grown near the glass. I do not think frame culture can be improved upon, as grown thus the plants get more light and better ventilation than in houses. Many persons sow Radishes with Carrots, drawing the former as soon as large enough. Better results will be obtained, however, if sown separately, as the Radish crop will interfere with the proper development of the Carrots. Vegetable seeds under glass are often sown much too thickly. Most seeds are now so reliable, that there is no need, except in very special cases, to sow so thickly, as if thinning is delayed the crop is ruined in its early stages. For frame culture, Early Nantes and Parisian Forcing are excellent varieties, whilst if more size is needed, Early Gem is specially suitable, or any of the Short Horn section.

POTATOES IN POTS AND FRAMES.

Many can grow a few Potatoes in pots who cannot devote a frame or pit to the plants. Now is a good time to make up the pots, and it is of little importance what sized pots are used, providing too many sets are not placed in them. An 8-inch pot may have three sets. I have used four in the case of dwarf growers, but when this number is used the plants must be given ample food when tubering. If 10-inch or 12-inch pots are employed more produce is obtained, but the advantage of small pots is the ease with which they may be moved about. If frames are used I would advise dwarf kinds, such as Ringleader as the earliest, followed by English Beauty. There are no frame Potatoes superior in quality to a good stock of Ashleaf. Myatt's is still difficult to heat, but this is later and less prolific than those mentioned above. A good depth of soil is needed in the frames, as though a small quantity may suffice at the planting, the new tubers green badly when attaining size, and I find it best to give the soil at the start than later on, as there is then so much work to attend to that it is overlooked. Avoid overheating, and give but little moisture at the outset, as the soil, if in good condition, will be sufficiently damp to maintain growth for the first few weeks.

FORCED SEAKALE.

This will prove more valuable early in the year, as in many gardens the sharp frosts destroyed the Broccoli just turning in. Owing to the late growth many were afraid to lift and shelter, and in consequence the crop was destroyed. I never think Seakale nearly so good after a hot, dry summer as in a cooler one with more moisture; the result is that the growths when forced are less succulent. It will be well to place roots in their forcing quarters (a warm mushroom house is suitable) every fortnight, and, unlike Asparagus, Seakale must be kept quite dark to blanch top growth, otherwise it gets green and is less inviting. It may also be placed in large flower pots or boxes, which should be covered with empty pots or boxes and placed in a temperature of 65 to 70°. Roots in their permanent quarters may likewise be forced with hot litter, and here pots are employed as covers; but it is well to prepare the heating material in advance. If too hot it injures the plant. I prefer to place it in bulk and turn once or twice before being used; it may then be placed in larger quantities. If pans with lids are used the latter may be left off for a few days to allow rank steam to escape.

Syon Gardens, Brentford.

G. WYTHES.

FLOWER GARDEN.

THE LATER VARIETIES OF THE CHRISTMAS ROSE are still in good bloom in sheltered spots and

where, as is often the case, they are afforded the protection of a frame, which in severe weather may be covered over and the plants thus protected from the effects of frost. During heavy gales and rain some covering is advisable for the clumps, or the white blossoms get sadly soiled by earth stains. Where a spare light is not available, a sheet of glass large enough to extend well beyond the outer radius of the plants may be fixed over each clump by driving four strong wooden pegs securely into the ground at the four sides and slipping the edges of the glass into deep notches cut for the purpose on the insides of the pegs. A turn or two of thin copper wire across the top of the glass from head to head of the pegs will render the whole absolutely firm. The sheets of glass prove useful later on for covering boxes of freshly sown seed, and when not in requisition may be stored with the pegs until the succeeding winter. A good time for transplanting Christmas Roses is immediately they have gone out of flower. A deep and rich bed should be prepared for the plants, 3 feet being none too deep. With the lower foot of soil a heavy dressing of cow manure should be incorporated, since the Hellebores are partial to a cool and sustaining subsoil and some well rotted manure added to the upper stratum. On no account must large clumps be transplanted in their entirety, as such a course often results in the death of the plants, however carefully the removal is effected. When the clump is lifted it should be placed in tepid water, and when the soil around the roots is well moistened, this should be washed off with a single jet syringe. When the roots are entirely free from soil the clump should be carefully divided, separating the roots by hand and cutting the crowns apart with a sharp knife. A portion with three crowns is quite large enough for a single plant. These divisions should then be planted 18 inches to 2 feet apart in a few handfuls of fibrous loam and leaf-mould, no manure being allowed to come into direct contact with the roots. A sheltered position is best adapted for the culture of the Christmas Rose, one partially shaded by trees at some little distance being admirably suited to their requirements. A mulching with well-decayed manure and leaf-mould in early spring and large supplies of water during hot weather, with occasional applications of weak liquid manure, tend to promote the vigour of the plants, and thus lay the foundation of an abundant blossoming.

S. W. F.

FRUIT GARDEN.

VINES. The limit of time is reached for pruning late Vines. Any not yet done should be without further delay. If longer deferred, the cut parts will not have time to heal over before the sap begins to rise in the spring, at which time it not healed over bleeding will follow. These remarks are also applicable if Grapes are on them. Make clean and slightly slanting cuts in front of a prominent bud near the spur of the Vine rod. When cutting the Grapes at this time leave a portion of the wood in front of and behind the bunch, so that the lower part reaches well down into the bottle in which the Grapes are stored, the front buds tending to take away from the bunch any superfluous flow of sap while hanging. The bottles should be placed in a slanting position in racks fixed to the sides of the room, so that the Grapes hang without touching anything.

It is easy to keep Grapes in a dry room heated with hot water and with a ventilator at the apex. Strict attention will be necessary in order to keep the atmosphere of the room dry and sweet with a temperature of about 50°, or a few degrees higher or lower according to the outside temperature. To maintain these conditions keep a very slight warmth in the pipes, and open the ventilator in the warm part of dry days, *i.e.*, from about 9 a.m. to 4 p.m., for the purpose of expelling damp.

Lady Downe's Seedling is the best kind for late keeping, so that other kinds that will not keep so well should be used before it. Look round the bunches weekly and cut out all decayed berries. After the Vines are pruned, clean and dress them, and also cleanse the vinery. The cleaning of Vines comprises the taking off of all bark that is loose.

washing with soap solution at the rate of 8 ozs. of soft soap to a gallon of water, and painting with a mixture of soap water at the same strength as used for washing, with 1-16th of Richards' XL insecticide, and brought to the consistency of paint by the addition of sulphur, clay and cow manure. When this has been done tie the Vine rods closely to the trellis. Take the old soil from the surface of the border down to the roots, and afford a liberal top-dressing of new loam to which has been added some lime rubble and burned soil. The compost is enriched by adding bone-meal at the rate of a 6-inch pot of the meal to each barrow-load of soil.

Treat late Vines from now onwards until the spring with as nearly as possible the same natural surroundings as they would have out of doors, to give complete rest, by keeping theinery ventilators open as far as circumstances will allow, merely excluding frost from the hot-water pipes, if the water is in them, but if they can be emptied no harm will be done to them. Examine the borders of Vines now being started as to their condition of moisture, and if found to be approaching dryness, afford a liberal supply of tepid water. In

FORCING GRAPE VINES.

Nature must be imitated at all seasons in order to be successful. The increase of temperature in the spring is gradual, and in forcing a similar slow increase should be aimed at. If hurrying is necessary it should be done later in the season, when the days are long and sun-heat powerful. Six months should be allowed from the time of starting the Vines to the ripening stage.

Hard-and-fast temperatures are not conducive to successful forcing; they should be approximate to those I give, varying according to outside conditions. They may begin at, say, 50° at night, and 55° in the day with fire-heat, with a rise of 10° to 15° with sun-heat, accompanied by a moist sweet atmosphere, maintained by means of occasional damping.

Vines that have not been previously forced, particularly young and vigorous ones, do not break into growth regularly the full length of the rods, being more inclined to break at the top than bottom. To assist regular breaking, tie them loosely along the lower part of theinery, with a slight curve from the base to the end. Vines previously forced break freely without being tied down.

Vines started earlier and now breaking into growth should, if tied down, be fastened into their permanent position for the season. Suitable temperatures for these are about 57° at night and 65° in the daytime with fire-heat, with a rise of 10° with sun-heat. Increase these temperatures gradually until the flowers begin to open, when they should be 5° higher at all times. Encourage healthy foliage from the beginning by careful ventilation without causing draughts. When the weather will allow it, open the top ventilators a little in the morning, and close early in the afternoon. When it is very mild a crack may be left on during the night.

Where it is contemplated to plant Vines during the spring, preparation may be made by taking out old borders and preparing the new ones. The renewing of a Vine border entails a good deal of labour, but if the work is thoroughly done the border lasts a long time. If the soil at the bottom of the border is damp and unsuitable for the roots, it will be necessary to cover the bottom with concrete, though this will not be needful in the case of a dry, gravelly subsoil. Broken bricks are as good a material for drainage as anything. These should be laid on edge, the largest pieces at the bottom, to a depth of at least 9 inches. If there is sufficient depth for more it will be none the worse. About 2½ feet is a suitable depth of soil, consisting of moderately light loam roughly chopped, to each cartload of which are added one barrow-load each of lime rubble and burnt earth and a peck of finely-crushed bones or bone-meal.

Put in the drainage over the whole space of the border, covering it with soles of loam laid with the grass side downwards. A portion of the

border the full length of theinery and 4 feet wide is all that should at first be made up. This will be sufficient for the Vines for the first year, and can be added to annually as required.

FORCING STRAWBERRIES

is carried on in most gardens, and plants brought indoors now, whether to form a succession or as a first batch, can be depended upon to carry a full crop better than those brought in some time ago, as quantity to some extent has to be sacrificed to earliness. A Strawberry house is a valuable adjunct to a garden, but Strawberries may be grown in other houses in light, airy positions under the same atmospheric conditions as advised for starting Vines. They must be examined frequently and given a thorough supply of water when the soil is found to approach dryness. As the season advances, increase the temperature gradually so that it reaches 55° at night, 60° in the daytime, with a rise of 10° with sun-heat. G. NORMAN.

The Gardens, Hatfield House, Herts.

THE EPIPHYLLUM.

LATELY in THE GARDEN there was a note with reference to this plant speaking highly of it, but



THE EPIPHYLLUM HANGING FROM A GREENHOUSE ROOF.

it always seemed to me that the one great objection to growing it in pots was that the flowers did not show themselves properly, even when grafted on fairly tall stock. It occurred to me to try an experiment as to this, and having grown a strong plant of Pereskia, I planted it out in the conservatory border, and when it had attained a length of about 14 feet I cut off the end, and upon the side breaks I grafted bits of Epiphyllum. The result has been most satisfactory, and now, when it is one mass of flower, one has to lift one's head to look at it, and its full beauty is disclosed. There are some six or seven large bunches from these original grafts, and with this I send you a photograph of one piece which will give you an idea of its general appearance. It has certainly a very uncommon effect, and excites much admiration. I cannot stand the colour of the truncatum section, and therefore grow only E. Macowianum, the flowers of which are a good red. A. KINGSMILL.

Harrow Weald, Middlesex.

SAXIFRAGA OPPOSITIFOLIA.

This is as yet one of my failures, and I shall be glad if any reader will give me instructions how to make it flourish in a dry garden with north and south exposure. E. M. H.

[Saxifraga oppositifolia is not a suitable plant for a dry place. Its home is on cool mountain flanks, where its head is often bathed in mist and its roots feel a frequent trickle of moisture. Ed.]

OUTDOOR CHRYSANTHEMUMS.

Of the two dozen sorts tried last year—and last year was a bad one for them—the best with me was the neat, bright little pompon L'Ami Condorchet (or Conderchet). It forms a compact, shapely bush about 2 feet high, seems to want no staking, and certainly flowers with great freedom. Moreover, the light-yellow blossoms keep clean longer than many, so that the effect of the plants is quite prolonged. Once the best outdoor variety I had was Julie Lagravere, but I lost it somehow, and since then the plants of this variety I get are less hardy, apparently. I expect I do not get the true sort, although I know it is to be had still, for I saw a large quantity used for decoration not long ago. Woodside Park. T. J. W.

NARCISSUS PALLIDUS PRÆCOX.

FEW seem to appreciate the value of this early Trumpet Daffodil. It is flowering now with me under glass, and the delicately-coloured and gracefully-formed flowers make pretty button-holes, or are useful for vase decoration. How much it varies in colour! Some of the blooms I have just cut have a distinctly golden trumpet with almost white perianth, while others bear throughout a delicate primrose tint. This is a vagary of the species, and no error on the seedman's part, as I obtained the bulbs from a firm beyond reproach. In the open, planted on a mossy bank, the buds are already almost showing, and a few hard frosts will do them but little harm. The hardiness and earliness of the flower alone, apart from its beauty, should make it more largely grown than it is at present. F. H. C.

Rye.

ORCHIDS.

DENDROBIUM WARDIANUM.

THE importing season of the Burmese *Dendrobium* has once more returned. The early importations of *D. Wardianum* are eagerly purchased in the sale-rooms annually, while those introduced later in the spring months are almost given away. The result is that those who grow *D. Wardianum* extensively for the supply of cut flowers have discovered that if they wish to secure satisfactory results from the first season's growths, when purchased early a longer growing season is secured, and roots are produced which with lengthening days gradually promote growth. By the time the bright summer weather arrives these growths are enabled to make the best of the warm months and mature satisfactorily before the decline of the days. With late importations the plants cannot be, as a rule, relied upon to complete their growths, and it will generally be found that these are in an active state of growth at the end of September. The pseudo-bulbs, which in the early plants have become brown and are in most instances shedding their leaves, in the late plants will be found altogether unripened and unprepared for the dull winter months, which are the resting period. It is difficult to deal with plants under these circumstances. Unless the outside conditions are exceptionally favourable, shortened and weed-like bulbs are the result. Plants thus retarded rarely regain their normal proportions. I would advise those who wish to replenish their stock or to add this species to their collections to procure what is required, even at the slightly larger outlay in the initial cost.

What becomes of the annual importations of *D. Wardianum* into this country? The early importations generally find their way into private gardens. The nurserymen and trade growers who do not import direct must be content with later importations, but these are generally supplied in good time. It is not a species that can be found growing satisfactorily for many years after importation. I am familiar with a few instances, and do not complain of my own experience in the satisfactory culture of this useful *Dendrobo*. In some places destruction is wilfully brought about by the barbarous treatment adopted of cutting off near the base the whole of the growth as it stands while in bloom, so that the growths may be used for cut flower decoration. This is not only done in private places, but one frequently sees instances where the bulb is cut off in this manner displayed in the florists' shops about London. Such treatment cannot produce desirable results. The flowering of *D. Wardianum* differs altogether from *D. nobile*. The former flowers from the last season's growth, whereas in *D. nobile* the two-year-old bulbs flower, and last year's growths start into growth from the base, so that the removal of the flowering growth is not likely to produce the disastrous effects on the new growths. It is worthy of note that the majority of nurserymen do not stock, as a rule, more than the demand for the current season. This undoubtedly points to the fact that they do not find it desirable to retain the plants longer than is necessary, and prefer imported ones.

I am inclined to think that the chief cause of failure is a want of proper conditions during the resting season. Plants do not take the proper rest sometimes, like other species, and frequently commence growing before the previous growth has reached maturity. It is not generally understood that this is characteristic of the species in its native habitat. One of the most prominent of the Eastern collectors has told me that the young growth often reaches from 9 inches to a foot long before the cool and dry season sets in. Then follows the long season of rest, during which time the lower foliage of these growths are sometimes affected, which is followed by the flowering season. Then comes the deluge of rains, and in a remarkably short period the growths which remained dormant for months start away vigorously and quickly attain their proper dimensions. Many of our best growers have failed in the past in endeavouring to treat the

plants in the same manner as the majority of *Dendrobium* when the young growths are in an active and growing condition. Continuous growth during the proper resting season produces most unsatisfactory results, and it was not until I began to discard this secondary growth that success was gained. The flowering season should be reasonably limited and the plants relieved of the strain which is so often imposed in the endeavour to prolong the beauty of the flowers by cooler and drier conditions after they have become expanded. This is an injurious practice. The flowers should be cut within a reasonable period after they have expanded.

H. J. C.

TREES AND SHRUBS.

SHRUBS FOR DRY SOILS.

IT is not always easy to get shrubs to make satisfactory headway in dry, sandy soil, but few are better than the evergreen *Oleasters*, and at the same time few evergreens with variegated foliage are more showy than *Elaeagnus pungens aurea*, which grows freely and forms a compact bush, the leaves of which are rich yellow, the margins only being green. The

as its underground shoots push freely it soon makes a dense carpet of deep glossy green leafage, which in winter is heavily stained with brownish purple and crimson. Continuous growth during the proper resting season produces most unsatisfactory results, and it was not until I began to discard this secondary growth that success was gained. The flowering season should be reasonably limited and the plants relieved of the strain which is so often imposed in the endeavour to prolong the beauty of the flowers by cooler and drier conditions after they have become expanded. This is an injurious practice. The flowers should be cut within a reasonable period after they have expanded.

THE WINTER HEATH (ERICA CARNEA).

At this season of the year it is charming to see patches of colour formed by this hardy Heath. Frost does not appear to affect its flowering, and it emerges from a covering of snow looking fresh, bright, and cheery. How many spots in the environs of gardens might be made bright during autumn and winter by the free use of such plants as this, its white variety *E. herbarica*, and some of the autumn-flowering native Heaths. They are hardy, but unobtrusive plants, and never look out of place or untidy at any season. J. C. T.

RHODODENDRONS BY WATER.

THE fine effect of a bold grouping of the most free-growing of the *Rhododendrons* on the margin of artificial water is shown in the accompanying



RHODODENDRONS GROUPED BY WATER.

type is of good growth, too, and bears great numbers of small, white, deliciously-scented flowers in axillary clusters in November and December. *E. macrophylla* from Japan is a choice shrub for decorative planting. It is of excellent growth, spreading habit, and its bright green leaves, silvery on the undersides, create a pleasing effect when ruffled by wind. It flowers in mid-winter, and although its greenish yellow blossoms are small, they are borne so abundantly as to merit attention amongst winter-flowering shrubs. The *Oleasters* are perfectly hardy, easily grown, and splendid dry-weather shrubs.

A GOOD SHRUB FOR CARPETING THE GROUND.

DURING winter, *Gaultheria procumbens*, a dwarf-growing North American shrub, is one of the gems of the hardy Heath or rock garden. It forms a good carpet shrub 4 inches or 5 inches high, and

illustration. These grand shrubs are never so happy or so free in growth as when their roots are within sucking distance of a constant supply of water. They will live and do fairly well under drier conditions so long as they are not absolutely parched, but will require constant watching, with judicious mulching and watering when signs of distress are noticed. But if planted at once in peaty soil, or in such as has a good proportion of leaf-mould, and where there is water so near below them that they can easily take it up, they will grow away well and take care of themselves.

Hamamelis arborea. This is one of the most charming of winter-flowering shrubs, with its crowd of golden-colored twisted petals. It is very hardy, moderately vigorous, and should be grouped on the lawn, not crowded into the mixed shrubbery. The other species are far less interesting and attractive.

ONWARD! NOT BACK.

Is your kindly reference to my work in the last issue it is said, that "although the newer and better ways of gardening are only a return to the ways of our ancestors, yet the precious heritage they left us had for many years been lost."

On this I should like to say a few words, not so much on my own behalf as in the interest of the things themselves. The statement is true enough as far as it goes, but it covers but little of the ground. A just view is that which Dean Hole expressed to me last summer, *z.c.*, that we are now beginning to see a beauty in gardens which was never dreamt of in old times. Certainly no one need be ashamed of going back in any art, and much of so-called progress is anything but worthy of the name. Nothing, however, suffers so much from the influence of "survivals" as the garden art, and the watchword there must be "onward" if we are to reap anything like a tithe of the beauty of actual things in many cases wholly unknown to our ancestors.

In saying something as regards the various ways in which distinct advance has been made, I do not by any means try to cover all the ground, even if it were in the power of any one person to do so.

THE ROCK GARDEN.

Perhaps there is no more interesting instance of real progress, and at the same time of the survival of ugliness, than what I call the rock garden. No one can say that this was known to our ancestors, as the earliest evidence we have is that of London's books, which show fearful things and useless for their purpose. Even in our own day we have heard savants and botanists say that alpine flowers could not be cultivated, and the collection of them at Kew even were, as many will perhaps remember, under a canvas cloth. Who among our ancestors would ever have expected to see such rock gardens as that of Miss Willmott, and many others that could be named, in which the true beauty of the flora of the mountains is seen! Here also is an example of the survival of evil things. The ugly old "rockery" idea is unfortunately now being carried out in the costly London parks under the rule of the London County Council. In Dulwich Park, Waterlow Park, and in the squares of London we see rockeries being formed of the vitrified waste and rubbish of the brick-yard. Nurserymen, also, with a reputation for forming rock gardens, erect showy stony piles, using many stones where three would give a better result. Here there is no going back; all progress can but arise from looking to the great mother of things. It is singular how near we are to the mountains, and how little good our garden-makers get from it, and certainly any good we have got is by looking to Nature.

HARDY FLOWERS.

Even in the one way in which we have rightly gone back, that is to say, to the mixed and more natural way of arranging hardy flowers, there is a great change for the better. The old mixed borders were often full of coarse plants, which eat up the few good things. Even in gardens where hardy flowers were best grown, such as the marvellously fertile soil about Edinburgh (as at Comely Bank, Mr. Stirling's garden), while one saw with great pleasure the beauty of the individual plants, there was no grouping or holding things together in the way we now see in some of our best hardy flower gardens, such as Lady Ardilann's flower borders. Nor was it possible that we should have had such gardens of hardy flowers as we

have now, because the rich collections of Lily and Iris and many other flowers were not known in our gardens.

ROSES.

Here, if we go back, we get into the Rose garden of Roses that flower but a few weeks; as Roses were usually placed, except in cottage gardens, in a place apart (the rosery). In consequence of the survival of this rule not one out of fifty Rose lovers even has any idea of the beauty lost in the present day owing to this survival. How it would have rejoiced the hearts of our old gardeners to see a garden of Tea Roses in full beauty months after the old Rose-time had passed! This, although little known to people as yet, is a delight which the simplest cottager can enjoy if he does not pursue the orthodox and settled method of putting all Roses on the wild Brier, or follow the teaching of every list, that Roses to thrive must have rich and heavy soil—not only not true, but the very opposite of truth as regards the finest of all Roses grown in the natural way.

THE WATER GARDEN.

Perhaps there is no greater advance imaginable than has been seen in water and water-side flowers. While everyone has heard of the new Water Lilies, few yet realise the difference they will make to the lake in the future in this water-blest isle. Mr. Watson, of Kew, said to me a summer or two ago on seeing some of these hardy Water Lilies well grown: "What is the use of building Victoria houses if you get results like that in the open air!" It seems to me that a few acres of water set with lovely Water Lilies in various delicate colours and with the margins clad with water-side plants and the banks with the rich hardy plants that may be grown in such soils, offer a picture which, as Dean Hole said, people at one time never dreamed of as possible in a garden. Also, we may claim that many things which were known and grown in the gardens of our ancestors have been more rightly treated in our own day. Take the beautiful Starworts, which in old gardens were tied to a stick like a broom. The new way of growing these in broad groups or colonies of all the more lovely kinds among shrubs or young trees is distinct from anything seen in gardens before, and gives a great charm to the garden in autumn. What is true of these applies to many other beautiful plants, which in the old gardens existed only in a spotty way, and never gave any good clear effects as our beautiful plants do now when we group them in Iris border, Lily garden, or many Narcissi so admirably suited to our climate. The old people had the Narcissus here and there, and a few kinds naturalised themselves in Irish gardens and cool soils; but who expected to see anything like the constellation of lovely beauty in the grass now seen in many places!

FLOWERING TREES AND SHRUBS.

It is not only to the ways we have already realised that my contention applies; it is to things we know and as yet make no fair use of, as, say, the most precious things of all for the open-air garden—flowering trees and shrubs. If there be any place in England where half the beauty these may give us is well shown, I should be very glad to hear of it—I mean the full expression of their beauty in the way the beauty of hardy flowers, bulbs, or Bamboos has been realised in various instances in our gardens. Even the value of the Willows of the north, full of lovely colour as they are every month in the year, is rarely seen in any effective way, and we may see now and then the best examples of water in park or pleasure

ground—as at Bocket—and rivers sweeping through fine country seats without a group or mass of these most beautiful of hardy trees for the water-side being seen.

Without trying to cover the whole ground, I hope I have shown that the word must be "onward." I have not mentioned any advance here of which we have not good evidence of, though, unhappily, it may be unknown to many. Also, that it is a fight only for what is true and right and will carry us to better things in the garden art. This fight may be a long one, especially when it is against the routine of established trade practices, the practice of grafting, for instance, by which nearly all the beautiful shrubs and trees introduced or raised perish, and are in the end lost to gardens, as in the cases of the species of *Catagrus* on the Quick, the lovely varieties of Lilac on the common Privet, and graceful Willows on the common Withy. W. R.

WOODLAND AND FOREST.**FORESTRY: A LOST CROP.**

ONE of the most conspicuous faults of our home system of forestry is the neglect of crops from old stools. It has often been a source of wonder to the writer seeing owners of land incurring much expense in forming extensive plantations of young trees and leaving the stools from felled trees in the older woods untended and mired for, apparently in ignorance of the fact that in every one of the stools left a second crop of trees and poles equal to the first might be had in a much shorter time than was possible from planted trees, and with no more attention than the thinning out of the young shoots that spring in such abundance from the stools of nearly all the hardwoods. These shoots always grow at a rapid rate, due to the rebound of growth caused by cutting down the tree, just as cutting back a branch causes it to break out stronger than before. When a healthy tree is cut down the whole vigour of the roots is concentrated on the reproduction of new growth, and the rapid rate at which such trees as the Oak, Ash, Sycamore, Alder, &c., spring up from the stool far exceeds, for a number of years, the growth of planted trees, which, comparatively, stand still for the first few years. Through want of attention, however, stool crops of timber are practically lost on most estates. Indeed, the writer does not know at the present time where he could point to a good second crop of timber of the kind described. Single, accidental examples are common enough, but what one usually sees in woods from which repeated falls of timber have been taken is just a thicket from each stool neither fit for timber nor coppice—pure waste. Travelling through part of Lincoln and Nottinghamshire not long since, I could not help noticing numerous examples of this kind. The neglect of this branch of forestry on estates in England is far from creditable to the management. We know fine Oak and Ash woods in Yorkshire in which nothing has ever been done to rescue the second crop from destruction, and the woods have had regular falls of timber taken out of them so long that they are now much too thin, the shoots from the stools having been either eaten off by rabbits as fast as they grew, or been allowed to become smothered with weeds and bracken at the critical stage. This neglect did not exist always, however, judging from the signs one occasionally sees. On certain well-known

estates where extensive falls of timber were got many years ago provision was made in the printed agreements between vendor and purchaser that the trees were to be felled at the right season, viz., autumn or winter, when the sap was down, and that the trees were to be cleanly cut close to the ground so as not to check future growth from the stool. In the case of trees peeled standing, as is done in South Yorkshire, the trees had to be ringed or "burled" at the base to prevent the bark on the stool from being injured.

The Germans and French are ahead of us in this matter, as in others. In German books on forestry the reproductive power of different species of trees from the stool is carefully noted, and some fine examples of second crops are to be seen on the Continent. There was twenty years ago a model second crop of Oak to be seen in the beautiful forest of Fontainebleau, about 40 miles south of Paris and close to the little station of Thomery. This forest corresponds to some of the Crown forests in this country in a sense; but as regards good order, management, and productiveness there is no comparison. Fontainebleau Forest is kept up as a royal forest, but it is managed on strict sylvicultural lines. In the second crop of poles alluded to the trees were about 60 feet high, and from two to four poles sprang from every stool. No doubt many more had been produced at the beginning, but they had been carefully weeded out in good time. The whole of the first crop had gone down in a "clear cut" and been succeeded by the one we saw. The regularity of the crop and even uniform size of the trees were remarkable, indicating the attention bestowed on the forest. As before stated, all the broad-leaved forest trees except the Beech possess great reproductive power from the stool after felling, and this power lasts for years in the case of the Oak and others. It is quite surprising how quickly the second crop springs up. The first year the shoots are not so long, but the second year they shoot up several feet, and in two or three years quite a young plantation is established. We have seen single Oak stools from which, by accident or design, the shoots had been reduced at an early stage bearing a crop of six fine poles about fifty years after the original tree had been felled. About twelve years ago a thin Oak wood that we knew was cut down and the ground replanted with Firs between the Oak stools, which produced vigorous shoots that were early thinned, and they are now ahead of the Firs and likely to produce a fine second crop.

We strongly commend this subject to the owners of woods. The second crop of timber in our woods is at present practically a lost crop, though one of the easiest and cheapest to secure. Let owners look round them when they go into their woods from which falls of timber have been removed. Whenever shoots are seen springing up there is a possible crop of timber. As a rule the shoots spring up in great profusion from each stool, forming dense, bush-like masses, and that is where the danger to the crop lies, as if the stools are left in that

state the smothering process sets in. The thinning out of the shoots is, however, a very easy matter, and consists in simply cutting or wrenching out the shoots that are not wanted and leaving about four or five of the strongest to each stool.

J. SIMPSON.

NOTES FROM NURSERY GARDENS.

CHINESE PRIMULAS AT MESSRS. SUTTON AND SONS'.

CHINESE PRIMULA time at Reading is a bright period of the year under glass. When leaden skies and keen winds drive one from the pleasure

Reading, is a distinct break away; its finely-formed single flower, its whitish petals relieved by a crimson shaded central ring and eye of greenish yellow, is entirely unique, and such a departure as this is only the beginning of a new set, so to speak, from this quaint and beautiful novelty.

THE SINGLE-FLOWERED PRIMULAS.

We have written of the flowers here on previous occasions, but every visit reveals some fresh and beautiful variety. The Duchess, as we have already remarked, is an acquisition likely to prove the forerunner of a new and charming race, and other seedlings were there also, all possessing distinct features of excellence. These seedlings, chosen from extensive trials, are the outcome of patient work to seize upon every cross likely to prove the

basis of future groups, and in this way gradually and surely has this beautiful family arisen. It is hardly necessary to individualise. There were Reading Scarlet, Brilliant Rose, that beautiful and popular white flower The Pearl, Reading Blue, the delicately tinted Cambridge Blue, the exquisite Fern-leaved Purity, Snowdrift, and the noble series of giant flowers in several colours—pink, the remarkably distinct terracotta, and crimson. The giant group flowers rather later than the other type, and forms in a way a pleasing and valuable succession.

But there is another type, which some prefer even to the beautiful flowers already mentioned, and this group is called stellata, or the Star Primula, in allusion to the somewhat starry form of the flowers. By this one must not suppose the flowers are poor in form, for this group is of extreme elegance—tiers of blossoms, a profusion that fills the house with beauty and provides material for room and table decoration. An example in a pot is illustrated to show the character of this fine section of Primula, which, if it reminds one of the wild species, appeals to the lover of flowers by its freedom and vigour. The type, so to speak, has white flowers, which with age become flaked with colour; but this does not detract in the slightest degree from the beauty of the flower. The pink forms a strong contrast; the colour is pure and distinct and very charming against the older form. Those who care little for the more formal kinds of Chinese Primula will treasure this free and graceful flower, which we hope in time will develop other colours as pleasing as those already in existence.

THE DOUBLE-FLOWERED VARIETIES.

We confess to a strong love for this bright group of winter flowers, and the variety given an award of merit by the Royal Horticultural Society at its last meeting is a great gain. There are no poor colours in the double-flowered strain, and this deep crimson, as rich and precious as the colour of a Clove Carnation, will promote an even deeper interest in this section. The flower is pretty in form, somewhat approaching a rosette, and intense in shade. General French is the name of this sterling novelty. Even in the dimly-lighted Drill Hall this colour, grouped with the scarlet, blue, white, and pink shades, was conspicuous amongst the double kinds. A very pretty set is named Moss-curl'd, in allusion to the Moss-like character of the leaves, and it represents several colours, all pretty and distinct. No variety, however, interests the writer more than the double blue, which from a poor, undecided colour has changed to a pure and delightful shade. The Messrs. Sutton have striven diligently to bring this group to perfection, and the latest addition is, for colour and form, finer perhaps than anything that has yet appeared,



THE "STAR" PRIMULA (P. STELLATA).

garden, it is agreeable to see flowers filling the plant house, groups of colour, crimson, blue, or a strong approach to that distinct hue, rose, pink, and purest white. At the time of our visit the Persian Cyclamens were fading, with Chinese Primulas in profusion to carry on the bright colouring into the early spring months. At the last meeting of the Royal Horticultural Society one of the chief features consisted of the group of Primulas from Reading, and even in the murky light of the Drill Hall the flowers were very effective. How great has been the march of the hybridist one may judge from the flowers of the present day, and progress is written large upon Primula hybridisation even at this time, when improvement and extension of varieties seem impossible. This is not so. The variety named Duchess, raised at

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EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editors invite readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object they wish to make the "Answers to Correspondents" column a conspicuous feature, and when queries are printed, they hope that their readers will kindly give inquirers the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITORS of THE GARDEN, accompanied by name and address of the sender.

The Editors welcome photographs, articles, and notes, but they will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, they will endeavour to return non-accepted contributions.

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Edited by MISS JEKYLL and MR. E. T. COOK

Office: 20, Tavistock Street, Covent Garden, W.C.

THE PHARMACEUTICAL SOCIETY.

THE SALE OF INSECTICIDES.

THE Pharmaceutical Society was pro-
fessedly incorporated for the public
benefit, more particularly to secure
that the sale of poisons and the dis-
pensing of drugs should be only
undertaken by persons properly trained and
qualified for the work. Everyone will admit
that it is to the advantage of the community
that physicians' prescriptions should be com-
pounded by skilled hands, and it will be
equally patent that it would not be for the
good of the community if some of the more
dangerous preparations of the chemist could be
dispersed broadcast by anyone who chose to
indulge in the trade for purposes of mere profit.
It conduces to the public weal that supervision
should be exercised by a recognised authority
over the retail vendors of poisons, and that in
the case of certain special preparations a
register of retail sales must be kept, in which
must be entered the date of the sale and the
name and address of the purchaser, together
with the purpose for which he stated the
material was intended to be used. Such regu-
lations are for the good of the public, and
should be properly enforced.

During recent years the Pharmaceutical
Society has evinced considerable activity in
detecting the sales of proprietary medicines

containing poison by unqualified persons—a
legitimate sphere for its operations, and one
in which much good work has been accom-
plished—but the society seems to have now
taken quite a new view of its *raison d'être*,
and is concerning itself with matters outside
its proper province.

The development of the market-garden in-
dustry and of fruit and flower culture has led
to the more systematic study of insectal and
fungoid pests, one result of which is that a
number of special preparations, known as in-
secticides, have been placed on the market, and
have now come into common and every-day use.
Naturally, the active principle of some of these
preparations is a poison, and so on a sale by
retail by a person who is not a duly qualified
chemist there is a technical breach of the law,
even though the vendor purchases from a
manufacturing chemist, and sells in a closed
sealed package, duly labelled, and never opened
by himself. Nicotine is well known to be an
active principle of one or more of the insecti-
cides in common use, and nicotine is a poisonous
vegetable alkaloid, and, as such, is a poison
comprised in the schedule to the Pharmacy Act
of 1868, and recently proceedings have been
instituted against a seller of such a preparation
for committing a breach of the Pharmacy Act.
This preparation has been before the public for
some seven years, and yet proceedings are now
instituted for the first time. Will anyone
contend that the sale of a fumigative contain-
ing nicotine for use in gardens is a source of
danger to the community unless sold by a
qualified chemist?

It undoubtedly appears that in this matter
the Pharmaceutical Society are simply acting
as a trade protection society, and the plea that
the action is taken in the public interest is
misleading; they seek to secure to chemists
and druggists such profit as may arise from the
retail sale of insecticides, and to prevent anyone
else from participating in the profits of such
sales. One result will inevitably be to raise
the price to the consumer, but, happily, the
gardening industry is not asleep, and a society
is being organised to resist the movement (Mr.
G. H. Richards, of 128, Southwark Street, is
acting as hon. secretary *pro tem.*), and to secure
the amendment of the Act of 1868 so as to
enable agents, other than pharmacists, to sell
in the manufacturers' original packages poison-
ous preparations for technical purposes to the
trades and professions ordinarily requiring such
preparations in the course of their trade or
business. Certain restrictions might be found

necessary, to which, however, no one would
object.

One large manufacturer has asked the mem-
bers of the seed and nursery trade to send
their orders direct to him, and he will despatch
to their buyers and invoice the goods to the
merchant, who in turn will invoice to his
customers, but, happily, the decision in the
recent case of the Pharmaceutical Society *v.*
White has shown that it is scarcely necessary
to resort to such a roundabout procedure.
Mr. White, who is a florist at Worcester, is in
the habit of selling a weed-killer containing
arsenic; he does not keep the material in stock,
but forwards his customers' orders to the
Boundary Chemical Company at Liverpool,
who execute the orders and allow Mr. White
25% on the annual sales through himself. The
Pharmaceutical Society proceeded against Mr.
White in the County Court, but the judge
decided that Mr. White was merely acting as
agent for the Liverpool company. The society
appealed to the Court of Queen's Bench, and
last week a Divisional Court (Justices Grantham
and Channell) held that the decision of the
County Court was right, and dismissed the
appeal. Justice Grantham said that in his
opinion Mr. White was merely the conduit-pipe
between the company and the buyers, while
Justice Channell said there was no evidence
that Mr. White had the control or the manage-
ment of the sale.

The Pharmaceutical Society intend to take
the case to the Court of Appeal, but there is
little cause to fear that the decision of the
Divisional Court will be reversed. During the
last few days a question was addressed to the
Lord Advocate (Mr. A. G. Murray, Q.C.) by
Mr. M. Cuthbertson, at a large public meeting,
asking if he would support a Bill in Parliament
making it legal for seedsmen and other agents
to sell poisonous preparations, such as sheep-
dips, insecticides, weed-killers, &c., and the
Lord Advocate replied that where poisonous
substances were dealt with in the way of being
dispensed, it was only right that this should be
done only by qualified persons. But in his
view, where they did not need to be dispensed,
but were supplied by the manufacturer in the
final form in which they were to be applied, he
saw no reason why any trade or profession
should have a monopoly of selling them, pro-
vided proper regulations were made and
precautions taken that they would not be
supplied or used for any other purposes than
those for which they were meant. And this
is nothing more than the trade is fully prepared

to admit, and it is a happy augury for the gardening trade that the decision in White's case, and the remarks of the distinguished lawyer who now fills the position of Lord Advocate, should become known at this juncture.

FALSE IDEALS.

ALL those of your readers who, like myself, love the flowers in their gardens from an artistic point of view, for their intrinsic beauty rather than for their novelty or rarity, will be grateful to you for your able article, entitled "False Ideals," which appeared in your number for January 20—"Nature is made better by no mean, but Nature makes that mean."

So long as we follow the lead which Nature, as it were, points out to us, we are on safe ground, for by assisting her in the way of her own direction, increase of beauty frequently rewards our labours. When a plant has a natural tendency to double its blossoms, or crosses easily by fertilisation, the results are nearly always interesting and satisfactory; but whenever she has distinctly marked out the character and purpose of a plant, and so fitted it that it shall do its best for the general effect in the place amongst its fellows which she intends it to occupy, it seems to me to be folly for the cultivator to interfere; by so doing, novelties and monstrosities may very likely be secured, but an increase of beauty never.

How obviously Nature has intended that the Pea should climb, that its lovely winged blooms may be exalted in the sunshine and air. "Here are Sweet Peas, on tiptoe for a flight." So conveniently raised too for us to enjoy more thoroughly their beauty and their scent. Our florists have lately done much for us by increasing the variety and beauty of the colouring of this exquisite flower, and we tender them our grateful thanks. But what demon could have possessed them to introduce the dwarfed varieties that now figure so frequently in the catalogues! "Cupids," forsooth! To me it seems little short of downright cruelty to sow Sweet Peas like these which are condemned to grovel on the ground during their short existence. The dwarf and compact habit is no doubt a virtue with many things, like the carpeting plants and mosses for instance, but it would be fatal to the beauty of others such as the Teasels, Mulleins or Roses.

To anyone who has worked in a garden for a few years, the temptation to secure plants that are dwarf and compact is no doubt very strong, so many things, especially amongst annuals, having such a tendency to grow beyond all bounds. The labour spent on keeping the borders tidy becomes great and unceasing; this no doubt accounts for the demand for these dwarf things, and I suspect that they are very welcome to the paid gardener as a means of saving labour. Still, after all, beauty is the principal thing, and no sacrifice should be grudged in our endeavours to secure it. Extreme tidiness in the flower borders is not so important a matter as many people think. A wild luxuriant tangle, so long as there are plenty of flowers, is, in my opinion, very much more beautiful than a border in which each plant is severely kept to itself, with neatly raked soil around. Nothing is more delightful than the accidental beauty which results from one plant growing into and amongst another, and I would rather see even weeds than bare soil anywhere. In painting pictures, one of the greatest gifts the artist can possess is a right sense of when to leave his work alone,

and it is precisely the same in the treatment of flower borders, which as a rule suffer far more from continual interference than from occasional neglect. It is extremely difficult to get a professional gardener to feel the truth of this, for he is naturally very proud of his skill, and too apt to imagine that the beauty and success of the garden is all the result of his own attention and intelligence: he is sure to get a very large amount of praise for the symmetry and gorgeousness of the effects which he produces from numbers of people whose taste is indiscriminating, such praise leading him to regard any suggestions of artistic improvement that may be offered to him as the vagaries of amateur ignorance. It is on this account that I feel so grateful to you for giving the subject the benefit of your powerful advocacy.

Riverside, Wallingford.

THE FLOWER GARDEN.

VIOLETS IN FRAMES IN WINTER.

I AM afraid many gardeners were caught napping on the occasion of the late severe frost and had their frame Violets badly nipped, as, owing to the mild weather which preceded it, the foliage was very soft and tender. Those whose frames were sufficiently protected to exclude frost, and who have been careful in airing, watering, and surface stirring, which latter preserves the plants from damp, which is the Violet grower's worst enemy, will now be rewarded by seeing them strengthen. The blooms will consequently improve both in size and colour, as it is wonderful what a change slightly lengthening days and increased solar heat make to Violets. On calm bright days remove the lights from the frames entirely, so as to dry and sweeten the soil about the plants, removing at frequent intervals all decayed and yellow leaves. If water is needed, let it be given on a fine day, so that the foliage will dry before nightfall. It is now time a plot was selected for the summer growth of the plants. Aspect is of great importance, as very few succeed in growing first-rate Violets on sites fully exposed to the sun, as in this case red spider is almost certain to work mischief, as moisture is deficient. An east border is in my opinion the best position, as the sun shines on the plants for a few hours in the morning, and they are left comparatively cool for the rest of the day. Digging in a quantity of rich farmyard manure is not a good practice, as although the plants may make strong rank foliage, they always stand ordinary winters badly, and bloom-production is not satisfactory. What is wanted is healthy medium-sized foliage and prominent well-matured crowns, and these are best ensured, not by strong stimulant, but by the free incorporation of loamy compost, road scrapings, leaf mould, and burnt garden refuse. Mix this to a depth of 15 inches or 18 inches now and let it lie roughly till planting time (the end of April) arrives. Do not plant spider-infested runners on any account.

NORWICH.

MR. G. F. WILSON'S LILIES.

By all plant lovers the name of Mr. Wilson is closely identified with many Japanese Lilies, but a fact not so generally known is that he was the first to exhibit *Lilium Harrisii* (Easter Lily of Bermuda) in flower. This was at a meeting of the Royal Horticultural Society, then held at Kensington, on June 12, 1883, when a first-class certificate was awarded it. The long white trumpets of this charming Lily attracted a good deal of attention, and even more later on, for it was exhibited at an evening meeting at Burlington House on the same day. Despite its many

admirers on that occasion, it is very questionable if anyone anticipated the popularity it would so soon attain and its high commercial value, for the culture of *L. Harrisii*, in many instances at least, has been very remunerative. It was our American cousins who first directed attention to *Lilium Harrisii*, and the production of its blossoms quite early in the year is one of the many wrinkles we have learnt from our friends across the Atlantic.

PLANTING A BED.

"J. W." asks for advice about planting a round bed 10 feet across that has a vase about 4 feet high in the middle. He wishes to do something better than quite common-place bedding. The bed is in a conspicuous place, with a grass verge and gravel walk round; it is near hardy flower borders, with shrubs beyond.

We are not told what is the nature of the plinth on which the vase stands, but as it is 4 feet high we suppose it has some kind of support. We take it to be a square plinth 2 feet each way in plan; it may be round, but to suppose it square will help the description. Next to each of the four sides we plant a large-flowered *Canna*, the four *Cannas* being all of the same green-leaved variety with soft scarlet flowers, such as *Antoine Bouvier*. Between each of these is plunged a well-grown potted clump of some handsome Lily, of which a succession is kept ready. The earliest batches would be the large longiflorum or *Harrisii*, the next *candidum*, then *speciosum*, and lastly *auratum*. Next in front of the *Lilium* should be three permanent plants of *Funkia subcordata grandiflora* in a group together, two back and one forward, and the rest of the space towards the edge of the bed should be of a zonal *Geranium* of a soft scarlet, such as *Mme. Bartlemann* or the splendid salmon-coloured *King of Denmark*, avoiding the hard scarlets, for though they are more brilliant in detail they never make so harmonious a grouping with other plants. Of the foregoing plants the only ones that remain in the bed from year to year are the *Funkias*. Except in warm places in the more favoured parts of our islands, they cannot be depended upon to flower, but in such a bed as the one described the object is not so much for flower as for groups of handsome fresh green foliage. In less favoured places they could be plunged like the Lilies.

Where the *Funkias* do well in the open—and they remain from year to year in the bed—they would equally take a part in another good arrangement of quite different colouring. In this case the Lilies would be the same, but the four *Cannas* would be replaced by well-grown plants of variegated or silver-striped *Maize*, and the front spaces would be of some arrangement of *Cineraria maritima* and a good medium-coloured *Heliotrope*, such as *President Garfield*—the *Cineraria* in a group of three next the *Maize*, the front plant of the three breaking forward into the *Heliotrope*. With this colouring a pretty incident would be a potted *Clematis*, either white or lilac, plunged at any point next the base of the vase and trained upward and around it. The vase itself should, in the first arrangement, have either a *Geranium* to match one of those below, or a small *Canna* of rather dwarf habit; in the second, a pot of *Phormium* might be placed in the vase, or a well-grown two-year-old *Cineraria maritima*.

PROPAGATING YUCCA GLORIOSA.

THE well-known Adam's Needle, with its formidable spiked leaves, seems an unlikely subject to take in hand for propagation by cuttings. But I have found that single crowns, taken off with a short piece of stem, strike as easily as Willows. Some years ago two large specimens were sent me. They flowered, and then, in their usual fashion, split up into several heads. I reduced the number to prevent the plants growing unshapely, and now have several neat specimens, obtained simply by putting the pieces taken off into the border. Some I put into large pots, and these did just as well.

Woolside Park.

T. J. W.

THE ROSE GARDENS OF MIDAS.

It is much to be regretted that we do not know more concerning the Rose gardens of Midas, the earliest Rose gardens of which we find any legend or record. Herodotus, the father of history, who published his writings about 450 years before the Christian era, speaks of "The gardens of Midas the son of Gordius" as if they still existed in his own time. He says they were situated at the foot of Mount Bermus, in Macedonia, and that self-planted Roses grew in them bearing sixty petals on each flower, and being the most fragrant of all Roses.

Midas, king of Phrygia, lived in mythical times, before Grecian history began; his father Gordius was also king of Phrygia, and tied the famous Gordian knot, which remained unloosed for about 1000 years, till Alexander the Great cut it through with his sword. How the king of Phrygia came to have a garden in Macedonia is not very clear, but it was not farther from his home than the south of France from the home of some English people who have villas and gardens there. Latin classical writers, both before and after the Christian era, speak of these Rose gardens of Midas, but give no particulars about them.

We know very little about the flower gardens of the ancients, only just enough to make us wish to know more. The gardens described by Greek and Latin classical writers were for the most part what we should call kitchen gardens. There were the famous gardens of King Alcibiades, generally reported to have been in Corfu. But Homer, in describing these gardens, does not speak of any flowers, but names several kinds of fruit trees which bore perpetual crops, another crop ripening as soon as one was gathered.

The Athenian garden of the philosopher Epicurus was entirely a vegetable garden. The Roman Emperor Diocletian, when he retired from ruling the world, and devoted his time to gardening at his villa in Dalmatia, told a friend who visited him that no one who had once learnt the pleasure of gardening would wish to rule an empire, and he showed his friend large breadths of Cabbages, all planted with his own hand; but nothing is said of flowers. Virgil is very tantalising. In his poem about bees he says if he had less to say about them, he should like to give more time to telling of the double-bearing rosaries of Pæstum, and would give more particulars concerning the delightful flower garden of an old foreign friend, who had enclosed some waste land on the southern coast of Italy, and was more happy than a king amongst his Daffodils and Hyacinths, his Lilies and Poppies, his Myrtles, and especially his Roses, which were always the earliest in spring, but, adds the poet, I have not time or space, and so—"Prætereo atque aliis postme memoranda relinquo."

Theophrastus, the earliest of Greek botanists, who lived more than a century after Herodotus, says of Roses that they vary much in the number of their petals, some having five, some twelve, some twenty, and upwards, some growing in Macedonia being called hundred-leaved; these are probably the Roses which Herodotus mentions. Theophrastus tells us that transplanting and close pinning, and especially burning down, increase the vigorous growth of the plants.

From Pliny, that voluminous Latin writer on plants and animals, we should expect more information about the cultivation of Roses, considering the enormous demand for them at Rome to use in garlands and feasts. As this demand must have been met by a corresponding supply, there were probably many hundreds of acres covered with Roses near the city; but

the information we get from him about them is meagre. Pliny repeats in Latin what Theophrastus had told us in Greek, and adds that the *Rosa centifolia* of Macedonia, which was not wild, but improved by cultivation, was the same as the *Rosa centifolia* of Campania (probably the flower of Pæstan rosaries). The Rose of Pæneste was the latest variety flowering into winter, the Campanian being the earliest. The Rose of Miletus, a Rose having never more or less than twelve petals, was the deepest in colour; the Rose of Abandæ—both these places being in Caria—was the palest. That of Cyrene, in Africa, was the most fragrant, whilst at Cartagena, in Spain, were Roses which flowered all winter.

Pliny recommends grafting and budding, and growing from suckers, as producing quicker results than raising from seed. A pale-flowered, strong-growing thorny Rose with five petals, found wild in Greece, was used as a stock for budding. He astonishes us most by saying that all the Roses known at Rome were scentless, except two. One he calls *coroneola*, and describes as an autumnal Rose of medium size; the other is the Rose *in cubo nata*, i.e., produced on a Bramble—the Briar Rose (?). This summary of Pliny on Roses affords a fair specimen of the difficulty of coming to any conclusion about the flowers described by the ancients. In the case of a plant so widely cultivated as the Rose, all the garden varieties have probably undergone great change in the course of 2000 years, but we are perplexed by the statement that the Roman Roses were for the most part without fragrance, as it seems at variance with what Herodotus tells us of the Macedonian Roses, and with what Pliny says in other passages. But it may be that the sweetness was washed out by the irrigated bog soil of the suburban gardens which supplied the Roman markets, which, as Horace tells us, made even the Cabbages insipid.

Lequipo nihil est cilius horto.

But to return to the Rose gardens of Midas. Herodotus mentions another incident about them which, though it has nothing to do with Roses, introduces an amusing legend. In the days of Midas there lived an elderly gentleman named Silenus. He had the honour of being private tutor to the young god Bacchus, to whom in some ways he set a very bad example, being nearly always tipsy. But he had other more refined pursuits; he was passionately fond of flowers and an accomplished musician, and he imparted these tastes to his young pupil, in whose honour many musical and floral festivals were instituted. Silenus appears to have been in the habit of straying wherever he thought he could get drink, and it was believed that if he could be caught asleep and bound with a wreath of flowers, he would be so charmed by them as to make no attempt to escape, but would redeem his liberty by singing a series of beautiful songs, or by answering any questions his captors might ask concerning the past, the present, or the future, for he was endowed with prophetic inspiration. This Silenus was once caught by the gardener of the King Midas in the Macedonian garden and taken to the king. Every schoolboy knows the rest of the story, and that the adventure did not end well for Midas.

This is, unfortunately, all we know about the earliest Rose gardens recorded either in verse or prose. If Silenus still continues his wanderings, for he is said to have become immortal—it is hoped that he may some day be caught napping in Edge garden, and the writer will certainly not let him go until he has given a complete list of all the species and varieties

of Rose which grew in the gardens of Midas. This could not fail to be very interesting to all who love the queen of flowers.

Edge Hall, Malpas. C. WOLLEY-DOD.

[In the event of this desired capture being effected and the much-wanted information elicited, we trust that Mr. Wolley-Dod will not fail to immediately communicate it to THE GARDEN. Let us hope that an ample bin of choice Falemian exists in the cellars of Edge Hall.—Eds.]

NOTES OF THE WEEK.

Fatsia japonica out of doors.—This ornamental shrub, better known by the name of *Aralia japonica*, is most effectively planted out in clumps or as single specimens. It has large terminal panicles of white flowers 12 inches high and as much through, while in favourable winters it ripens seed here from which we raise young plants. It grows well in a rich sandy loam with a little rotten manure. The leaves being so leathery are not easily injured by wind.—W. O., *Fota*.

Veronica rupestris.—I suppose all Veronicas may be considered good garden plants, but I know of none that pleases more in its heyday than this kind. It is so accommodating and gives such masses of flowers, that it would be perfect as a rock plant if it did not require keeping strictly within bounds. Each plant is compact enough, but it sows itself a little too readily. I used to let it do so at first, but I found it overrun everything, so I clipped off the flower-stems when the blossoms were going off. It did not mind this in the least, as it is readily increased when required.—T. J. W.

The striped Rudbeckia.—I tried a plant with the terrible name of *Rudbeckia grandicephalum striatum* last year, and found it showy when in full bloom. In its early stage its leafage is rather coarse and its flowers disappointing, but it soon develops long-lasting flowers, which form a distinct break of orange-crimson colour. But be sure and stake it well, for it has a branching habit which makes it top-heavy, whilst the branchlets are brittle as well, and apt to snap off the main stem. Of course, it flowers in the autumn, and its warm tone brightens up the border effectually. It grew about 4 feet high in my strong soil.—T. J. W., *Woodside Park*.

Fruiting of Euonymus japonicus.—A correspondent of the *Gardener's Chronicle*, writing from the Isles of Scilly, remarks upon the unusually abundant fruiting of this useful seaside shrub. We hear the same from Ventnor, Isle of Wight, from whence a friend sends us some fruiting twigs, and says that the berries have been so abundant and so ornamental, that they have been freely used as Christmas decorations. The pods before opening are pale green and nearly spherical, with a short pointed snout at the point where the four divisions will presently open, and display the seeds with their coats of brilliant scarlet.

Gardening for the Hawaiian lepers. In the *Standard* lately a letter appeared from Honolulu in which an interesting account is given of gardening for the lepers in the Hawaiian Islands. The writer says: "In a land where it is never too hot and never too cold; where the warm sunshine of the tropics is tempered by the cool and health-giving breezes from the sea; where bright, clear skies, limitless blue ocean, and mountains dressed in perennial verdure unite to charm the eye on this spot, where Nature has done so much and intelligent human benevolence is actively at work, dwell over 1000 lepers. The Baldwin Home is in charge of Brother Joseph Dutton, who for more than thirteen years has lived among them as a friend and brother. With his aid, and under his direction, the once bare and stony ground on which the Home cottages are located has been cleared and planted with bright-leaved shrubs and flowers. A model garden, where grow the finest of Bananas and sweet Potatoes, gives evidence of

constant and intelligent care, and the inmates of the Home have been taught the blessings that result from wisely directed labour. Milk is supplied from a herd of cows owned by the Board, which range over the peninsula, and fresh vegetables and fruits can now be had all the year round by those who will take the trouble to grow them. There has heretofore been insufficient water for irrigating gardens, but last year the Board had a new and larger main laid at an expense of £1000, and there is now an abundance of good water for all purposes. The 'pai-ai' mentioned in the rations is a preparation of the Taro root, and from it is made 'poi,' the national food of the Hawaiians. They eat it in the form of a paste, and to them it is the staff of life, as bread is to the Europeans."

Apples injured by hail. Some fruit was received by the scientific committee of the Royal Horticultural Society from Mr. Woodward, of Barham Court, Maidstone, which had received severe injuries from hailstones. But, although the skin was cut through and the flesh exposed, this had dried up and so protected the interior, which had not at all decayed. The storm occurred on July 19, 1899. Mr. Michael observed that when birds plunged their beaks into Apples through thirst, the injured spots usually resulted in decay.

Double-flowered Peach trees. In THE GARDEN, December 30, 1899, was published a coloured plate of the bright red-flowered Peach tree, under the name of *Prunus persica magnifica*, this name, it is said, being in accordance with Bentham and Hooker's "Genera Plantarum," but I must say it is entirely against the practical and botanical principles universally adopted. A Peach is no more a Plum than a Pear is an Apple, the generic characters being so evident in the foliage, flesh and stone of the fruit, and in the scent and flavour of the herbaceous part, as to render confusion impossible. Accordingly the name ought to be *Amygdalus persica*. The specific name *magnifica* is also doubtful, the variety generally sold by nurserymen under that name being far inferior in beauty to the type represented in the photo.—D. GÜTHESEF, 20, Rue Albouy, Paris.

Proposed trials in R.H.S. Gardens this year. The following trials of flowers and vegetables will take place this year: *Dahlia* (*Cactus*). New varieties only. Two plants of each should be sent in April. The trial of *Cactus Dahlia* not having been a success in 1899 (on account of the great drought and heat), the whole collection will be grown again this year. *Phlox decussata*.—Two plants of each variety should be sent on or before March 1. *Tulips*.—These have all been received and should make a good display in May. *New Cammies*.—One plant of each should be sent on or before February 1. *Celery and Celeries*. *Pears*. *Potatoes*.—Any new varieties. Also a trial of distinctly early Potatoes, of which both old and new varieties are requested. Tubers to be sent by February 1. *Tomatoes*.—For outdoors only. Seed to be sent before February 1. All of the above should be sent addressed to the Superintendent, Royal Horticultural Society's Gardens, Chiswick, W.

Double Rockets. In THE GARDEN, December 30, 1899, p. 518, Mr. Arnott gives a very interesting note on these plants. It is true they are fast disappearing from our gardens and are now comparatively scarce, but I believe they will soon be plentiful again, large quantities having been sent to England during the last few years. Recently some Paris florists have been using the single kinds, but chiefly the double white varieties, for forcing with complete success, the long racemes of pure white, highly fragrant flowers being greatly admired in the shops of our leading florists in January and February, and I must say that few other flowers could compete with them. Obviously, this practice will soon grow over the Channel, established plants being obtainable at a comparatively low price. As regards the Scotch double white and the old double scarlet or crimson, I should be glad to know the difference, as I was ignorant of their existence. Perhaps Mr. Arnott will satisfy me.—D. GÜTHESEF, 20, Rue Albouy, Paris.

Winter flowering of Yuccas. The last hot and very dry summer seems to have acted in some unusual manner on the Yuccas, as we have at the present time fifteen tall spikes of bloom showing, some with half-opened flowers, which we see with regret, as in the summer they would have been beautiful, but now can never come to perfection. B. A. THORNYCROFT, *Bombriidge, I. of Wight*.

[We hear other complaints of this untimely flowering of Yuccas from gardens on the warm and dry Surrey hills, and it is probably happening in many other places in the south of England. It is no doubt accounted for by the more rapid ripening of the flowering-crowns, brought about by the unusual heat and drought of the late summer.—EBS.]

Heliophila scandens.—Regarding the beauty of this charming climber recently illustrated in THE GARDEN there can be no difference of opinion, but, apart from its ornamental qualities, it is particularly interesting from the fact that climbing members of the order Cruciferae (to which it belongs) are very few in number. According to the *Botanical Magazine*, in which the *Heliophila* was figured, out of this enormous order, containing 180 genera, only two are of climbing habit, viz., the South African *Heliophila* and the Peruvian *Cremolobus*. Some seventy species of *Heliophila* are known to botanists, but few are in cultivation in this country. *H. scandens* was first sent to Kew by Mr. Medley Wood, curator of the Botanic Gardens of Dublin, in 1885, and flowered the following year.—H. P.

Spiræa prunifolia flore-plena.—Though this *Spiræa* is among the earliest of the shrubby kinds to flower when in the open ground, it is rarely seen forced into bloom; but a group of it in No. 4 greenhouse at Kew is just now very attractive, and serves to show its adaptability for such a purpose. It forms a loose-growing bush, and when the long wand-like shoots are studded for a considerable portion of their length with clusters of little white rosettes, it is really charming. As an isolated bush on the lawn, provided it is attended to in the matter of cutting out the old and exhausted wood, and also given an occasional dressing of well-decayed manure, it forms a delightful feature in the spring, while in the autumn it stands out distinct from most *Spiræas* owing to the leaves being frequently suffused with red before they drop.—T.

Toxicophlæa spectabilis.—Flowering as it does in the depth of winter, this stove shrub is now at its best, and a plant or two will when in bloom suffice to perfume a good-sized structure, so fragrant are the small white Jasmine-like blossoms that are produced in clusters from the axils of almost every leaf. Cuttings strike root readily during the growing season, and if potted off as soon as rooted, they make rapid progress. If intended to grow in bush form, the plants must be freely stopped during their earlier stages, as it is naturally somewhat rambling in growth, and may, if required, be treated as a roof or rafter plant. It is a native of tropical Africa, and was at one time generally known as the Winter Sweet, but of late years that name has been monopolised by *Chimonanthus fragrans*. This *Toxicophlæa*, which is also known as *Acocanthera*, belongs to the order Apocynaceæ, and, in common with many of its allies, the milky sap is poisonous.—H. P.

Galanthus Elsäe.—Snowdrops all seem a little late with me this year, and the first flowers of *Galanthus Elsäe* did not open until the new year had begun. I have had it in bloom in December some seasons, but it is always later than *G. Rachelæ*, which was sent from Greece at the same time, although collected on a different mountain. *Galanthus Elsäe* is the more robust of the two here, although it increases very slowly at the root. I have a couple of seedlings from seed saved here from this Snowdrop, and these have flowered a day or two in advance of the original stock. The position is warmer, and this probably accounts for the difference in time of flowering. *G. Elsäe* was found on Mount Athos by Professor Malaffy. In his paper on the Snowdrops, read before the Royal Horticultural Society in March, 1891, and published in THE GARDEN of September 19 of the same

year, Mr. James Allen expressed a fear that it was not very hardy. I have grown it for about six years and find it hardly enough here. I do not think, however, that our late frosts are so injurious as they are at Skepton Mallet and other places similarly situated. The flowers of *G. Elsäe* are not large, but are well formed. It has not the "card-drop" shape I like in some Snowdrops, but it is pretty enough to be prized, especially when it has so few companions of its genus.—S. ARNOTT, *Carsathorn, by Dumfries, N.B.*

Pitcairnia corallina. Though this belongs to the Bromeliads, it is in general appearance widely removed from the more commonly cultivated kinds such as the *Tillandsias*, *Vriesias*, *Echmeas*, and others of this class. This *Pitcairnia* forms a tuft of long, narrow leaves, the entire plant reminding one a good deal of a *Curculigo*, and, regarded only from a foliage point of view, it is decidedly ornamental. Just now a large specimen in the Victoria house at Kew is bearing several spikes of its showy blossoms, and its beauty is thereby much enhanced. The flower-spike springs from the centre of the growth at about 6 inches above the soil, then bends sharply down, and rests on the edge of the pot. It is about a couple of feet in length, and the flowers occupy the upper half. They stand erect on the scape and are of a bright coral-red tint, so that a specimen in bloom is very attractive and distinct. It needs to be in a fairly elevated position to see the flowers at their best. This *Pitcairnia* is a native of New Grenada, and needs to attain a large size before it flowers freely. Blooming, as it does, in the early months of the year is, in most instances, an additional merit.—H. P.

Centropogon Lucyanus.—This is one of the most persistent of winter-flowering stove plants, as its clusters of carmine-crimson tubular blossoms commenced to expand in October, and a succession has been kept up from the same specimens ever since. When the plants have done flowering they should be cut back hard and grown on for another season, or they may be employed as stock plants for the supply of cuttings. A mixture of loam, leaf mould, and sand, with occasional doses of liquid manure as the pots get full of roots, will just meet its requirements. When needed for winter blooming the plants should be encouraged to make good sturdy growth during the summer, in the height of which they may be removed to a frame outside. There seems to be a certain amount of doubt regarding the origin of this *Centropogon*, which, according to the *Revue Horticole*, was the result of fertilising *C. fastuosus* with pollen from *Siphocampylus betulæfolius*. This, however, has been more than once questioned, and the suggestion that it might be a form of the old *C. surinamensis* finds favour with some. Whatever doubt may exist with regard to its origin, there can be none as to it being a most valuable winter-flowering plant.—H. P.

The Date Plum (DIOSPYROS LOTUS).—The note in THE GARDEN, p. 29, on the probably better-known species, *D. Kaki*, is most interesting, and though rarely seen in fruit in this country—at least, I have seen few specimens, and these were given a warm wall in the south—doubtless such summers as we have experienced during the past two years promoted fruitfulness. As stated at p. 29, the fruit at first is not a great favourite; but some trees of the kind referred to I once had under my charge in a cool house furnished much better flavoured fruit than I have seen imported. But my note more concerns the kind called *D. Lotus*. We have some trees probably nearly a hundred years old, and during the past summer our oldest tree perfected fruit. This I thought may interest your readers, as, though smaller than that of *D. Kaki*, they are most interesting, being sweet, somewhat astringent, and about the size of a medium-sized Cherry; they hang until the leaves drop, and this is at the first frost. Our trees are in the open, standing on turf, and, of course, get no protection. I have only noticed perfect fruit. After a very favourable ripening season the trees when in flower are interesting and always bloom freely.—G. WYTHES, *Syon House Gardens, Brentford*.

THE OLD PALACE AT MATHERN AND ITS GARDENS. 1.

OWEN GLENDWR, rising against Henry IV., burnt Llandaff Cathedral in 1402, and destroyed Llandaff Castle, then the chief residence of Bishop Peverell. His successor, Bishop De la Zouche, evidently thought it wiser to live in the more English portion of his diocese—in those lowlands fringing Severn Sea, which had been early settled and reclaimed by the English, and protected against the Welsh raiders of the hill-country of Gwent by a chain of fortalices as well as by the great castles of Cuddicot and Chepstow.

Halfway between these two, the bishops had held the manor of Mathern ever since. In the

decay, and the successors of Bishop Beaw—who died in 1706, after a struggle to keep up episcopal appearances on £400 per annum—ceased to reside in their diocese. What remained of the old palace, after the lead had been stripped from the greater part of its roofs, and its interior woodwork and fittings had been destroyed or removed, was turned into a farmhouse. The gate-house, banqueting hall, and other now useless buildings provided material for barn and cowshed. The chapel was converted into a dairy, the kitchen into a stable.

It is a sad story of wreckage, yet it has its bright page. The degradation of the place from a stately home of "proud prelates" to a neglected farm prevented the classic hand of the 18th century from touching it—from

once more vigorously aiming at the roof-line—were dwindling and dying in the grip of the all-covering Ivy. There was plenty of scope for work with the encouragement of a favourable environment. Given ample and varied stretches of old grey stone in dwelling, out-building, ruin, wall and terrace; given much orcharding of gnarled and venerable Pear and Apple, sloping rapidly down to ancient Willow-fringed fish-ponds; given a pleasant position in finely-wooded surroundings; given a desirable soil of loam, rich, yet porous, formed out of a subsoil of mixed marl and gravel; given a climate which allowed young freshly-planted Myrtle, Pomegranate, Avatia, and other none too hardy shrubs to pass through February, 1895, without flinching—given these, and the



MATHERN PALACE: NORTH-EAST FRONT. FROM THE OLD KITCHEN GARDEN.

6th century, Theodoric, of Glamorgan—receiving his death-wound while defeating the yet pagan Saxon at Tintern—had died and been buried by its holy well. Here De la Zouche set his new palace, as we know from Godwin (the Elizabethan historian of the English bishops), who lived in it two centuries later, and noted the Zouche arms on the great three-storied gate-house which then dominated the entrance, and in the stained glass of the windows.

Milo de Salley, an early Tudor bishop, also proved a great builder, so that Leland could well describe the place as a "preaty pyle in Base Venteland."

But the Reformation dealt hardly with this see. Its lands and revenues were largely alienated and stolen. Its cathedral at Llandaff and its palace at Mathern gradually fell into

piercing its Gothic walls with an even row of sash-window, from hiding its old stone-tiled roof behind a stucco parapet. The north-west elevation, at least, remains to us almost as De Salley left it, and, on the other side, the ruined hall, its thick walls crowned with self-set Lilac bushes and pierced by arched window and doorway, stretches out as an old-world feature into the garden.

Whether, ere the age of poverty and decay set in, a gardening bishop arose I cannot say, though signs of a third terrace show in the field beyond the two which are gardened to-day. But six years ago horticulture was almost limited to Potato patches, in imminent danger of invasion by the surrounding hosts of Nettle, Dock, and Couch Grass. Even the Banksian and China Roses on the walls—now

garden lover has at least good material to work upon. Five years have wrought great change here, and it should need few more to make it a fair example of how some agreeable garden effects can be produced at no great outlay within an old, though sadly neglected setting.

H. AVRAY TIPPING.

[The excellent photographs accompanying this article were taken by Mr. J. E. Laurence, of The Cedars, Chepstow. Ed.]

Fruiting of *Euonymus japonicus*.

I enclose a sprig of the common evergreen *Euonymus* picked from a bush which this year has a considerable number of berries. We have many bushes of this shrub in our garden, but none have ever had berries before; now we have two well-berried specimens. —B. A. THORNYCROFT, *Benbridge, I. of Wight*.

GARDEN THOUGHTS.

COLD WEATHER NOTES.

WALKING to and fro one's garden upon a January morning, one's eyes, albeit seemingly fixed upon bare earth, are in reality aglow with all the forms and the colours revealed to the believer by faith and hope. The moral side of gardening has been on the whole less worked out than the aesthetic, yet that it exists I feel no sort of doubt. The sense of personal responsibility, for instance, that gets borne in upon one from many sides and by many channels, but neither slight nor yet transitory is the responsibility that one feels to owe to one's own defenceless garden. The moralist may frown and the mocker may laugh, but I take it that there is no genuine plant-lover but is more or less acquainted with the sensation. The truth is that we have all embarked upon a very delicate and complicated business, and a good many of us are hardly fit to have the ordering even of the least "important" of our own flower beds. To the really discerning eye the smallest scrap of plant-producing ground, the homeliest corner of earth "long Heath, brown Furze, anything" has potentialities of beauty and interest which even the best gardener rarely develops as they might and ought to be developed. It is not merely that individually our powers are weak, our taste poor, our ignorance great, our imagination defective, but over and above all this we have in most cases not the faintest idea of what we are aiming at. Having no clear vision of what we propose ultimately to produce, how in the name of reason can we hope to produce that, or anything else worth speaking of?

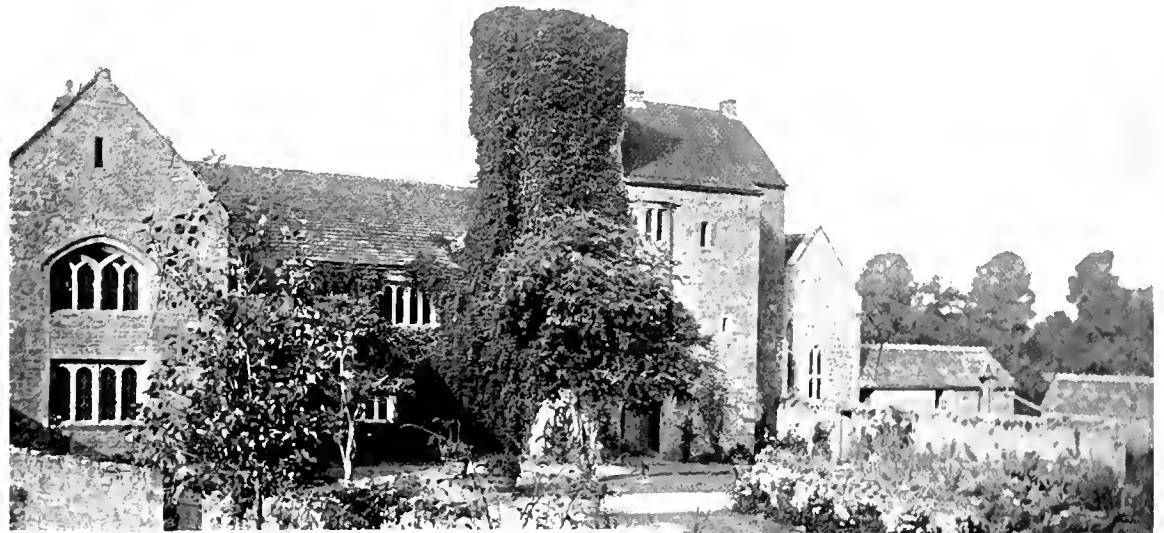
It has happened to me now and then, as to most other bunglers, to bring into existence something that might for a moment be called a plant-picture. Only for a moment, however. Within a terribly brief space of time it has either melted of its own accord off that very mutable canvas upon which we all have to work, or, what is far worse, by some incredible ineptitude of my own I have deliberately spoilt it. The delightful thing was there, and now it has gone, and I might garden throughout a considerable lifetime yet never see that particular aspect of it again.

The cause of the mischance in nine cases out of ten is that we will attempt too much. Our original combination may have been good, but we mean to make it still better. Our gold gets over-gilt: our Lilies are painted till they almost cease to be Lilies at all, and the result is failure all along the line. This sounds the reverse of encouraging, but I am not sure but what it is in some respects better that it should be so. I sometimes suspect that all gardeners—professional and amateurs, experts and gropers alike—are just now rather in a state of flux and indecision. Two chief schools seem to hold

the field, and to be in some respects mutually destructive of one another. There is the school which avows itself the faithful, not to say servile, follower and imitator of Nature, and there is the school that proposes to itself to improve upon her. The tendency of the first is to develop a good deal of picturesque disorder, a pleasant, rather easy-going sense of repose, and possibly some want of definite form and colour. The tendency of the second is to regard their garden as a battle-ground; colour, size, brilliancy, height, as so many tests of their own personal victory, and every plant, species and hybrid alike, as objects for them to shape and manipulate at their own pleasure. Whether the two schools will ultimately com-

not shine forth as they do under a radiant summer sky, nor be so distinctive with brilliant flowers around, but now they are precious because of the bright and cheerful aspect they give to wintry hours; for once the daylight has begun, their spirit form seems vanished, and they are revealed as masses of white blossom netted together and crowning the deep green glossy foliage that spreads luxuriant on every side.

No one who has only seen these Aralias as much-suffering pot-bound plants used for indoor decoration, with their erect bare stems stripped of the lower leafage, and only a bunch of foliage at the summit, can imagine their exuberant outdoor growth, where the stems are many-branched and fresh ones are being constantly thrown up from the base, till the plant assumes a bush-like form.



MATHERN PALACE. FROM THE STABLES.

bine into one harmonious whole; whether the over-strenuous science of the one will serve and strengthen and reform the careless grace and negligence of the other, are questions which must be left to be decided in the still unplumbed future. Here, meanwhile, is our modest brown garden, still sound asleep under its envelope of earth and withered leaves, and one finds oneself gazing down at it with a good deal of affectionate and rather wistful compunction, recalling one's many failings towards it in the past, and its patience under such persistent provocations. Happily, the sin, if it be one, is at least not one of those sins that are irreparable. The past is past: buried in the ground amongst the roots that are already beginning to stir and quicken with fresh life. We have a new year before us, one in which there will be plenty of time to make the fullest and the most ample amends.

EMILY LAWLESS.

Harlethatch, Gomshall, Surrey, January 12, 1900.

ARALIA SIEBOLDI OUT OF DOORS.

UNDER the sombre skies of December nothing is fairer than the blossoming of the Aralias. When I look from my window in the grey dawn, the ivory-white blossoms gleam out of the darkness in a surprising manner, as if white-robed spirits were abroad. It is no doubt the shortened daylight hours that form, as it were, a dusky setting for these blossoms which enhances their worth. They could

surrounded with crowns of blossom from the middle of November until the new year.

The flowers of these Aralias are like glorified Ivy blooms. They commence in a dense cluster, gradually lengthening and expanding until a branched stem is formed, set all the way up with heads of blossom rising one after the other in pyramid form. These flower-stems vary in length from 6 inches to 12 inches. They are thick and fleshy, and have the appearance of ivory.

Beyond an autumn top-dressing and a few good soakings of water when making new growth, they receive no special care. Under evergreens the Aralias do extremely well, enjoying the shade, but in the open they seem of a more robust habit. Even if they have no blossoms, the great, firm, glistening foliage of deepest green would make them ever of value in wintry days, and as they have withstood the frosts of many winters without protection, one may regard them as hardy in a climate not far from the sea.

A. L. L.

SAINTPAULIA IONANTHA.

WELL-GROWN plants of this charming little Gesneriad will flower for months together and at all seasons of the year. They are, however, more valuable, generally speaking, at this time of the year than in the summer, when the choice of flowering subjects is so much greater. Their neat compact growth, great profusion of blossoms, and the pleasing colour of the flowers all tend to form a plant admired by everyone. It has been in cultivation long enough for its requirements to be thoroughly understood, and it is now often met with in good condition. Besides the typical form with its rich violet-purple blossoms, against which the yellow centre stands out conspicuously, we have one known as *rubra* whose flowers are more of a reddish tint, and *alba albescens* in which they are whitish. T.

WOODLAND AND FOREST.

PLANTING FOREST TREES.

A CHANGE NEEDED.

COST OF PRESENT METHODS.

RECENTLY one of your contemporaries discussed the subject of the cost per acre of planting forest trees, one owner of woods asserting that, according to his experience, planting could not be done for less than £10 per acre. It was curious to observe how much difficulty there seemed to be in arriving at a satisfactory conclusion on the subject, and in every case it seemed to be assumed that large plants at a high price must necessarily be used. One does not wonder at landowners being in some doubt on this subject, as the cost of the trees in the first instance always comes to a good sum, and may easily—and often does—reach an extravagant figure.

The cost of planting given in some works on forestry is of little value now, as the price of labour has gone up so much, but if we take even the half of the above estimate, viz., £5 per acre, think what a figure it reaches when hundreds of acres have to be planted. But as planting is carried on on many estates at the present day, £5 would not pay for the plants alone, not to speak of planting and many other incidental expenses. I am assuming that the planting and pitting, &c., is done by contract or piece-work, but in numbers of cases that work is done by the day, and then nobody knows what the rate is, except that it is always high.

THE ONE AND TWO YEARS' SEEDLING SYSTEM.

If, however, the continental system of forestry is adopted in this country, as it soon will be, something like a revolution in raising forest trees and planting will be the result, and probably no class will welcome the change more than nurserymen. At the present time, whether the trees are raised in the home nursery or bought from the nurseryman, they are, as a rule, put out too big and too old at the final planting, and in either case they cost too much. There is no comparison between continental planting and planting in this country. The Germans and French sow their plantations wherever practicable, as their system enables them to do, or they plant out their trees when very young and small, and at a period when, in this country we would be having the plants at the planting stage they would have an established plantation. It must be remembered

that plantations from seed or from very young plants grow much faster than plantations of transplants do. Some may not believe that Firs, for example, from seed will reach a height of 10 feet or more in the period during which the transplanted tree goes through the mere preparatory stage in the nursery. All our nursery-raised forest trees are dwarfed and stunted to prepare them for planting out finally. With hard-wooded trees the case is worse, for whereas a Sycamore or Ash, for example, will

explained between big and little trees! The question is easily answered. Trees from 1 foot to 3 feet high or more and from four to six years of age cannot be planted out in woods with much chance of growing if they have not been frequently transplanted in the nursery to keep them of planting size and fit for removal, and every time a tree is handled it adds to its price, not to mention the time it occupies the ground and incidental expenses. Transplanting millions of forest trees and singling every tree



MATHERS PALACE. FROM THE BOWLING GREEN.

reach a height of 10 feet or 15 feet in a few years from seed, it must be kept at planting size by cutting either root or top in the nursery. On the Continent, we believe, forest trees are rarely or never bought from public nurseries: in fact, continental nurseries do not offer the trees which are raised by the foresters in the woods and put at a title of the cost incurred here. Wherein is the difference in the cost

out separately in the operation is no joke, and nurserymen have to do that several times before the trees go out, and no right forester would buy forest trees that had not been transplanted sufficiently often. And after all this trouble the nurseryman has often many thousands of trees left on his hands that have got beyond the planting stage, and the only thing he can do, and does do with these, is to burn them,

but the cost of rearing must be defrayed out of those trees that are sold.

Now, about the price of plants raised for planting we shall take the ordinary nursery examples. The first cost in planting, say, one acre is the price of the trees, and as not less than 5000 should be planted to the acre, the cost on that head is soon ascertained. One-year seedlings may be used for planting, and, taking the list of Firs and hardwoods ordinarily planted in quantity—less than a dozen, perhaps—these may be had at an average price of about 5s. per 1000. These seedlings have very small tops and disproportionately long roots, which are often six times longer than the top or more. They are easily planted with a dibber or trowel in any soil not covered with rough herbage, like Bracken, for example, and the total cost of planting an acre, including the price of the plants, would be about £2 10s.—that is, 25s. for the 5000 plants and the difference for planting, which would vary according to the wages in the district, but the work should be set out at so much per acre, and not by the day.

Next we take two-year-old plants, which are more certain and just as easily planted, as at that age they have developed the normal leaf and have good little tufts of heads that can be seen; hardwoods are a little larger. The price of these should not exceed 8s. per 1000, and as two-year-olds are just about as easily planted as one-year, the cost per acre should not exceed £3 10s.

Now, planting trees of these sizes and ages is, next to sowing a plantation, almost as expeditious, if anything safer in this country, and by far a surer plan than planting older trees, no matter how often they have been transplanted. The one objection urged against the use of such small trees is that they are apt to be smothered during the first two or three years by rank surface grasses and weeds. This plea has, however, no basis in ordinarily fair land where there is only grass or heather, provided the plants are put out in rows where they can be found, and that they are gone over once a year or so for the first few years, and have the grass pushed off them. I do not mean the bad plan of cutting the grass. All that is needed is a man, with a boy or two on each side of him, each taking a row and clearing each little tree with their feet, hands or a stick. The work is quickly done. Do the work in this wise and I will undertake to say that for few failures, quick and early growth of a plantation, and early over-head canopy, the plan cannot be beaten. At one of our flower shows one day I heard a nurseryman, with many big trees to sell, condemning this plan because the trees got smothered, but that is all nonsense. The smallest seedling tree can be raised in a wood or field just as easily as in a nursery provided the same attention is given to keep the heads of the plants clear to the light. This is the cheapest and every way the best plan if the above directions are attended to. Plant in rows and keep the rows clear, and compare the cost.

THE TRANSPLANTED TREE SYSTEM.

I now come to the common plan of using large transplanted trees from four to five or six years of age, and I take my figures from the present year's catalogue of a well-known firm.

First of all, a distinction must be made between trees raised in the home nursery and those got from a public nursery, because the first ought to be raised more cheaply than the latter. That, however, only happens when the work is done at home on economical lines, as when home transplanting in the nursery is done

by day work instead of by the piece, and in the dawdling way often seen on private estates, I should say that home-raised trees cost more than bought ones. They ought, however, to cost at least 30 or 40 per cent. less.

Assuming that we are dealing with trees from a public nursery, the prices per 1000 rise at once far above those given for one or two-year seedlings, reaching to from 17s. 6d. to 20s. after the first transplanting, and after twice transplanting to from 25s. to 40s. per 1000, according to the kind, such sorts as the Corsican Fir and Douglas Fir being the most expensive among their class. Hardwoods are higher priced, if anything.

These are high prices and will show planters what planting trees of considerable size means, for 5000 trees per acre would mean from £7 to £8 for trees alone. It is the price mainly that has caused planters to use about half the above number to the acre, but no greater mistake could be made, for thick planting should be the rule in all cases, and 3 feet from tree to tree should not be exceeded. It is far better to plant fewer acres than to plant too thinly, as the sooner the ground is completely covered the more progress the trees will make.

Planters will see, then, what planting big trees means—just double, or considerably more than double, the cost.

If nurserymen would only cater more for the small tree system they would undoubtedly sell more trees and lose nothing. But we have got wedded to the big tree system, and if the millions of trees sent out annually from nurseries mean anything, the cost of planting to planters of woods must be on an extravagant scale. J. SIMPSON.

BOOKS.

THE ROSARIAN'S YEAR-BOOK.

THIS year-book for the rosarian, edited by the Rev. H. Honeywood d'Ombain, hon. sec. of the National Rose Society, is always welcome, and that for 1900 contains much interesting and useful information. The portrait of Mr. H. V. Machin forms the frontispiece, with article by Mr. C. J. Graham, in which it is mentioned that "Mr. Machin first took to Rose growing in 1884, and is now by far the largest amateur, and one of the most successful Rose growers in the kingdom, his plants numbering close on to 40,000, mostly of exhibition varieties, although he also has one of the finest collections in England of garden Roses, of which class he is in the very front rank as a first-class exhibitor. . . . I hope that amongst the new subscribers who have joined the society in the last few years, and who in several cases are steadily forging ahead as exhibitors, we may find some who will be as generous supporters to the society and as good exhibitors at their shows as Henry Vessey Machin, who, I may say, without feeling the saying to be otherwise than thoroughly appropriate, is a good specimen of the English country gentleman."

The Rev. J. H. Pemberton contributes "Recollections of some New Roses of 1899," Mr. George Paul, A.M.H., "On Planting and Pruning Garden Roses," the editor "The Rose and the National Rose Society in 1899," Mr. R. E. West "Amateur Rose Culture," Mr. Cecil E. Cart "Standard Roses," and Mr. Edward Mawley, secretary Royal Meteorological Society, and hon. secretary of National Rose Society, "The Weather of the past Rose Year." The book may be obtained from the editor, Westwell Vicarage, Ashford, Kent; price 1s. 3d. post free.

GARDENING OF THE WEEK.

THE FLOWER GARDEN.

IN open weather, ground intended for Violet culture during the summer months may be prepared by trenching and manuring. This is more satisfactory if done several weeks before the rooted runners are planted, at the close of April or commencement of May, than if it is postponed until later, as the manure has then time to mellow before invaded by the rootlets of the plants. In the southern counties a slight slope to the north-west is, perhaps, the most satisfactory exposure for Violets, such a situation being still more desirable if it be partially shaded by tall deciduous trees on the south and east, though these should not stand near enough for their roots to impoverish the ground. The great enemy of the Violet is red spider, and in hot borders during dry summers it is often almost impossible to keep them free from this pest, which ruins the foliage and materially weakens the plants, in bad cases rendering them useless for winter blooming. For this reason summer quarters that are not subject to being baked by the sun from morning to night should be arranged for. On the other hand, constant shade, such as that of an over-shadowing tree, should be avoided, since without a certain amount of sun the clumps will not prove floriferous. Except in cold districts it is a mistake to make Violet beds by walls, especially south walls, as the radiation from these merely invites the ravages of red spider, and even where a copious and constant supply of water is available, the plants often become affected in exceptionally dry summers. Anyone passing by a Violet plantation, part of which is backed by a south wall, while the other part runs into the open garden, in the month of August, after a hot summer, will detect at a glance the difference between the two batches of plants, and note the healthier appearance of those not subjected to the radiation from the wall.

While the weather remains free from frost Roses may still be planted. When they are firmly set in the soil the precaution of drawing up the earth round their shoots to the height of a few inches should be taken, as where this is done the plants are rarely killed back to the roots by subsequent frosts. Briar cuttings, made and laid in during the autumn, may be planted in rows 12 inches apart, the individual cuttings being buried two-thirds of their length in the soil and distant 4 inches from one another. In planting, the soil should be made as firm as possible and mulched with a little old hotbed manure. In spare time alterations in the garden may be decided on and carried out, lawns to be sown, trenched and enriched if necessary, care being taken not to bury the top spit. Laurels and other evergreens may be pruned, not that the present time is preferable to the spring for this operation, but that at the latter period there is usually more work on hand, and therefore less time to attend to such matters. The close of January is a good time for taking cuttings of Chrysanthemums destined for brightening the open garden. Some of the older varieties are well adapted for this method of culture, such as the Christines, the deep maroon Julie Lagravère, George Glenny, Mrs. G. Ruddle, the Golden Jardin des Plantes, and some of the pompons. Sweet Peas sown now in the open will germinate slowly and not be far behind the autumn-sown seed in blooming. In sheltered gardens the Winter Aconite is showing its bright gold cups above its Elizabethan ruff of leafage. In some soils this bright flower spreads quickly, and in these its blooms wither and re-appear again with as much regularity as do the wild Lent Lilies and Bluebells, and with as little need of attention, while in other localities it refuses to establish itself. Pyrus japonica, in a warm corner of a whitewashed cottage wall, is bearing a few vivid crimson blossoms. The Laurustinus bushes are heavy with flower, and some of the shrubby Veronicas are bearing bright bloom-spikes, while the leafless branches of Dogwoods and golden and scarlet Willows give attractive colour to the grey days. S. W. FITZHERBERT.

KITCHEN GARDEN.

GROUND WORK.

ALL arrears of work, such as the alteration of quarters, additions to the soil, manuring and digging, should be pushed on in suitable weather. I have previously referred to the digging and trenching of vacant land, referring to such soils as are easily worked. With heavy clay soils trenching may be deferred till we get more drying winds, as in wet weather wheeling on such land does more harm than good. There should be no further delay in making up walks, and the most important detail is drainage, which if defective should now be overhauled.

Manures will be needed in quantities for the next two or three months, and may be got ready by turning, and to assist in making poor materials good, now is a good time to add liquid from the stables and cowsheds.

The quarters needed for crops may now be marked out, and it is well in all cases to give change of crop whenever possible. No kind of Brassica should follow another, and if unavoidable, it will be well to trench the land, especially if such vegetables as Brussels Sprouts or other strong growers are planted. Time will be saved later on if Pea and Bean stakes are prepared now. Roots should be sorted for planting and seeds purchased.

EARLY SEED-SOWING.

Though too early to sow seeds in the open, I would recommend a start being made under glass. We usually at this season prepare some leaves and warm litter, and place a movable frame on them, with about 6 inches of soil for seed-sowing, and when the soil is in good condition sow such vegetable seeds as are needed for early crops. When manure is used as the heating medium, it will be well to allow the rank steam to evaporate before sowing, and it is a safe plan to get the heating materials in bulk and turn a few times before placing in position.

Brussels Sprouts sown now are valuable for planting out in May, and so also are Cauliflowers. These sown now and, like the sprouts, pricked out in a little warmth will make good plants by the time those sown in the open are just through the soil. Celery plants also sown thus are much stronger than when sown in strong heat. A little Cabbage seed will be useful sown as a succession crop to the spring varieties. Leeks and Lettuces are of value; the latter for early supplies, such kinds as Golden Gem and Commodore Nutt being used. Those grown in a frame will be fit for use in May. Avoid thick sowing, as under glass nearly every seed germinates.

EARLY TOMATOES.

To get fruit early in the spring the cultivator must be on the alert at the beginning of the year, though I find it best to sow for first supplies in the autumn previous. Cuttings from fruiting plants struck in the autumn may now be given a shift and a little more warmth, but avoid over-potting. The same applies to autumn-sown plants. If the plants are planted out, a small quantity of soil will suffice at the start, adding more as growth increases in the shape of top-dressings. Many growers will be obliged to rely upon seed sown now for their early supplies, and to save time I place the pans or pots on a warm pipe to assist germination, but when once through the soil, place the plants as near the glass as possible. It is also a good plan when only a few plants are needed, and these early, to sow three or four seeds in small pots, and when large enough to handle to thin to the strongest, as this saves potting up. Use a light soil for seeds at the start and ample drainage, and a small quantity of wood ashes assists the roots if the soil is poor. Such kinds as Earliest of All, Conference, Eclipse, and Winter Beauty are both early and good.

Syon Gardens, Berks. G. WYTHES.

FRUIT GARDEN.

PEACH TREES.

FORGING. The nearer artificial processes approach to Nature, the greater will be the success. Out-of-doors when the blooms are open bees and spring breezes do the fertilising. I have seen bees brought

inside to do it, with success so far as fertilising the blooms went, but it entailed a great loss amongst the busy little workers. There are various methods of fertilising the blooms. Some gardeners use a camel's-hair pencil, some draw a Pampas Grass plume over the flowers, and some a rabbit's tail. I have used the latter with success for many years. From the time blooms begin to open, about noon on alternate days, go over them, giving the blooms one slight touch; at the same time give the trees a few raps with the hand to cause the pollen to distribute itself.

In the daytime keep warmth in the pipes to maintain a moyant atmosphere, with ventilation at the apex of the house, and when the weather is mild a crack may be left on during the night. While in this stage damp sparingly, and that in the afternoon, an hour or so after fertilising. Temperatures range from 50° at 6 a.m. to 60° through the day with fire-heat, with a rise of 10° with sun-heat.

Later in the season some trees will carry a superabundance of flowers, and, so as not to waste

compound. Give liberal supplies of tepid water when found to be in a state approaching dryness, and it is better to err on the side of giving plenty than to allow trees to suffer for the want of water.

Finish without delay the work of preparing trees for late fruiting and the cleaning of the houses they occupy, washing the woodwork and glass and limewashing the walls. Cut off all old ties from the trees and do what little pruning is required, of which there will not be much, which will consist in taking out old snags and shortening back unripened shoots to a wood bud. Wash the trees with soap water at the rate of 4 oz. of soap to a gallon of water, to which a half pint of Richards' XL washing compound may be added. Apply it with a paint-brush, rubbing it well into the rough bark of old wood, and drawing the brush upwards on shoots with buds on. If the trees are at all likely to be infested with mealy bug or scale, make the before-mentioned wash to the consistency of paint by adding cow manure and clay, and carefully apply it to every part of the trees. If in tying trees there is any strain on the string with thick branches,



A COLONY OF CROCUS SPECIOSUS.

the energy of the trees, these should be thinned before they open to one on each node. After the fruit is set increase the temperature a few degrees, and another means to get them along is to shut the house early in the afternoon, and at the same time syringe with water at the same temperature as the house.

Begin disbudding after the fruit begins to swell. One or two shoots must be left at the base of each piece of wood of the previous year's growth and also the end shoot on the same, or one near to it, to be grown on to the end of the current season and to bear fruit the following one. Disbudding should be done on several occasions, at no time allowing the branches to become crowded, nor to make them appear denuded of shoots. First take off the shoots from the back and front of the trees, and afterwards thin out others as required. From the beginning train young shoots to the front side of the trellis. Young Peach leaves are very subject to be infested with aphides, both black and green; therefore immediately after the flowering period fumigate on calm evenings, for which purpose nothing is so effective as Richards' XL fumigating

place a piece of shred round between the string and the branch.

G. NORMAN.

Hatfield House Gardens, Herts.

CROCUS SPECIOSUS.

This is one of the handsomest of the autumn-flowering Crocuses and one of the easiest to grow; indeed, in some gardens it spreads quickly and becomes almost a weed. Its colour is a fine blue-purple, and the flower is all the more showy because of the handsomely feathered stigmata, of a deep orange, almost scarlet, colour. The leaves develop at the time of flowering, so that it escapes the naked look of some of the species whose flowers come first and whose leaves follow.

Christmas Roses and Pernettya berries, especially the pale pink, in smalt glasses are pretty on the dinner-table, and a flower of Iris alata (we have had some beauties) with Christmas Roses round has a very good effect. GEORGE F. WILSON.

AN ARTIST'S NOTE-BOOK.

TWO DAFFODILS.

THE peculiar value of the *Narcissus*, besides its unchallenged claim to be reckoned our earliest spring flower of truly noble rank, lies in its multiplicity of clear-cut shapes. Between *Corbularia*, which is nearly all crown, and poeticus or the tiny *juncifolius*, which is nearly all perianth, there stretches a long chain of forms, which by intercrossing may be rendered practically endless. Moreover, the comparatively few tender *Narcissi* are willing to infuse their own peculiar beauty into the hardiness of the winter-proof majority. Thus I have many hybrids of *N. triandrus* and of the more tender *Tazettas*, such as *Bazelman major*, which passed unscathed through the terrible winter of 1894-5 in a cold district and without protection.

Here are two flowers from Mr. Moon's true and facile pencil which lie almost at the extreme opposite boundaries of the genus *Narcissus*. One is a hybrid, such as I have described, between poeticus and triandrus. The latter is now well known, and the beautiful photograph in *THE GARDEN* of January 20 portrays it better than words. Yet it is only some sixteen years ago it was introduced as a plant scarcely known to English gardens, though a quite common wild flower in the Spanish peninsula. Those who possess Mr. Oswald Crawford's delightful

book, "Round the Calendar in Portugal," will remember a charming drawing of triandrus blooming in a tangle of wayside herbage, and his description of it as "a little Daffodil no larger than a Snowdrop, that grows here by every wood and by the margin of every brook . . . out of the whole list of European wild flowers I know none so perfect in its grace and modest beauty." This grace it invariably imparts to its hybrids, together with an extremely refined

some of its rivals. Under glass it is very early, and perhaps finer than anything in its class. But out-of-doors, neither its white nor its yellow is so clear and pure as that of *Horsfieldii*, and it has the troublesome trick—in my own soil at least—of breaking up into a crowded mass of offsets too small to bloom, so that a large, well-flowered clump of *Victoria* is scarcely obtainable, while I have seen thirty good flowers on the ten years' undisturbed increase of a single bulb of *Horsfieldii*.

G. H. ENGLEHEART.

THE ROSE GARDEN.

AMATEUR ROSE CULTURE.

IT was in the year 1884 that I determined to try my hand with Roses, and I started with a very small border, and was sufficiently successful to enable me to take a few small prizes. From that time I have made Rose culture my study and delight; and in the work of my small garden I find my greatest recreation, and to that work I believe I owe a large measure of the exceptionally good health with which I am blessed. The more I see of Roses, the more I love them; and here, I may add, that to appreciate thoroughly what Dean Hole very rightly calls the "Queen of Flowers," you must love them. No flower, in my humble opinion, will so well repay you for the attention you give it, and if you mean to be a really successful grower you will find that attention is required practically all the year round. When the beginner starts work the different matters to be considered may be classified as under:

1. To select the position for the border.
2. To prepare the bed.
3. What to plant and how to plant it.

Before giving my ideas on the cultivation, pruning, and manuring of the Rose plantation, I will, for the benefit of beginners, say a few words on these three very important matters, for on a correct and thorough commencement so much depends. A good beginning in this case—as in most things—is half the battle. First, then, in

SELECTING THE POSITION.

choose a warm border where the rays of the morning sun may have full play on your plants. If you do not do this, failure is likely to ensue. The Rose tree glories in plenty of sun and air. I have seen Rose trees planted in situations that are only suitable for herbaceous plants, and the owners have been wondering why their Roses came so poor and made such miserable growth. By all means carefully avoid planting near or under trees, for the Rose demands sun and air, not only for the production of the blossom, but for the growth and ripening of the young wood, which in the ensuing year will form the new tree.

The bulk of my trees are twelve years old, yet, owing to cutting away all the old wood every autumn and depending entirely on the young wood, my trees are practically like maidens. Without plenty of sun and air this system would be almost impossible, as I should be unable to ripen off the young wood in the autumn properly. In small London gardens the necessity of sun and air is so often overlooked. You will generally find a small garden has a plot of grass running through the middle of the Rose trees and planted round the outsides under the shelter of the fences or walls, and they cannot obtain sufficient air to thrive. To this error I attribute most of the failures in regard to Rose growing in suburban gardens. In such gardens the Rose bed should be in the centre of the garden, where they can obtain, and take full advantage of, the largest possible supply both of sun and air. Try this plan, and I believe you will be rewarded with a large share of the success you desire. Having selected the position, we now have to consider

HOW TO PREPARE THE BED.

Many growers and exhibitors of Roses go to great expense in the preparation of the bed. No doubt this is the right thing to do, and to those to



NARCISSUS AJAX VICTORIA.
(From a drawing by H. G. Moon.)

and indescribable quality of ivory or creaminess in their white or yellow. My own seedlings in this line, including the one here figured, have been raised from the fine variety of triandrus, which, so far as is known, grows only on the tiny islet of Dréne, one of the *Iles de Gléna*, off the coast of Brittany.

Ajax Victoria is a fine example of the white and yellow Trumpet Daffodil, of which many varieties have been raised in recent years, mostly in Holland. Their parents are the older and more familiar *Horsfieldii* and *Empress*, which they have outstripped in size, but scarcely in refinement or easiness of cultivation. The parentage of *Horsfieldii* and *Empress* has never been precisely known, but whether they came from the old bicolor of gardens or from some similar wild Pyrenean form, their raisers certainly achieved more at one leap than has been done since. *Victoria* is a large and shapely Daffodil, free from the coarseness of

whose expense is no object I would say, by all means prepare the best bed you possibly can; but I want to show that where the conditions are at all favourable this expense is by no means a *sin qua non*; on the other hand, provided due care is exercised in selecting hardy types of Roses when planting, even where the soil and other conditions are not favourable, a considerable amount of success may be obtained without any expensive preparation beyond thorough trenching and manuring. In my own case my only preparation has been thorough digging and manuring; but I admit that I have a very suitable garden for Rose growing. For the information of those who think that an expensive and elaborately prepared bed is an absolute necessity, I may here state that, although I have only about 1250 trees, and being a busy man my time given to gardening is limited to a few hours before breakfast (except in the month of June, when I take my holiday), I do most of the work myself, as I only keep one man, and the remainder of my garden requires most of his time. All the work that he does to the Roses is under my own supervision. My own success, I think, conclusively proves that good Roses can be grown without going to great expense in preparing a bed. One of the most essential things is to have good drainage. Rose roots like moisture, but not cold toes; if the drainage is bad the young roots die and the plant flags. The bed should be trenched and prepared at least two months before you plant the trees, so that the soil may get thoroughly settled down. The manure, which should be mixed with the soil in the preparation of the bed, should be thoroughly rotten cow manure. Stable manure is good, but that from the cow-shed is better. Where the soil is clay do not be discouraged, for the Rose likes some clay, only be sure you have obtained proper drainage. Clay is very retentive; it retains moisture and it also retains manure; and if the clay is well broken up and mixed with our own top soil and a plentiful supply of yellow loam and cow manure, you will have an almost ideal mixture. Where there is no clay and the subsoil is gravel the soil is what we call hungry, because it has no retentive power, and both moisture and manure quickly filter away, and great difficulty is experienced in preventing plant life from being burnt up in dry, hot summers. Here let me remark that watering with hard water direct from the mains is not advisable.

We now come to

WHAT TO PLANT AND HOW TO PLANT IT.

In deciding what kinds of Roses to plant one must be guided by the locality and the general conditions under which the Roses will be grown. I do not propose to go into the merits of the many different varieties of Roses, but will be content with generalising. First, we have standards, half standards, and dwarfs; and of these three for general use I give my emphatic vote in favour of dwarf plants. For special purposes and in special positions standards and half standards have great value, but for general purposes you must adopt dwarfs. It is of these that my beds are made up, and it is on these that I grow all my exhibition blooms, and it is on the cultivation of dwarf Roses that I am writing. Then as to sorts my own beds comprise the best Hybrid Perpetuals, Hybrid Teas, Teas, and Noisettes. The Hybrid Perpetuals are the hardiest and the best for general purposes, but in all suitable spots and where a certain amount of shelter can be arranged for the winter, the Teas and Hybrid Teas should certainly be grown. In the south of London, especially where gravel prevails, the Hybrid Teas and the hardiest of the Teas are especially useful, and even do better than the Hybrid Perpetuals, and I have no doubt that where gravel is in evidence the same result will obtain.

In making the selection for your beds I would advise you to consult some good grower in the neighbourhood either professional or amateur, and get to know from him the names of the Roses which he finds thrive best in your particular locality. Having decided what to plant, we now have to be careful to plant them properly. Before

planting, each tree should be carefully examined, and if any of the roots are found to be damaged, cut the "barked root" away. Having carefully ascertained that all the roots are free from damage, carefully divide them out and use the utmost care in planting not to scratch or damage them. Having put in the tree, with crown just



NARCISSUS (HYBRID) POETICUS AND TRIANDRUS.
(From a drawing by H. G. Moon.)

under the level of the ground, carefully tread the soil firmly round it. Firm planting is absolutely necessary. Here let me say I do not hold with planting when the soil is too wet; choose rather a dry day when the soil can be trodden down tight

without kneading it. When planting, it is a good plan to drive in beside the tree an ordinary short Bamboo cane and tie the leading shoot to it; for should rough weather ensue, the tree will "wobble" about and have a hard fight to obtain a good hold of the ground. The best time to plant in my opinion is about the middle of October. To protect the trees during winter I strongly advocate earthing up Hybrid Perpetuals as well as Teas. This should be done at the first favourable opportunity in October or November, during a dry spell of weather, and it requires very great care in carrying out. Draw the earth close up to the wood, just like earthing up Potatoes. Of course to do this the Roses must have been planted in rows through your beds. I allow 18 inches between the rows and 14 inches between each plant in the row. Before earthing up it is a good plan to tie out the strongest shoots to Bamboo sticks to prevent them blowing about, and I also find the wood ripens much better when so treated; the lower leaves drop off quicker, and the lower buds seem to fatten better. It really seems to assist Nature. I may here mention that after that very, very severe winter which we experienced a few years since, I only had eight dead trees, while my neighbours lost many of theirs. This plainly shows the value of careful and thorough earthing up.

Now, having prepared and planted our Rose beds, we have to consider the year's cultivation and the battles to be fought with the various pests which we shall have to encounter. After giving you my humble opinion on these matters, I shall conclude with a few remarks on exhibiting.

When spring arrives, it brings to the Rose grower most important work. The first is

PRUNING.

On this point opinions are most conflicting. Personally, I hold that early pruning is best for the plant, and I am so strongly of this opinion, that I invariably prune considerably earlier than is considered wise by the majority of the best growers. Last year I pruned very early, and to early pruning I attribute a great deal of my success in the 1898 season. This year I also pruned all my trees in February, and my experience of Rose growing in Reigate is that early pruning is decidedly right, and that in a favourable position, south of London, at any rate after a mild winter, the last week in February is the best time for pruning. The pruning should be done with proper pruning scissors. Generally speaking, only a few buds should be left. The stronger trees do not need cutting quite so close as the weaker ones. The weaker the tree the closer it should be pruned, as the more buds you leave the more shoots there will be making their calls on the strength and vitality of the parent stem. When I prune I always carry a small bottle of carpenter's knotting and brush a little on the cut surface after pruning a few rows. This prevents bleeding, which weakens the plant.

As soon as pruning is finished many growers level down the earth; but I prefer to leave the trees earthed up till March is well advanced. The earth protects the wood, and the sap being unable to find an outlet, no doubt assists root growth, and then young shoots start up, which form the wood for another year. I also notice that although these young shoots make rapid growth, frost does not damage them, whereas if the old wood buds make a rampant start, the frost damages them so much that it is best really to remove them. Having got this far, I always give the ground a good dressing of soot, gypsum, and lime. I believe if insects attempt to come out it settles them; at any rate since I adopted this plan green fly is scarcely ever troublesome in my garden.

As soon as growth is fairly started I give the plants a thorough syringing with cold water every other day early in the morning when we do not get natural rain. I believe it helps the buds to grow, and when once started I never like the shoots to stop growing. Another thing; when a dry time sets in and many people water the ground heavily, I am content to syringe my foliage very early in the morning, and let the plants absorb the moisture through their leaves.

(To be continued.)

TREES AND SHRUBS.

THE BEECH AND ITS VARIETIES.

FAGUS SYLVATICA.

BEING a true native of Britain, the common Beech is one of the most typical and well-known trees of our woods and forests. As a timber-producing tree it is not so valuable as the Oak or Ash, but as regards its beauty and picturesqueness it is not inferior to them or any other of our larger native trees.

the common Ivy perishes. I find, however, that our native Bluebell (*Scilla nutans*) will grow and increase beneath the Beech, and where bulbs can be obtained in sufficient quantity I would recommend their being extensively planted there. A carpet of Bluebells in flower is never more beautiful than when it is associated with the exquisitely tender hues of the young foliage of the Beech.

Like most long-cultivated trees, the Beech has sported into numerous forms. About a score of these have been named and are now grown in botanical collections. Several of them are merely monstrosities, and have no value as ornamental trees for the garden. On the other hand, there are some that ought to be in every garden of sufficient size to accommodate them. These varieties may be distinguished by their differences

out its great arms in a horizontal or slightly drooping direction; from them the smaller branches fall almost vertically, the whole in summer making a tent-like mass of verdure. In

THE VARIETY MILTONENSIS (so-called because it originated at Milton Park, Northamptonshire) the small branches are not so absolutely pendulous as in the previous variety, being more arching in their mode of growth. Several weeping Beeches have been discovered in the forests of Alsace and Lorraine, and have been put into commerce by Messrs. Simon Louis, of Metz. The three following varieties are named after the localities in which they originally occurred: *hornyensis*, *remillyensis*, and *paguyensis*—all of pendulous growth. There is also a handsome weeping variety of the purple Beech.



VIEW IN BURNHAM BEECHES.

Typically a wide-spreading, somewhat round-headed tree, it is specially well suited for growing as an isolated specimen or in isolated groups. In such positions, and when not molested by animals, its lower branches frequently reach down to the soil, and give some of the most charming examples of restless tree beauty. An enormous specimen in the arboretum at Kew is now surrounded by a colony of young vigorous trees, which have originated as layers from the lower branches of the parent tree resting on the ground.

The shade beneath a healthy Beech is so dense that no woody vegetation will thrive there. Even

in habit, in colour of leaf, and in the shape and cutting of the leaf.

Of those whose habit gives them their distinctive characters the most important are the pendulous varieties. There are perhaps half-a-dozen of these, but the two best are *pendula* and *miltonensis*.

THE VARIETY PENDULA

is represented by numerous fine specimens scattered over the British Isles. The best known to me are those in Mr. Anthony Waterer's nursery at Knapp Hill and one in the Lough Nurseries at Cork. This variety does not grow very high, and sends

Of the forms with variously shaped leaves, the handsomest is

HETEROPHYLLA.

It is grown under various names, such as *asplenifolia*, *lacinata*, and *incisa*. The leaves are very variable in outline, sometimes long and narrow (as much as 5 inches long and only $\frac{1}{2}$ inch to $\frac{3}{4}$ inch wide); others are of the same diameter as those of the common Beech, but are divided back to the midrib into narrow, strap-shaped lobes. Very different from this, but almost equally striking, is the variety

MACROPHYLLA.

I have not seen fully-grown specimens of this Beech. It may possibly lose some of its distinctive character then, but young trees are remarkable for the size of the leaves. Last summer I measured some over 5 inches in length and 4 inches in width. They are, perhaps, of a deeper green, but otherwise are similar to the leaves of ordinary Beech. Other varieties in this section that need only be barely mentioned are *quercifolia* (Oak-leaved), *cristata* (crested), *cochleata* (shell-shaped), and *grandidentata* (large-toothed). They are all more or less curiosities and their names sufficiently indicate their peculiarities.

Among the varieties distinguished by coloured or variegated leaves the

PURPLE BEECH (PURPUREA)

is the best known and most popular. Of all our big trees with coloured foliage it is, probably, the finest. Nearly all the purple Beeches in cultivation are the progeny of a tree growing in a forest near Sonderhausen, in Germany, which was discovered in the 18th century. But records exist of other wild specimens of the purple Beech in Switzerland and in the Tyrol. This variety is in its greatest beauty when the leaves are young and of a soft, rosy hue. Trees with variegated and coloured foliage, whilst they have their distinct uses in the garden, are apt in these days to be overplanted. One begins to tire of the variegated *Negundo*, *Prunus Pissardi*, and the like, and it would be a misfortune if the purple Beech fell into the same category. It is a tree more for the garden and park than the wood. Several forms of the purple Beech have been raised from seed in nurseries which vary in the intensity of the purple shade. Of these, the copper Beech (*cuprea*), *atropurpurea*, *major*, and *nigra* are considered the best. A new variety "Swat Magret" (Black Margaret), recently introduced from the Continent, is also highly spoken of.

Messrs. Spath, of Berlin, have during the last few years sent out a new golden-leaved variety of the Beech called

ZLATIA.

It is described as having been found in the mountain forests of Servia and as worthy of comparison with the golden Oak (*Concordia*). From what I have seen of it, it scarcely bears out that description, but is nevertheless, of a pleasing yellow shade, and it appears to thrive well, which is more than can generally be said of the golden Oak.

Of Beeches with parti-coloured foliage, the showiest is *purpurea tricolor*, the purple ground of whose leaves is streaked and edged with pale rose. There are also variegated forms whose leaves are margined and blotched with creamy white and yellow.

W. J. BEAN.

Alphacatum, Ker.

CHRYSANTHEMUMS.

USEFULNESS OF POMPON VARIETIES FOR DECORATION.

PROBABLY owing to the infinite variety of form and colour in the Japanese Chrysanthemums, the charming miniature blossoms of the pompon sorts are rarely met with in private collections. The pompon Chrysanthemums, although somewhat formal in shape, are represented by some exceedingly pretty flowers, and as most of the varieties now catalogued are of easy culture and also embrace a wide range of colouring, their culture may be taken in hand with every prospect of success. Taken as a whole, the plants are distinctly dwarf, comparatively few sorts exceeding a height of 4 feet. The average height of the pompon plants would be somewhere between 3 feet and 3½ feet. Many of the best and most reliable kinds are also bushy in habit, possessing that welcome branching style of growth so well adapted for the adornment of the conservatory. Their period of flowering is a matter of importance, this commencing as early as September and concluding in December with just a few sorts of exceptional decorative merit. A

November display is what is generally aimed at, the bulk of the best sorts being in perfection throughout the month.

What is particularly charming in the midseason pompons is the addition of another type of the same flower. These are known as pompon Anemones, the flowers of which are small and have a centre or disc of quilled florets and a fringe of ray florets. This type of the pompon Chrysanthemum is not grown nearly so largely as it deserves, the grace, beauty, and quaint character of the blossoms adding very materially to their decorative value either as a pot plant or for the purpose of providing cut flowers. White, pink, and other soft tones of colour predominate in the pompon Anemones.

January is the best month for commencing propagating operations, stock at this time as a rule being plentiful and in a healthy condition, so that there will be few failures.

Eight-inch pots for the final potting are ample for most purposes, although growers for exhibition often use them a size larger. The flowers lose their charm to a large extent when the plants are too severely disbudded, as is the practice when large exhibition blooms are grown. A partial disbudding is far more likely to produce a pleasing display, as by these means useful sprays, each carrying several medium-sized blossoms, are obtained. A small selection of the more reliable kinds may well include a proportion of each type, and is as follows:—

Pompons.—William Westlake, golden-yellow; William Kennedy, crimson-amaranth; Mlle. Elise Jordan, soft lilac-pink; Osiris, rosy pink, tipped gold; Vésuve, crimson-red; Dolly, canary-yellow; Perle des Beautés, deep crimson; Mlle. Marthe, white; Prince of Orange, orange-amber; President, rosy crimson; Rosinante, blush-rose; and Harry Hicks, soft pink.

Pompon Anemones.—Emily Rowbottom, creamy white; Marie Stuart, lilac, with sulphur disc; Firefly, scarlet; Antonius, rich yellow; Mme. Montels, white, with yellow disc; Mr. Astie, golden-yellow; Mrs. Wyness, rosy lilac, with yellow disc; and Marguerite de Coi, blush, with yellow disc.

Miniature pompons.—Snowdrop, white; Primrose League, yellow; Miss Gertie Waterer, white, tipped with rosy purple; Victorine, chestnut-brown; and Yellow Gem, yellow.

D. B. CRANE.

FRUIT GARDEN.

CORDON PEARS.

THERE is no other kind of Pear tree that gives such a quick return as the cordon, and by no other description of tree can a wall or trellis be so quickly covered. These are characteristics of some value, more especially to planters placed under certain circumstances. Other advantages that might be claimed for this form of tree are, that a greater variety of fruit can be produced from a given space than by any other, and that it can be grown upon some surfaces unsuitable for other trees.

An opinion prevails that, owing to the restricted character of its growth, the cordon is comparatively short-lived, but whether correct or not I am not qualified to say. The noted trees at Hohne Lacy are the oldest I have seen, but I do not know their age. The oldest under my charge were planted in 1888, and are growing under varied conditions, more particularly with regard to aspect and the height of the walls. The walls face south, east, and west, and their heights are respectively 15 feet, 12 feet, and 4 feet. The trees upon the highest walls are in a vertical position, while those upon the low one are obliquely trained. Our experience causes me to prefer high trees to low ones, for although the conditions of those upon a 15-foot wall are the same as those upon a 4-foot one in every respect (including varieties in many cases) except in the angle at which they are trained, the former are by far the most prolific. I do not think, however, that the angle at which cordons

are trained in any way influences their bearing power. The only advantage derived from training obliquely, which some cultivators consider essential to complete success, appears to consist in the greater run of wall or trellis space to be thus obtained, and for this reason it is advisable to train in this manner upon low walls.

Cordons may be trained upon archways over kitchen garden or other walks, and although, perhaps owing to draught thus created, it is not the most happy mode of cultivation, at the same time covered ways of this kind have a very pleasing effect, make a pleasant promenade in hot weather, and utilise space that might be otherwise wasted. Trees planted by the sides of walks in upright positions, either trained to trellises or stakes 6 feet or 8 feet in height, also afford a pretty effect, and their wants when thus grown can be conveniently attended to. Horizontally-trained trees may also be planted in this position and secured to strong wires placed 15 inches or 18 inches above the soil, and are also suitable for covering borders by the sides of walls occupied by fruit trees, and when grown under these conditions they should be planted near the walks and trained at right angles to them, as by so doing their roots will be placed at the farthest possible distance from those of the wall trees.

The general management of the cordon differs but little from that of other trained trees, yet there are a few points in it that may be noted. Firstly, the distance of the trees apart should be considered. There are here single upright trees placed 1 foot and 1½ feet asunder, and double ones at corresponding distances, and all do well; but were I again planting I should not place single upright trees closer than 1½ feet, and with plenty of room at command should prefer 2 feet. The extra space thus afforded is beneficial both to stem and root development, especially in the case of strong-growing varieties such as *Triomphe de Vieme*, *Pitmaston Duchess*, and *Beurré d'Amanlis*, while it also permits the fruit to be better exposed to the sun, which is a matter of great importance where trees are not in a very sunny position. Trees grown as cordons are usually worked upon surface-rooting stocks and soon suffer in dry weather, so that they need timely attention in the way of being mulched and assisted with liquid or artificial manures after they have reached a full bearing state. We have a tank supplied from the stables, and its contents are freely used, even through the winter and spring months, with manifest benefit.

In the case of cordons, if root-pruning is found necessary, it can be easily accomplished, as can also the replacement of exhausted soil by that which is good. The latter treatment has an invigorating effect upon them, and can be carried into effect at the end of October without endangering the crop.

This brings to mind the evils of overcropping, than which few greater errors in fruit culture can be committed. This applies with extra stress to cordon Pears, especially if planted upon light soils. Walls with an eastern aspect are not the most favourable places for cordon Pears, but varieties that succeed upon them will also do well in most other positions.

A short list of good sorts that are found satisfactory under these conditions may be interesting to intending planters: *Beurré d'Amanlis*, *Beurré d'Anjou*, *Beurré Hardy*, *Beurre Bosc*, *Conférence*, *Doyenné du Comice*, *Durondeau*, *Louise Bonne de Jersey*, and *Marie Louise*. A variety that we find unsatisfactory in this position is *Olivier de Serres*. Upon south and west walls the following late varieties give satisfaction: *Bergamotte d'Espéren*, *Beurré Baltet Père*, *Easter Beurré*, *Gloa Moreeau*, *Marie Benoist*, *Triomphe de Jodoigne*, and *Winter Nelis*.

THOS. COOMER.

The Hendri Gardens, Monmouth.

Lilac Marie Legray. This is one of the best of all Lilacs for forcing, particularly where neat little bushes are required, as it will flower freely in a small state, and both the individual blooms and the clusters thereof are larger than in many other kinds. It is much grown for forcing both here and on the Continent.—F.

CORRESPONDENCE.

NATIONAL ROSE SOCIETY.
COMPETITION IN CHAMPIONSHIP
CLASSES.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Your correspondent, Mr. C. J. Grahame, opens out an important question, *viz.*, how to encourage exhibiting at National Rose Society's exhibitions, though I fear his suggested system would have the contrary effect to that desired.

It is scarcely likely that an exhibitor debarred from exhibiting for the most important prize at any show would care to compete in any of the less important classes. Naturally he would prefer to keep his flowers in reserve for an exhibition where he was under no restriction. The exhibition, therefore, in which he was debarred from the leading class would lose his support, and though this would enable a smaller or less fortunate exhibitor to obtain a first, it would lessen the sum total of the exhibits and probably keep away the best Roses.

I can also see the possibility of a successful exhibitor like Mr. Lindsell being compelled to retire from exhibiting at nearly all the National Rose Society's exhibitions, at least so far as the leading classes are concerned which would in my opinion be a greater loss to the exhibitions than the lack of mere numbers of exhibitors is at the present time.

I do not suppose that there are a dozen exhibitors, or probable exhibitors, who would subscribe to such a system as Mr. Grahame proposes. Surely the average exhibitor has more grit than to cherish the idea of winning a championship (however much he might value such a distinction) on lines that remove the only difficulty from his path. Debar Mr. Lindsell, Mr. B. R. Cant and Messrs. Harkness and Sons from the championships, and the class loses its value and significance: in fact ceases to be a championship.

A question even if the suggestion be acted upon that it would greatly increase the number of exhibitors, or, what is more important, materially improve the quality of the exhibits. I can cite a case where one of our most noteworthy exhibitors, acting on a peevish complaint "that he monopolised certain classes and that he should give smaller exhibitors a chance," generously retired, but not one of those he thus made room for have yet risen above respectable mediocrity.

To my mind the most likely way to increase the number of exhibitors is to apportion the total prize money of each class to each stand according to merit, giving every stand

A PRIZE ACCORDING TO ITS POINTS.

Often enough a few points only divide first and fifth, and the fifth, though helping to the general effect of the show, receives no prize or recognition of any kind.

If an exhibitor had reasonable hopes of making his expenses, he would often put in an appearance when his flowers are not quite to his mind. He would have his "day off" just to see the show and meet his brother rosarians.

I know some people argue that the question of money never comes into the exhibitor's calculations, though strangely enough they must acknowledge that the big prizes always have the largest entries and most exhibits.

With regard to the championships, they do not to my mind always indicate the best growers of a season. Weather has often determined the championship. The champion cup ought to be given to the exhibitor who wins the most of the leading prizes at the whole of the National Rose Society's exhibitions, or during a given time, say from July 1 to 14.

There are many other matters the committee of the National Rose Society might take up besides the above: amongst others, the advisability of holding the Crystal Palace show in a tent, making new rules regarding duplicates, the disfigurement of an exhibition by advertising show cards, the objectionable system of selling flowers during an

exhibition, the clashing of dates of exhibitions and the employment of incompetent judges in important classes, and the desirability of a northern section of the National Rose Society, with control of the Jubilee trophies, &c. E. R. STAVKS.
Rosleigh, Bedale.

CALLISTEPHUS SINENSIS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, It may interest Mr. Kingsmill (p. 27) to know that when flowers of the *Callistephus* (*Sinensis*, the re-introduced plant) were brought to the floral committee table of the Royal Horticultural Society for certificate they were considered so nearly alike to the other flowers in the Drill Hall flowers, by the way, that have been somewhat contemptuously referred to as "degenerate forms of the double China Aster" that it was deemed desirable to consider the flower-heads side by side. This was done, but so closely did these resemble each other, that some members became puzzled, and had to inquire which was which. There is, however, nothing disparaging in all this; it simply proves that a certain percentage of the original blood still remains, and still asserts itself, though ignored as often as it is seen. Too frequently what is spoken of as reversion is perhaps but a bold, vigorous refusal at any cost to become double; a strong, natural clinging to the wild conditions of these things that surpass all the skill and long years of labour on man's part to eliminate or even expel.

The present race of Asters started obviously from the single kind, the one aim being more petals, greater fulness, and so on. But with all this craze for doubling there have ever been single kinds; that percentage that refused to be doubled; that, though weeded out as persistently as they came, still asserted themselves through all the years that are past. It may be that the percentage was being gradually lowered, but it is still seen in the finest types of to-day. My only objection from the first has been directed to these references that made the *Callistephus* a very superior plant to the single Asters, when this single and simple fact is the one in which we rejoice.

As to the latter part of Mr. Kingsmill's note, the past volumes of *THE GARDEN* should be the best guide. Apart from this, however, I will mention that on the re-introduction of *Chimodoxa Lucilia* I was so enamoured of it, that I was glad to secure a single bulb at a cost of 7s. 6d. When I think of this my enthusiasm for the re-introduced species must have been warm indeed. Prior to that, *viz.*, in May, 1875, I was most anxious to get *Tiarella cordifolia* grown by all, and when I exhibited a plant at Kensington, bedecked with its four flowers to show its beauty, I was surprised to find it was quite unknown. The exhibit was not lost, however, as many inquiries reached me respecting it. E. H. JENKINS.
Hampton Hill.

[In reference to a passage in the above note which speaks of the Royal Horticultural Society's floral committee finding a difficulty in deciding on the merits of the single Aster blooms from different sources, it should be borne in mind that it is one of the difficulties that often presents itself when flowers are detached from the plants and taken to a distance for comparison. A good single bloom from a plant of poor habit may easily be found to match a moderate bloom of the handsome bush-like single Aster. If on an occasion like this, where the merits of a good garden plant are being discussed, the committee could have seen the two plants growing, the doubt would not have arisen. Eds.]

DISEASED POTATOES.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I should be very glad if you could tell me what is the disease with which the enclosed Potatoes are affected. We had an apparently fine crop, but they are nearly all diseased. Our soil is a hot, dry sand (greensand). The ground where the Potatoes were grown is in a recently planted orchard, and it had only had one crop (Potatoes)

grown on it the year before. Before that it was fallow except for the fruit trees. It was well cultivated, ploughed, hoed, &c. We grew Pink Beauty of Hebron and White Elephant. The former are the most diseased. Some Myatt's Ashleaf which we grew for early Potatoes in the kitchen garden immediately adjoining the orchard were quite sound. Such manure as we used for the orchard crop was well rotted. The fruit trees are quite small and over 20 feet apart. I should be glad if you can advise me what to do this year.

J. C. CHANCE.

[We think your culture excellent, and do not attribute the disease to any failing in that respect, as upon close examination the skins of the tubers sent are clear where the disease has not affected them, and the disease is mostly at that part of the tuber which is furthest from the surface. Had it been caused by manures, the skin would have been rougher. We wish you had given us the date at which you lifted the crops, as we attribute the failure to the variety, and to the fact that possibly you left your crop too long in the soil after it was matured. As you well know, in the southern parts of the country the drought and heat in July and August were bad for all root crops, and your soil being sandy, you would feel their effects worse than on heavy land. You would, therefore, have done well to have lifted your Beauty of Hebron early in August, and probably you would then have found very little disease; such, at any rate, is our experience. In your case we would advise growing kinds not so easily affected, as there is no lack of good kinds. Probably you lifted your Ashleaf's earlier, but these are not so subject to disease as the early American kinds. We prefer Early Puritan of the American kinds, as it is less subject to disease. If you planted late, that would affect the crop, as the tubers would be matured earlier. We would advise you to change the variety this year and to use a good fertiliser instead of animal manure. Eds.]

CLERODENDRON TRICHOTOMUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR, One is glad to observe that "T." is able, on p. 506, to write a favourable account of *Clerodendron trichotomum* in the south of England. It is one of the plants one would like to be able to induce to flower. It was rather disappointing to have unfavourable accounts of it when I visited Ireland in 1898. One garden in which I saw it was in the neighbourhood of Dublin, and I was informed that it came into bud too late to open before the cold weather arrived. This was a sheltered garden in which many things which are not very successful with us did well. From what one has seen of Irish gardens, one is not very hopeful of succeeding with plants our friends across the Channel cannot persuade to flower. Some parts of Ireland seem ideal places for flower-gardening. I daresay some of the correspondents of *THE GARDEN* in the sister isle will be able to give a more favourable account of the flowering of *Clerodendron trichotomum* in their own or other gardens. One can, however, only speak of what one knows. In this case the knowledge is not favourable to the *Clerodendron*, so that it is a pleasure to have more encouraging information. S. ARNOTT.
Cassloren, by Dumfries, N.B.

SIR, My experience on a dry hill in West Surrey agrees with Mr. Arnott's in Dumfriesshire, that *Clerodendron trichotomum* is not to be trusted as a flowering plant. In the warmest places in the extreme south and west of England it would be likely to do well, but here, though it grows only too rampantly, it does not, within the duration of our summer months, ripen up to flowering maturity. But its near relative, *Clerodendron fetidum*, I find to be an excellent plant for late autumn flowering. During the last five or six years that I have had it growing at the foot of a south wall it has always flowered well; during the last two autumns especially well. Whether this is to be attributed to the heat and dryness of those two summers, I

cannot say, though it seems probable. Each year the established clumps throw the year's growths higher, for, beginning with a height of about 4 feet after first planting, they now attain to 9 feet, with a corresponding size and vigour of foliage.

The flowers are large terminal corymbs of a good full pink colour; in bud they are of a grand crimson. The leaves are large and handsome, and give a tropical look to the whole plant. Their surface, instead of being downy and dull and soft-looking, as in *C. trichotomum*, is bright and polished. They are shaped something like very large Mulberry leaves, the likeness being increased by a bold toothing of the edge, but they have a full, deep colouring that reminds one of the foliage of *Hibiscus Rosa-sinensis*. The only defect of this fine plant is the strong, unpleasant odour given off by the leaves when touched. No blight or insect seems to attack it. During the time of its rapid growth it presents an unfailling picture of prosperous vitality. It spreads quickly at the root, in one season often running 3 feet underground, and coming up in some neighbouring border. G. J.

CYMBIDIUM LOWIANUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR, A *Cymbidium Lowianum*, after making a larger bulb than usual this year, has pushed up two growths instead of flower-spikes. Why should this be? It has been in my possession only one year. The seller told me it had been the same each year and never flowered. It grows in an intermediate house and was kept drier after completing its growth. J. C. WRIGHT.

[It is by no means unusual for *Cymbidium Lowianum* to produce growths when flower-spikes are expected. One may have plants growing side by side all of which have been subjected to the same treatment, yet while some flower satisfactorily others make growths instead. This is more particularly the case when plants of this species are cultivated in the warm intermediate houses or with the *Cattleyas*. When grown under cooler conditions more satisfactory flowering results are obtained, and they rarely fail to produce flower-scapes. The flowers also expand under the cooler conditions and are finer in every way. The warm end of the *Odontoglossum* house is more desirable than the hotter divisions for the culture of *Cymbidium Lowianum*. Under cooler conditions, careful attention will have to be devoted to the watering during the hot summer months. While the plants are in vigorous growth an abundant supply of root-moisture will be required, but towards the autumn and during the dull winter months only give sufficient moisture to maintain the pseudo-bulbs in plump condition. The flower-spikes make their appearance later under cooler conditions. As soon as these are well away from the base, more liberal treatment should be afforded. If the plants are grown in the warmer division, they may be removed in the same manner as *Dendrobiums*, and placed in a vinery or some other cool, light, and airy position for the season of rest. Care must be taken to exclude frost in sharp weather. Eds.]

DOUBLE ROCKETS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, After the appearance of Mr. Arnott's article on the double Rockets I had intended writing about them, but since another Irish correspondent has so fully written, I feel diffident as to giving my small experience. However, I feel I may supple-

ment his instructions as to their propagation by saying that nothing is more simple than treating them in the following way: When the blooms are no longer fresh, cut down all the stems to within 1 inch or 2 inches of the ground; then slightly cover the remainder with a small quantity of bench rubbish, through which the young growths will soon appear. When these growths are from 1 inch to 2 inches long take up the entire plant and pull it into as many pieces as you can. These will all be found rooted, and will make good plants to bloom the following year. This saves all the trouble of spring cutting, which cannot be expected to give the same results, for the drying winds of spring will tell on them more than on those established in the warm autumn soil. No other care do they get here all the year round, and they well repay the small trouble this entails. Here I find



DOUBLE ROCKETS.

they must be dug up and treated as I describe every second year. My garden is on limestone and is of medium soil, which has been well worked and treated for the last century. It would be well if writers in *THE GARDEN*, in describing their successes and their treatment, would give their locality, climate, and soil, so as to guide others, for what suits one garden may not at all give the same results elsewhere. J. HILL POE, Capt.

Riccarton, Ireland.

THE WISDOM OF ROOT-PRUNING.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—In the article in *THE GARDEN* for December 30, Mr. G. Wythes, in speaking of lifting the roots of Apples, remarks, "It is an easy matter to check gross growth at this season, and by so doing ensure

a full crop next year." This is slightly misleading, for, beneficial as root-manipulation undoubtedly is in necessary cases, it will not achieve this. What root-lifting and root-pruning will do—and the best time to carry out the operation is at the end of October or beginning of November—is to check the next year's growth, and cause fruit buds to develop in readiness to produce a crop the following year. To ensure a full crop next year, one of the chief necessities is for the trees to be furnished at the present time with the requisite fruit buds, and if these are present, root-pruning is unnecessary, that is if a full crop of fruit is secured, as this in itself would check strong growth. Young pyramid trees of Apples and Pears, more especially when worked upon the Crab and Pear stocks and planted upon rich land, are prone to furnish gross wood, and usually need to be root-pruned occasionally to bring them into a free-bearing state; but once this desired state is attained, as a rule further root-manipulation is unnecessary, as the exhaustive nature of the crop generally prevents exuberant growth.

OLD PRACTITIONER.

DOUBLE WHITE ROCKET.

(*HESPERIS MATRONALIS*.)

LIKE many another good garden plant, these fine perennial Rockets can only be grown to perfection in rich loamy soils; even in these they are better for careful division every year, taking off nice side pieces and discarding the woolly centre. They are nearly related to Stocks, and have the same quality of delightful fragrance, at its best and most powerful in the evening. The pure white is the handsomest, but is by no means common. Many people think they have a pure white double Rocket, but it is nearly always tinged with purple; still, this is also a precious plant, and is rather more vigorous and easy to grow than the quite pure white. There is a caterpillar that nearly always infests the flower-bud; it is well to give the bud a careful pinch, such as will crush the maggot, but not the bud.

Coleus thyrsoides.

We have been so long accustomed to regard the *Coleus* simply as a foliage plant, that a species remarkable for its beautiful blossoms is a decided novelty. Such, however, is that under notice, *thyrsoides*, a native of an elevated region in British Central Africa, and which first flowered at Kew in 1898. The blossoms, which are borne in thyrsoid racemes, are of a charming gentian-blue, a tint but little represented among flowering plants at this season. Like the rest of its class, this *Coleus* is of easy propagation and culture, and it is destined undoubtedly to become a popular subject in the near future. The fact of its flowering in January and February enhances its value, supplying as it does quite a distinct feature. H. P.

Pasque Flower (ANEMONE PULSATILLA).

Some people seem to have great difficulty in transplanting this species. There is no real difficulty if the plant is inserted carefully with as much of the slender roots as possible in a deep porous soil, made damp and kept so, a glass being placed over the plant until it forms new leaves. It does better in a calcareous soil than in a sandy one, but I have grown it in both. To make it flower well I supply it freely with water as soon as it begins to start in the spring if the weather is at all dry. —E. M. H.

KITCHEN GARDEN.

CARDOONS.

THIS vegetable is not much grown in this country, and there appears to be less difficulty in growing the plant than in getting it cooked properly, though this should not be difficult with so many good cooks in the country. On the Continent it is valued and made the most of. I am aware the Cardoon is an ungainly vegetable, but the same may be said of many others, and it is an easy matter to cut up one plant into sections, and, treated thus, it would suffice for several meals, as unless Cardoons are large and well grown they are wanting in flavour. As a winter vegetable I would advise more attention to their culture, as at this season there is no great variety in vegetables, and Cardoons, once fully grown, may be kept weeks in a cool, frost-proof place. In the southern parts of the country there is no need to give glass culture at any period, as is generally advised. If the seed is sown early in April in rich land, the plants will make good progress by the end of the summer, provided sufficient moisture is given during the growing season. I prefer to grow the plants in trenches in the same way as Celery, as grown thus moisture is more readily applied and does not drain away so soon. Trenches should be prepared 5 feet apart, and a liberal dressing of decayed manure placed in the bottom and covered over with soil. Seeds may then be sown in clumps of three to five seeds 2 feet apart, and when the seedlings are large enough they should be thinned to the strongest. The culture for the next four or five months consists in giving ample supplies of water, or, what is better, liquid manure in dry seasons. Many sow in pots in April and plant out at the end of May in trenches, and in heavy, wet land this is advantageous, as the plants start away freely. Another mode of culture is to draw drills in richly-manured land and sow in May on an open border.

On the Continent there are many acres of land devoted to Cardoon culture for the large towns, and the plants are grown on the level, but the surface soil between the plants is heavily mulched in dry soils to retain moisture and to feed the plants. When grown on the level there is less trouble in getting at the growths and in keeping the land clean, but in this case it is essential to give ample room to get sufficient soil for blanching, as unless the growths are well blanched the flavour is not so good, and when served the leaf-stalk is less inviting.

The blanching takes place when the plants are full grown, that is either in September or October, the latter being best for the latest plants or those needed for winter use. It is necessary to bind the large leaf-stalk with some protecting material before the soil is placed round the plants. Many use straw or hay bands, and others stout paper and canvas, but whatever material is employed it is well to have it strong enough to bind without cutting the leaf-stalk. After binding, the soil is heaped up to within a few inches of the top of the plants and made firm with the back of a spade. The blanching takes from six weeks to two months, and the plants, being as it were protected with soil, will not suffer from frost if not so severe as to reach the blanched portion. When lifting to shelter we leave the covering on the stalks, and place soil or damp ashes over the roots to prevent shrivelling. There are not many varieties, and the largest are not the best. One called the Pearl is a better type than the large Spanish, the latter, though large, being less white and coarser. Some kinds such as the one named are less prickly than the Spanish, thus enabling the cultivator to work more freely between the plants. The medium growers also need less space.

GARDEN WANTS.

With the advent of the new year the cultivator will need to prepare the seed and root order for the ensuing season. In kitchen gardening, as in every other department, there are new additions yearly, and those who wish to make the most of

the soil will be wise to select stocks that are well known. On the other hand, I make it a rule always to give new things a fair test, as in a year or two some of these will become standard varieties, and without trial their value in diverse soils would not be known. By ordering at an early date one secures better materials, as should some stock be at all short, which is often the case, they are difficult to supply. It is also necessary in some gardens to sow various kinds of seeds in heat for early supplies, and these are needed at this date. Many growers now sow their Onion and Leek seed under glass to get large bulbs, and for frame purposes such seeds as Carrots, Turnips, and Radishes are needed at once. I would point out the importance of occasionally getting fresh seed of Potatoes, as it becomes much weaker if grown year after year in the same soil from one and the same stock.

EARLY BROAD BEANS.

In many gardens this vegetable is more appreciated in June than August, and it is an easy matter to push forward the crop. I prefer pots, although shallow boxes may be used, but with these there is a slight check at planting out. An early variety should be selected, such as the Early Long-pod or Beck's Gem. The latter is small, but very early and prolific, and I have grown it in frames and boxes from beginning to end. Three to five seeds in a 6-inch pot will make good plants for planting out in March on a warm border in light or rich soil, and to promote growth I start the seed in a warm house, and when a couple of inches above the soil remove to a cold frame.

EARLY CAULIFLOWERS.

My earliest Cauliflowers are obtained from autumn sowings, but should there be a scarcity of plants, the deficiency may soon be made good by sowing in heat. There is no lack of varieties. Veitch's Forcing is one of the best, and I have sown this and had it ready for use in less than four months. Those who can give Cauliflowers pot culture will find this an excellent variety, but should avoid much heat at the start. For planting out early in April I usually sow this or Sutton's First Crop in a cold frame, and this lot follows the autumn-sown plants. Sow thinly and expose freely in mild weather. Plants sown in autumn should be given ample ventilation on all favourable occasions, and those in pots showing any traces of mildew should be dusted over with dry wood ashes mixed with flowers of sulphur. G. WYTHES.

NEW AND RARE PLANTS.

LILIUM LEUCANTHUM.

This is one of Dr. Henry's discoveries in Central China. He sent seeds of it to Kew two years ago, describing it as a magnificent Lily with large cream-yellow flowers. A large batch of plants were raised, some of which flowered last year, and proved to be identical with a plant flowered at Kew some years before and which also came from Dr. Henry. Mr. Baker named it at that time as above. It belongs to the same group as *L. longilorum* and *L. Brownii*, but differs from both in its taller stems, the shape of the leaves, and in the size, form, and colour of its flowers. There is every reason for believing that it will prove a first-rate garden plant, as it grew freely at Kew and in a year formed bulbs as large as walnuts. It also has the habit of producing bulbils in the axils of its leaves exactly as in *L. tigrinum*.

HAYLOCKIA PUSILLA.

A FIGURE of this pretty little Crocus-like plant has lately been published in the *Botanical Magazine*, prepared from plants which flowered in the bulb house at Kew last July. It is a native of Buenos Ayres and Montevideo, where it flowers in March, and, judging by its behaviour under cultivation and its near relationship to *Zephyranthes*, it may prove as hardy as, say, *Z. candida*. Dean Herbert,

in whose garden at Manchester Haylockia first flowered, and who named it in compliment to his gardener, Matthew Haylock, aptly described it as having bulb, foliage, capsule, and seed that are scarcely distinguishable from *Zephyranthes*, and a flower like that of a *Colchicum*. The leaves are grassy, 6 inches long, and the erect flowers are 3 inches high, 1½ inches wide, white in one form and sulphur-yellow in the other, with a tinge of red in the throat. The flowers last only about a day, but they appear in quick succession for a month or more.

HELIOPHILA SCANDENS.

This pretty white-flowered climber (illustrated in THE GARDEN, January 13) has been an attraction in mid-winter in the succulent house at Kew for some years (it was introduced from Natal in 1885), and when it becomes known it will probably be an attraction in most conservatories where winter-flowering climbers are appreciated. I may remark, parenthetically, that *Asparagus plumosus* was for many years an attraction in this same house at Kew before its merits as a garden plant were recognised. The *Heliophila* may be likened to the Traveller's Joy in regard to its general effect. It has slender wiry stems, which grow quickly and twine about wires, &c.; its linear-lanceolate leaves are fleshy and from 1 inch to 2 inches long, and its snow-white fragrant flowers are borne in loose racemes. It is not a plant to grow for cut flowers, but it is just the kind of climber which, when planted in a border at the foot of a pillar or rafter, will grow and look after itself, and flower freely and continuously for a month or more in mid-winter. Sir Joseph Hooker says that *Heliophila* and one other genus are the only two climbers in the great order of Cabbages (Cruciferae).

RHODODENDRON KINGIANUM.

A NEW *Rhododendron* from the mountains of Mumpur, a small state adjoining Assam, will be welcomed by the numerous admirers of this genus, and as it will probably prove at least as hardy as *R. arboreum*, it will no doubt in time find a congenial home in Cornwall, where *Rhododendrons* are almost as common as Apple trees. *R. Kingianum* was discovered nearly twenty years ago by Dr. George Watt, who named it in compliment to Sir George King, at that time chief of the Botanical Department in India, and who sent seeds of it to Kew, where it flowered for the first time in the Himalayan house in June last year. Here it has formed a sturdy bush with thick, short branches, crowded, leathery, dark green wrinkled leaves, and compact globose trusses of rich crimson flowers as large as those of *R. arboreum*. Sir Joseph Hooker, in figuring it in the last number of the *Botanical Magazine*, says it is a variety of *R. arboreum*, but for garden purposes it may rank as a good species.

AMORPHOPHALLUS TITANUM.

THE flowering of this gigantic Aroid at Kew ten years ago was an event of exceptional interest, as it was known to be one of the wonders of the vegetable kingdom, the tuber weighing half a hundredweight; the leaf-stalk measuring 15 feet in height and nearly a foot in diameter; the leaf-blade with a spread of 12 feet, and the Arum-like flower so huge, that a man standing upright can barely reach the top of the spadix with his hand, and with open arms he can scarcely reach half-way round the funnel-shaped spathe. Unfortunately, the Kew plant did not survive the strain of flowering, and as it was the only example in Europe, there was no chance of obtaining a fresh supply except from its home in Sumatra. Thanks to efforts made by Mr. Charles Curtis, superintendent of the Penang Botanic Gardens, living tubers were obtained and forwarded to England last year, and some of them were sold by Messrs. Protheroe and Morris. Mr. Curtis presented one to Kew, which, after a period of doubtful vitality, has at last pushed into vigorous growth. There is, therefore, a prospect of this wonderful plant being soon again on exhibition in the Victoria house at Kew. W. W.

RHODODENDRON MULTICOLOR TRITON.

This is a remarkable hybrid, an addition to that interesting group of perpetual-flowering greenhouse Rhododendrons of which so many fine hybrids have been raised of recent years. The latest acquisition is very distinct; the flowers, of a bright salmon-rose colour, set off by a yellowish throat, are produced in a graceful cluster. It is quite a novelty in its shade of colour, and should become as popular as any of its race. From Messrs. Veitch, A.M., R.H.S., January 23.

PHALENOPSIS SCHILLERIANA-STUARTIANA.

This is a beautiful hybrid raised from the intercrossing of *P. Schilleriana* and *P. Stuartiana*. The upper sepal is white, becoming suffused with rose through the central and basal area; the lower sepals white, slightly tinted with rose, the lower halves being thickly covered with rose-purple and brown spottings. There is also some trace of yellow at the base. The front lobe of the lip is white, spotted with rose-purple; the side lobes white, shading to yellow at the base, on which there are numerous brown spots. In the centre at the base there are two prominent raised yellow ridges, which are thickly covered with miniature brown spots. The plant carried a seven-flowered raceme. It is a most distinct and desirable form. Shown at the Royal Horticultural Society's meeting by Messrs. Hugh Low & Co., Bush Hill, Enfield, and given a first-class certificate.

CYPRIPEDIUM SANDERIANO-CURTISII.

This is a distinct addition, a hybrid derived from the intercrossing of the species indicated by the name. The dorsal sepal is upwards of 2½ inches in length; the ground colour creamy white shading to green, thickly and evenly banded with bright purple veining. The petals are each about 6 inches in length, brownish purple, thickly spotted with a darker shade of brown colour. The margins are much crisped, and show the characteristic twist of the *Sanderianum* parent. The lip is upwards of 2½ inches long, showing the influence of *C. Curtisii*, deep brown, veined with a darker shade of the same colour. The disc of the column shows the intermediate characters of the parent species being wholly bright purple. Shown by the raiser, Mr. N. Cookson, Oakwood, Wylam-on-Tyne, at the meeting of the Royal Horticultural Society, January 23, and given a first-class certificate.

EPIDENDRUM WALLISIO-CILIARE SUPERBUM.

This is a beautiful hybrid. The sepals are about 1½ inches long, yellow, suffused with a bronzy tint of colour, the petals being a bright yellow. The lip is upwards of 1 inch across, reflexed, white round the outer margins, becoming suffused and veined with purple through the central area; the ground colour is yellow towards the base. The plant carried a five-flowered raceme. It was exhibited by Messrs. J. Veitch & Sons before the Royal Horticultural Society, January 23, having been raised in their Langley nurseries by Mr. J. Seden. First-class certificate.

CYPRIPEDIUM ACTEUS LANGLEYENSE.

The dorsal sepal of this Orchid is nearly 2½ inches long and of fine form and substance. The ground colour is white except a small blotch of green at the base. A few bright purple spots appear on the white central area, the spottings on the green base being light brown. The petals are greenish yellow with a brown bar through the centre, the base thickly covered with dark brown hairs. The lip is clear yellow on the outside and spotted with brown on the inside. It is derived from the intercrossing of *C. Lecanum* and *C. insigne Sanderi*. Shown by Messrs. J. Veitch & Sons at the Royal Horticultural Society's meeting, January 23, and given an award of merit.

LÆLIA MRS. M. GRATRIX VAR. SUPERBA.

This is a distinct hybrid, raised by the intercrossing of *L. Digbyana* and *L. cinnabarina*. The sepals and petals are about 3 inches long and bright yellow; the lip rather lighter in colour than the other segments and heavily fringed on the margin. This differs from the typical form principally in the colour of the sepals. The intermediate characters of the present species are most prominent in the habit of growth. Shown by Messrs. J. Veitch & Sons at meeting of Royal Horticultural Society, January 23, and given an award of merit.

PHALENOPSIS INTERMEDIA BRYMERIANA.

The sepals and petals of this Orchid are white flushed with rose, the lower sepals spotted slightly with rose-purple; the front lobe of the lip rose, shading to deep purple at the base; the side lobes rose, shading to white. At the base there are tracings of yellow, covered with miniature brown spots. The plant carried a raceme of fourteen flowers and buds. Shown by Messrs. H. Low & Co. at the meeting of the Royal Horticultural Society, January 23, and given an award of merit.

LÆLIO-CATTLEYA CALLISTOGLOSSA VAR. PRINCESS OF WALES.

(*L. PURPURATA* CROSSED *C. WARSZEWICZII*.)

This is most distinct and of delicate colour. The sepals and petals are pale lilac, and the broad lip lilac, becoming suffused towards the centre with rosy purple, veined with a darker shade of purple. The side lobes are rosy purple, shading to white, with some yellow at the base. The finely-grown plant carried eight flowers. Shown by Sir F. Wigan, Bart., Clare Lawn, East Sheen (gardener, Mr. Young) at meeting of Royal Horticultural Society, January 23, and given an award of merit.

CALANTHE REGNIERI HOLOLEUCA.

This is a fine addition to the white section of *Calanthes*. The sepals and petals are of good form and substance and very broad. There is no trace of colour whatever. The plant carried an eight-flowered raceme. Shown by Sir T. Lawrence, Bart., Burford, Dorking (Orchid grower, Mr. White), at meeting of Royal Horticultural Society, January 23, and given an award of merit.

LÆLIO-CATTLEYA CHARLESWORTHII.

(*L. CINNABARINA* CROSSED *C. AUREA*.)

This is a most distinct and desirable hybrid, displaying the intermediate characteristics of the parents both in habit of growth and in the flowers. The sepals are upwards of 2½ inches long, yellow, suffused with orange-scarlet; the petals as long and broader than the sepals and of a deeper shade of scarlet. The lip is much crested, and on the margins deep orange-scarlet, veined and suffused with a darker shade. The plant carried a two-flowered raceme. Shown by the raisers, Messrs. J. Charlesworth & Co., Heaton, Bradford, at meeting of Royal Horticultural Society, January 23, and given an award of merit.

LÆLIO-CATTLEYA SUNRAY.

This is a very distinct little hybrid derived from the intercrossing of *Lælia cinnabarina* and *Cattleya superba*. The sepals are chrome-yellow and upwards of 1½ inches long. The ground colour of the petals is similar to that of the sepals, and suffused with orange-scarlet; the front lobe rich crimson, lined in the centre with a darker shade of colour; the side lobes deep crimson-purple, shading to yellow towards the base. There are numerous purple lines through the throat. In growth the plant is intermediate between the two species. Shown by the raisers, Messrs. J. Charlesworth & Co., at the meeting of the Royal Horticultural Society, January 23, and given an award of merit.

LÆLIO-CATTLEYA FANNY LEON.

This is a very distinct hybrid said to have been derived from the intercrossing of *Lælio-Cattleya exoniensis* and *Cattleya labiata*. The sepals are each about 3 inches long and rosy lilac in colour; the petals as long as the sepals, 2 inches broad, and rich rosy lilac. The broad, fine-shaped lip is wholly of a rich crimson-purple, veined with a darker shade of colour, and margined with white around the outer edges, which are very much crested. The extreme base of the side lobes is white. The base of the throat is prominently lined with yellow and purple. The habit of growth shows the influence of *C. labiata*. Raised by the exhibitor, Mr. H. S. Leon, Bletchley Park, Bletchley, and given an award of merit by the Royal Horticultural Society, January 23.

OBITUARY.

John Ruskin.—John Ruskin, poet, teacher, reformer and philosopher, died at his charming home, Brantwood, Coniston, on Saturday last, in the eighty-first year of his age. Ruskin strived to reach the high ideals preached in his noble moral essays—earnest messages to the world and master-



THE LATE JOHN RUSKIN.

pieces of English prose. His famous works "Modern Painters," "Stones of Venice," "Seven Lamps of Architecture," "Fors Clavigera," "Unto this Last," and "Sesame and Lilies" are amongst the greatest contributions to the literature of this century. On Thursday, in the churchyard of Coniston, Ruskin was laid to rest, in the beautiful country he loved so well. It was his wish, that if his death occurred in London, to be buried with his father and mother in the churchyard of Shirley, near Croydon, the village of which the Rev. W. Wilks is vicar. We leave until next week an "appreciation" of this noble life.

Leaving to others to do justice if they can to Ruskin's genius and its ennobling influence on horticulture as a fine art, will you permit me, under a deep sense of his sudden loss, to cull a sentence or two from the appreciative notice from the *Scottishman* of Monday on Ruskin's influence on art: "In his day Ruskin did more for British art than any other man had done. When his first book appeared, British art and taste were fast bound in the traditions of a poor and vulgar conventionalism. It was in much the same condition as poetry had fallen into at an earlier date, and from which it was raised by Coleridge, Scott, and the other great poets of the romantic revival.

"Ruskin led the revival into the realm of art. He woke the nation into a new and finer sense, and a sense of the true and beautiful in form and colour. He shook the national taste out of its bondage, purged it of vulgarity, and taught it to see and appreciate the beautiful. The revolution of taste that has taken place in the last fifty years has not been wholly his work, but he began it, and even those who now refuse to acknowledge him a master, are the fruits of the stimulus which he gave to the love of art and the sense of beauty.

"The great distinction of all Ruskin's writings is their sincerity, or may be called originality. He drew inspiration from men and books, but he gave us no second-hand work. He describes for us what he has seen with his own eyes—never through the eyes of another. And if this can be said of what he has written about Nature and Art, it is equally true that, whatever his subject, he always gives us his own view of it and his own thoughts about it. Stimulus and inspiration he must have drawn from other masters, but his matter is his own. Nothing higher need be said of work that is so excellent in the main than that none of it is second-hand."

The *Morning Post* says truly of Ruskin "that he wrote with all the exquisite charity and often with much of vehemence of the mountain streams which he loved. To read him is to be infinitely refreshed and to be chilled with a new sense of the loveliness of the English language. Nor is it possible to see a time in the history of our literature when these qualities will not suffice to keep for him a place among the immortals."

How far the revival of gardening as a fine art and a revealer of natural beauty may be attributed to the works and life of John Ruskin, Mr. William Robinson, late of *THE GARDEN*, can best tell us, and in doing so he may be able to lead us all yet higher and further upwards and onwards in gardens of richer beauty, more faultlessly formed by art, and richly and variously filled through the inexhaustible resources of Nature. D. T. Fish.

John Fraser. With the death of Mr. John Fraser at a good old age there is the removal of a somewhat unique, and certainly well-known, personage. He has passed away at the end of a singularly active life, and his name figures in the horticultural annuals for the past fifty years. A member of the floral committee of the Royal Horticultural Society since its establishment in 1858, and latterly one of its vice-presidents, he put in a few attendances in 1899; and if he did not sit at the table, he made a point, as far as his health would permit, in attending the meetings of the society.

The two brothers, John and James Fraser, succeeded their father, who was founder of the business in the Lea Bridge Road, now many years ago. They cultivated New Holland and kindred plants on a large scale, as well as the leading florists' flowers, and at the historic exhibitions held at the Chiswick Gardens up to 1858 they exhibited stove and greenhouse plants, specimen Pelargoniums (show, fancy, and the green-leaved and variegated zonalis), Azaleas, &c., and later in time Roses, though it can scarcely be said they found their way into the front rank. It is currently reported that at one of the great Chiswick exhibitions they, with twenty specimen stove and greenhouse plants, defeated Mrs. Lawrence, of Ealing Park, the mother of the president of the Royal Horticultural Society, and, smarting under her defeat, she bought the whole of the plants, and with them the grower (Mr. May), who forthwith entered her service.

At the exhibitions held under the management of the late Mr. B. Marnock at the Regent's Park, and at some of the earlier ones held at the Crystal Palace, they were prominent exhibitors. At the great international horticultural exhibition held at South Kensington in 1866 they were leading prize-winners with Pelargoniums in several classes, and in the miscellaneous division they staged two dozen large specimen plants, mainly hard wooded, but very few of which are cultivated in these days.

At the earlier provincial exhibitions of the Royal Horticultural Society, which commenced at Bury St. Edmunds in 1867, they were exhibitors, and

also at the exhibitions of the once prosperous Pelargonium Society. The services of Mr. John Fraser were also in request as a judge, and he was one of the 110 censors who made the awards at the exhibition at South Kensington above referred to.

As a valuer and arbitrator in horticultural matters Mr. Fraser's services were in great request, and he invariably appeared to secure the confidence of both parties. He was also a valuer under the London County Council. As the chairman of the Leyton Local Board Mr. Fraser had much to do with the development of the neighbourhood in which he lived; and in course of time the nursery in the Lea Bridge Road was abandoned, and a new one opened in the open district of South Woodford, where a large business is done, especially with greenhouse Heaths, Ivies, Vines, fruit trees, and general nursery stock. The business will be carried on by the son of the deceased, Mr. J. Finlay Fraser.

R. D. Blackmore.—This writer of delightful romances—a writer who has told us of the beautiful Devonshire scenery and its flowers in his tale of "Lorna Doone"—passed away on Saturday last at his Teddington home. The English-speaking world is poorer for the loss of this gifted and interesting man, who hid himself from the world and its gaiety in his garden at Teddington, where he cultivated fruits enthusiastically for



THE LATE R. D. BLACKMORE.

many years. Pear culture was his favourite hobby, and his assistance for many years as a member (then as chairman) of the fruit committee of the Royal Horticultural Society was of importance. We remember with pleasure Mr. Blackmore's paper upon Vine posts delivered some years ago at a conference under the auspices of the Royal Horticultural Society, a paper of practical value, brimful of humour and revealing a deep knowledge of the subject. Lovers of gardens, of scenery, and of healthy literature should read Mr. Blackmore's novels, "Lorna Doone," "Cradock Nowell," and "Perlycross" being amongst his most interesting productions. Mr. Blackmore was born at Longworth, in Berks, about seventy-five years ago, was educated at Blindell's School, Tiverton, and from thence passed to Oxford and to the Bar. "Lorna Doone" shared the fate of many novels as brilliant; it failed to find a publisher until long after it had been written. It is said that eighteen publishers rejected the work, and when it appeared it received scant attention from reviewer and public. Mr. Blackmore attributed the ultimate success of his best known work to the fact that the marriage of Princess Louise and the Marquis of Lorne gave rise to the supposition that the novel was in some way connected with the "Lorne" family. Editions quickly appeared. The public were satisfied, too, if Lorne had nothing in common with Lorna,

they agreed the writer had given to the world a brilliant romance. About ten years after its first publication Messrs. Sampson Low, Marston and Co. issued the 22nd edition. It is not too much to say that Lynton and Minehead were made famous by this novel of the land of the Doones. Mr. Blackmore was a thorough lover of the open air, and besides a keen gardener was a good shot and trout fisherman. Of late years we have missed his familiar face at the meetings of the Royal Horticultural Society, due not to a lessened interest in flowers and fruit, but to failing health.

Mr. Blackmore, we believe, was not offended when described as a "market gardener," and used this *nom de plume* to one of his works. He was an enthusiast, and his produce from the many acres cultivated at Teddington found its way to Covent Garden, but he confessed once to the writer that Pear culture was not all profit.

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SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.*

JANUARY 23.

There was another small, but very interesting meeting at the Drill Hall on Tuesday last, when, of course, indoor flowers formed the chief feature. The orchids were delightful, many groups containing rare species and varieties being exhibited.

FLORAL COMMITTEE.

Before the business of this committee, Mr. Marshall, the chairman, said he had a sad announcement to make. Mr. John Fraser, of the Lea Bridge Nurseries, had died a few days previously, and the Royal Horticultural Society by his death lose a warm supporter on the committee, a member whose knowledge of hard-wooded and other plants was of great assistance in the work of considering the exhibits sent for adjudication. Mr. Marshall said he mourned the loss of a personal friend, and he proposed that a vote of condolence be sent to the family in their bereavement. Mr. Geo. Paul in a few well-chosen words seconded the proposition, and said that Mr. Fraser had been a friend of long standing, and was a man who was ever ready to bring his unique knowledge of greenhouse and hardy plants to bear upon the work of the committee.

A silver Flora medal was awarded to Messrs. Camell & Sons, Swanley, for their group of Chinese Primulas, prominent among which were the graceful Star Primulas, Kentish Queen, The Lady, both white, and Pink Lady. Among them also were Miss Doris, with large white flowers; Swanley Blue; Lutea alba, having white flowers with large greenish yellow centre; The Sirdar, the flowers of which are of a salmon colour. A very pretty mass of colour was formed by this collection. Messrs. Hugh Low & Co. again exhibited a group of Persian Cyclamens, including Papilio and Bush Hill Pioneer, both red and white. This group obtained a silver Banksian medal. A very handsome group of Ferns, to which a silver Flora medal was awarded, was shown by Messrs. J. Hill & Son, Lower Edmonton. We noticed the handsome Basket Fern (*Asplenium caudatum*), with its long drooping fronds; the pretty little *Pelaea rotundifolia*, the very dark and finely-toothed fronds of *Asplenium ornatum*, and also a fine plant of *Cyathea insignis*. There were two bowls of Sacred or Good Luck Lily of China and Japan (*Narcissus tazetta*), belonging to Messrs. Barr & Sons, King Street, Covent Garden. This firm also exhibited a pot of the large *Galantus Elwesii* var. *Whittallii* (figured in *THE GARDEN* last week). Among a stand of cut flowers of greenhouse Rhododendron hybrids, shown by Messrs. J. Veitch & Sons, Chelsea, an award of merit was gained by *Rhododendron multicolor Triton*. This is referred to in our list of new and rare plants. Messrs. Veitch were also the exhibitors of a fine specimen of *Banamelis arborea* (the Tree Wych Hazel), one of the most charming of winter-flowering shrubs. Mr. J. Hudson, gardener to Mr. Leopold de Rothschild, Gumpersbury Park, showed well-grown flowering shoots of the pretty yellow-flowered *Justicia flavicoma*, and was awarded a cultural commendation.

FRUIT COMMITTEE.

There were very few exhibits before this committee. Before the business commenced the chairman made allusion to the death of Mr. Blackmore, who was chairman for a few years. Mr. A. H. Pearson proposed and Mr. H. Balderson seconded that a vote of condolence be sent to the family in their bereavement. We publish elsewhere a portrait of Mr. Blackmore and particulars of his life.

A good even sample of the new Tomato, Winter Beauty, was sent up by Messrs. Sutton & Sons, Reading. This is an excellent variety for winter. The principal feature of this section of the show was an exhibit of fifteen dishes of Apples by Mr. George Bunyard, Maidstone. Of these,

HORMEADS' PEARMAN and NORMAN'S PIPPIN obtained awards of merit. The latter is a small green Apple and is a good bearer and keeper, being fit for use from December to April.

Also in this collection were fine samples of Twenty Ounce, Belle de Pontoise, Farmer's Seedling, Beauty of Kent,

*Plants given first-class certificates or awards of merit are described amongst "New and Rare Plants."

White Nonpareil, Foster's Seedling, Transparent de Crocels, Preston Hall, Improved Ashmead's Kernel, Rambour Papelen, and Chatley's Kernel. Mr. R. E. Davis, Yeovil, Somerset, exhibited six dishes of local Apples; while Mr. J. Chimney, Nevill Court, Abergavenny, had a dish of Apple Welsh Beauty. There was also a dish of the fine Royal Late Cooking Apple, belonging to Messrs. J. Veitch & Sons.

ORCHID COMMITTEE.

As our list of new and rare plants shows, many important novelties came before this committee. Without the Orchids, in truth the meeting would have been small and uninteresting.

Messrs. J. Veitch & Sons, Royal Nurseries, Chelsea, showed an extremely interesting group, consisting of *Cypripedium Harrisonianum* superbum, a very richly coloured variety; a pretty hybrid *Dendrobium* named Dulce, probably a cross between *D. Linawianum* and *D. aureum*; *D. atroviolaceum*, *D. Cassiope*, *Cypripedium Hera Euryades* splendens, very rich in colour; *Laelia Mrs. M. Gratrix*, a hybrid between *L. Digbyana* and *L. cinnabarina*, of a pure yellow colour; *Laelio-Cattleya Pallas*, a hybrid between *Cattleya Dowiana* and *Laelia crispata*, a very richly coloured form; and a very distinctly coloured *Phaio-Cattleya*, of which we shall make further note.

Sir Trevor Lawrence, Bart., Burford, Dorset (gardener, Mr. White), showed a delightful group of rare kinds. One of the prettiest plants was that of *Dendrobium Cordelia*, the flowers of extremely delicate colour, pinky white sepals and petals, the lip marked with deep red; *Epidendrum amplexicaule*, with minute green flowers; *Dendrobium melanoleucum* var. *Rainbow*, the charming *D. barfordense*, *Maxillaria arachnites*, *Cypripedium Lecanum Albertianum*, and *C. Sallierii Hycanum*.

One of the most charming groups of all and containing many well-grown plants was that shown by Sir Frederick Wigan, Bart., Clare Lawn, East Sheen (gardener, Mr. Young). It contained several beautiful *Phalenopsis* and *Dendrobiums*. The *Phalenopsis* family is extremely well grown by Mr. Young, especially *P. Schilleriana* and *P. Stuartiana*. Also of note were *Vanda lamellata* and that richly coloured form of *Laelia autumnalis* called *atrobribes* (silver-gilt medal).

An exceptionally fine plant of *Dendrobium atroviolaceum* was shown by Messrs. Sander & Co., St. Albans, the flowers very richly coloured.

That beautiful Orchid, *Laelia aniceps Sanderiana*, came from Mr. J. T. Bennett-Poe, Holmwood, Chesnut (gardener, Mr. J. Bonnes). It was an exceptionally well-grown specimen, *Laelio-Cattleya Cappei (Laelia cinnabarina - Cattleya gigas)* is an interesting hybrid, with yellowish sepals and petals and deep rose-purple lip.

From Lord Rothschild, Tring Park, Tring (gardener, Mr. Hill), came a noble spike of *Odontoglossum crispum* 3 feet 6 inches in length, and bearing thirty-seven flowers.

Baron Schroeder, The Dell, Egham (gardener, Mr. Ballantine), had *Odontoglossum Wilckianum Schroederianum*, a very richly marked form.

Messrs. H. Low & Co., Bush Hill Nursery, Enfield showed *Dendrobium Vanierianum*, a very pretty form, and a pleasing light-coloured variety of *Cymbidium Tracyanum*.

Mr. G. F. Moore, Barton-on-the-Water, Gloucestershire (gardener, Mr. Norris), showed *Cypripedium Mooreanum*, a very richly coloured form; *C. Beckmanii*, conspicuous for its broad dorsal sepal, richly blotched with chestnut, and polished brown petals and lip; also a well-coloured variety of *Cattleya Persevaliana* named *Chardwan* variety, or a similar name, as far as one could judge from the label; the lip is deep velvety purple, very striking against the orange-yellow throat.

Several interesting Orchids came from Mr. W. P. Burkinshaw, West Hill, Hessele, Hull, who showed *Cypripedium nitens Bessle* var., a very attractive flower, and *C. Adrastus* var. *punctatum*, a hybrid between *C. villosum Boxallii* and *C. Lecanum*, a very pretty flower, especially the dorsal sepal, which is green in the lower half, the upper portion white, and blotched with rich purple-brown colour.

Sir William Marriott, Bart., The Down House, Blandford, showed *Odontoglossum crispum* var. *castanum*, a pure white flower with yellow lip, a very charming form.

Cattleya Luddeemanniana Amor Bassall was exhibited by Messrs. Mobbs & Ashton, Southgate, and *Dendrobium Madoune*.

From Mr. de B. Crawshaw, Sevenoaks, came a very finely marked variety of *Odontoglossum Rossi* named *Mrs. de B. Crawshaw*.

LECTURE BY MR. BUNYARD.

In the afternoon Mr. Bunyard lectured upon the "Neglect of Flowering Shrubs."

NATIONAL DAHLIA.

The annual meeting of this society was held recently at the Hotel Windsor. Mr. E. Mawley occupied the chair. The annual report was very satisfactory, and it is interesting to know that at the annual show the number of flowers staged was as follows: Show and fancy, 1302; pompon, 1803; Caetns, 1809; single, 819; with a grand total of 5730. This is not so many as usual owing to the dry summer. In the future the decorative value of the Dahlia will be better shown. Other items in the report consisted of reference to the new varieties given certificates of merit, and the donors of special prizes were thanked. It was hoped that the roll of membership would increase, and, seeing how much interest is taken in the Dahlia, we wonder that this society is not stronger in this respect.

A sad note was struck when reference was made to the late T. W. Girdlestone, who was elected president in 1897, and continued in this office until his death. He was previously secretary for nine years. The catalogue of Dahlias exhibited by the society was his work, and as a raiser of single varieties he was most successful. Truly we miss this good gardener cut off in early manhood.

The income of the society from all sources, including the balance in hand of £15 3s. 9d. from the year 1899, and the

contributions to provide prizes at the supplemental exhibition, amounted to £200 4s. 9d., and the entire expenditure, including the payment of all prizes awarded at the two exhibitions, left a balance of £7 10s. 2d. to be brought forward to the present year.

Mr. Mawley, on moving the adoption of the report, referred to the dry year and the death of Mr. Girdlestone. A memorial to their late president was being instituted to take the form of a specially struck medal, the cost of which would be defrayed by private subscription. In everything relating to the Dahlia it was necessary they should be abreast of the times, and this memorial would fittingly commemorate one who did so much for their favourite flower.

Mr. E. Mawley was elected president, Mr. George Gordon and Mr. W. Marshall being added to the vice-presidents; Mr. Wilkins was elected treasurer in the place of Mr. Mawley, and Mr. J. F. Hudson was re-elected hon. secretary; the names of Messrs. J. Hudson, W. E. Reeve, and J. Stredwick were added to the committee.

No supplemental show is to be held this year, but some arrangement will be made for an exhibition of seedlings, if practicable, in connection with one of the meetings of the Royal Horticultural Society.

The list of Cactus Dahlias annually given in the schedule of prizes was revised, some new forms being added and some old ones struck out. The schedule of prizes was revised and additions made. In future a supplement to the catalogue will be prepared and will appear in the schedule.

IPSWICH DISTRICT GARDENERS AND AMATEURS CULTURAL IMPROVEMENT ASSOCIATION.

A PUBLIC meeting of those interested in horticulture was held in the Ipswich Town Hall on the 15th inst. to consider the suggestion (made by Mr. Close at the annual meeting of the Horticultural Society) that a mutual improvement society be formed. There was a large attendance, most of the local nurserymen and gardeners being present. The proposition to form an association to be known as above was carried unanimously. A committee, consisting of three nurserymen, three gardeners, and three amateurs, was appointed to form rules, &c. Mr. W. E. Close, Holy Wells Gardens, was unanimously elected hon. secretary. Upwards of forty promised to join as members.

ROYAL HORTICULTURAL SOCIETY OF IRELAND.

MR. ANDREW PORTER (gardener to Lord Ashdown, Co. Galway), as the exhibitor who carried off the largest number of prizes during last year at the shows held by the Royal Horticultural Society of Ireland, has been awarded the Williams Memorial silver medal. This medal was placed at the disposal of the council by Messrs. Williams & Sons, Upper Holloway, London.

READING GARDENERS' ASSOCIATION.

The following papers will be read during the remainder of this session: January 22, annual tea; January 29, "Chemical Manures," Mr. F. W. Shrivell; February 13, "Renovation of Fruit Trees," Mr. T. Neve; February 26, "Horticultural Buildings," Mr. G. B. Parsons; March 12, "Hardy Plant Borders," Mr. D. Harris; March 26, "An Evening in a Surrey Garden," Mr. A. Wright; April 9, "Vegetables," Mr. J. House; April 13, "Spring Bedding," Mr. J. B. Stevenson.

BRIGHTON AND SUSSEX HORTICULTURAL SOCIETY.

PRESENTATION TO MR. W. BALCHIN, JUNR.

ON the occasion of holding the annual meeting of this society recently at Brighton, an illuminated address was presented to Mr. William Balchin, Junr., from the members of the committee, which expressed warm appreciation of the invaluable services rendered to the society by discharging for ten years the duties of chairman of the committee, and the regrets of the committee that a pressure of business engagements compelled him to vacate the chair. In order, however, that the advantage of Mr. Balchin's business qualifications should not be lost to the committee, he was appointed hon. treasurer. Mr. Geo. Miles, the vice-chairman of the committee, was appointed in his place. It is satisfactory to know that the financial position is satisfactory, there having resulted a profit of over £32 on the year's work, and there is a balance of over £107 at the society's bankers. The society will for the future hold its meetings at the Imperial Hotel, which is much nearer to the railway station, a desirable step, as the attendances at the periodical meetings fell off somewhat owing to the distance of the place of meeting from the centre. The services of the energetic secretary, Mr. Thorpe, were warmly acknowledged by the members.

LINNEAN SOCIETY OF LONDON.

THERE will be an evening meeting on Thursday, February 1, 1900, at 8 p.m., when the following papers will be read: (1) on "Botanic Nomenclature," by Mr. C. B. Clarke, M.A., F.R.S., &c.; (2) on "The Zoological Results of an Expedition to Mount Koraima, in British Guiana, undertaken by Messrs. F. V. McCannell and J. J. Quclch, by Professor E. Ray Lankester, D.C.L., F.R.S., &c.

STOVE AND GREENHOUSE.

DWARF POINSETTIAS.

REFERENCE was recently made to the way in which some growers obtain their dwarf Poinsettias, which are invaluable for small ornamental receptacles in the drawing-room, for furnishing small baskets, or

for use on the dinner-table. The writer states that tops might be taken from earlier rooted plants late in the summer and rooted in the pots they were to remain in. Several years ago I noted having seen a capital batch of plants of this stamp in Norfolk, and that they had resulted from topping other plants, when another correspondent replied maintaining that this method of propagating late batches was simply spoiling one plant to produce another. Doubtless there is much truth in the assertion, as those plants which are deprived of their leads can hardly be expected to break sufficiently strongly at that advanced state to form decent-sized bracts, and thus all the time and labour bestowed on them would be practically lost. Of course, where the dwarf plants referred to were much appreciated, the end will justify the means; but the question is, Could not some old plants, by being kept in very cool quarters, be induced to break sufficiently late in summer to supply cuttings for the production of extra dwarf specimens? I think so, but it would be useless leaving them in a stove till the eyes were pushing into growth. They would have to be subjected to as little warmth as would keep them safe directly flowering was past, and in April moved to a cool north aspect. I think the plants would stand this, provided little or no water was given. Cuttings so formed could be secured with a heel and would root fairly easily. I see no other way by which cuttings could be secured so late in the season. The lowermost breaks are, of course, the most backward. J. CRAWFORD.

GARDEN DESTROYERS.

GARDEN PESTS.

IN reply to "A. D.'s" inquiry, it may interest him to know that in a small garden (about half an acre) I have found the following method effectual in preventing the birds from eating the fruit buds: I get some stiff flour-paste made, and then mix it with powdered bitter apple, and apply with a bristle brush a coat to the fruit buds on a day usually about Christmas-time, and before the buds begin to swell. As a rule the birds attack them after the first sharp frost (which probably sweetens the buds). Currant bushes are best treated soon after the leaves have fallen, as they are attacked sooner than the fruit trees. Possibly white hellebore powder might answer, but I have not tried it.

Bitter apple, or colocynth, as it is called by chemists, is so intensely bitter that no animal will willingly taste it, and it is doubtful even if insects would eat the buds if penetrated by the bitterness. There are two kinds of bitter apple powder sold. One containing the seeds, which is much the cheaper of the two, and the other without the seeds which is used as a medicine. The only drawback to this application is the fact that if there is heavy rain in winter it becomes washed off. In such cases it might be mixed with vaseline, Venice turpentine, or Japanese birdlime, though the last named would make a more difficult mixture to handle unless thinned down with some colza or other oil.

Sparrows are very troublesome in my garden by biting off the tips of the Carnations. The only remedy I have as yet found for this is filling up the tips with soot, which seems to be beneficial to the plants when it reaches the ground. For Primrose and Crocus protection I find nothing better than crossed lines of black thread a short distance from the flowers. E. M. H.

GOOSEBERRY CATERPILLAR AND WINTER DRESSING.

This is a troublesome pest and most difficult to exterminate. For years I was troubled terribly with it, so much so that when I took charge of these gardens, for a year or two I was continually dressing them with some solution, and even then we lost many leaves. I have tried many remedies, most of which only check the pest, and some are worthless. I resolved some five years ago to try dealing with them in winter; accordingly, I re-

solved to dress the bushes with an extra strength of wash which I always apply to the bushes to keep them clean and to prevent the birds from destroying the buds. This is done after the trees are pruned, about the middle of December. This is followed in February by a second dose if needed. At the same time the soil is removed from several bushes right from the stem out as far as any branches extend; this is removed down to the roots and wheeled away. This done, a good dressing of fresh lime is put over the roots and then a coating of manure. This is covered by digging out the soil between the bushes, then the soil from under other bushes is put in its place. These in turn receive a dressing of lime and manure, and so the work proceeds. During the last two years I have had little trouble with this pest, and have not needed to dress the bushes when in leaf.

J. CROOK.

ANSWERS TO CORRESPONDENTS.

Names of plants.—W. G.—1. *Dendrobium nobile*; 2. *Dendrobium bellidifolium*, somewhat distinct variety.—W. A.—1. *Dendrobium speciosum*.—A. E. W., *Dorehyster*, 1. *Blechnum occidentale*; 2. *Polypodium Billardieri*; 3. *P. venosum*; 4. *Asplenium lucidum*.

Name of fruit.—*Mex. Phillips*.—Bergamotted Esperein.

INDOOR GARDEN.

Lapageria infested with scale (J. HEAN). The best and safest method of getting rid of this troublesome pest is by sponging the stems and leaves with a mixture of soft soap and warm water. The plant being a large one, considerable time and patience will be necessary to thoroughly cleanse it, but we feel sure it will be time well spent. When the plant is made quite clean the syringe should be used freely amongst the foliage, as the health and general appearance of the plant is not only increased by it, but green fly and other pests are not so likely to gain a footing when a good use of the syringe is made.

The Guelder Rose (T.). This is not so readily forced as some other hardy shrubs, such as the *Lilac* and *Deutzia gracilis*, for if too much heat is used the display of flowers will be but poor. These latter subjects may be had in bloom by Christmas, or soon after, but the Guelder Rose cannot be depended upon before the latter half of February or in March. Where there is ainery started early in the new year it is just the place for the plants, or they will develop in the greenhouse in a very satisfactory manner. A temperature of 50 to 60 will suit them well. Of course, the plants must be prepared for such treatment, either by confining them altogether in pots, or in the open ground by transplanting each year in order to ensure a compact mass of fibrous roots, which admit of the plant being removed with but little check. It is also necessary that they be grown in a spot fully exposed to air and sunshine, as these conditions are particularly favourable to the formation of flower buds. Besides the common Guelder Rose (*Viburnum Opulus sterile*), the Chinese *V. macrocephalum* and the Japanese *V. plicatum* are also amenable to the same treatment and afford a pleasing variety.

Gloxinia seed (B.). This should be sown as soon as possible, and whether pots or pans are used they must be thoroughly drained. A suitable compost is equal parts of loam and leaf-mould, with a liberal sprinkling of silver sand. To facilitate the operation of pricking off after germination the upper layer of soil should be passed through a sieve with a 1-inch mesh. All being made level and pressed down moderately firm, a good watering through a fine rose should be given, and while the surface is still moist the seeds must be sprinkled thinly thereon. As they are very minute one is apt to sow too thickly, but this must be particularly guarded against. If a space of 1/2 inch is allowed from the surface of the soil to the rim of the pot, it admits of a pane of glass being laid thereon, by which germination is greatly assisted, as it keeps the seeds in a uniform state of moisture. On a shelf in the stove, just shaded from bright sunshine, the young plants will soon appear, when the glass must be at once removed, as the object is to encourage sturdy growth; for this reason they should be kept near the glass and pricked off as soon as large enough. When sufficiently advanced they may be potted into 3-inch pots, and shifted for flowering into those 5 inches or 6 inches in diameter. After their earlier stages the temperature of an intermediate house, or even a greenhouse, will meet their requirements.

ORCHIDS.

Book upon Orchids (J. C. WEBBIT). We would recommend you to watch closely the cultural notes which are given weekly under the "Gardening of the Week" calendars of THE GARDEN. We shall always welcome any inquiries, and will do our best to afford the information required on any particular subject of orchid culture our correspondents may need. We do not know of any work particularly suitable to meet the requirements of a beginner. Veitch's "Manual of Orchidaceous Plants" would assist you; to be obtained from Messrs. J. Veitch & Sons, Chelsea, London.

KITCHEN GARDEN.

Giant Onions (AMATEUR). You seem to be somewhat hitten with the desire to grow giant Onions. These huge bulbs are now grown in almost every garden, so that if you do not at all in haste—and we do not say such—at least you

err in very good company. But whilst with so many vegetables, and roots especially, mere size becomes detrimental to flavour and excellence, in the case of giant Onions not only are great bulbs produced, but these are less hot and much more pleasant to partake of in a cooked state than are those bulbs produced by an ordinary spring sowing outdoors. There are several varieties grown to produce huge bulbs, some of which are not firm or good keepers, however produced, but a true stock of Ailsa Craig, Cranston's Excelsior, the Sutton Globe, or Improved Wroxtan, all globe-shaped, and these are best for the purpose, will, with first-class culture, produce quite giant, handsome, hard-keeping bulbs of the very best description. We have now in our possession superb 2-pound bulbs of Ailsa Craig as handsome as well can be, and hard, and will keep well if desired till the end of March. But these giant bulbs are of great value to produce seed stock, for the plants so obtained always reproduce under any form of culture much the finest of bulbs. You had better secure seed of one of the varieties named or even a couple, and sow it thinly in broad, shallow pans filled with fresh fine soil, in which is mixed one-third of decayed leaf-soil. Gently press the seed in, strew a little fine sandy soil over it, then stand the pans in a frame or greenhouse near the glass and furnish a little warmth. When the seedlings are 3 inches in height lift them carefully and transplant into shallow boxes with similar soil, putting the plants 2 inches apart; water them, and still keep near the glass till early in April, then transfer them to a cold frame where they get ample light and air to harden them. The ground where to be grown should be trenched 2 feet deep and have a liberal dressing of manure put in on to the bottom spit and forked in, then a second dressing on the surface and forked in. Planting out into rows 16 inches apart, the plants being 12 inches apart in the rows, may be done at the end of April, each plant having when put out a good ball of soil and roots attached.

Intercrossing Potatoes (S. W. M.). If you think you can find room for the introduction of varieties of Potatoes obtained by yet further intercrossing, because we have several hundreds of varieties in commerce now, there is no reason why you should not try to do so. Not only is it of no use to trust natural seed-balls, that is to say, seed-balls produced on self-fertilised flowers, but there are very few of the many varieties in cultivation that produce pollen in sufficient quantity to self-fertilise flowers. With very many, especially the heaviest croppers, pollen production is almost nil, and using them as parents often results in failure. Sometimes if such varieties be grown by putting single tubers into 8-inch pots and grown on under glass, thus partially starving the roots, pollen can be more freely obtained. But you can do nothing before June or July. Then in using the pollen-cases of flowers to extract pollen from them on to the thumb nail, rather seek for it at the bases than at the points of the cases. Once get quite a thin film of this pollen-like fine powder on the nail, you will obtain enough to fertilise three or four flowers on some other variety. When those are done pinch off the rest, tie up the truss with a stick, affix to it the nature of the cross on a label, and leave to mature.

Sowing Spinach (DORSET). This leaf vegetable may be sown now, and have successions made up to the end of August, at which time the final sowing to stand the winter, and one of considerable breadth, should be made. To obtain very early Spinach it will suffice to sow rather thickly in rows 12 inches apart the common summer or Flanders variety. So treated it soon bolts off to flower and the plants in the rows are cut clean, stems and all, and so sent to the kitchen. But the best treatment for later sowings, which should be to the end of April, about once in three weeks, is to get seed of the Virolay, or as called here Victoria, sowing it in drills thinly, and when the plants are well up thinning them out to 3 inches or 4 inches apart. In that way very fine stout leafage is obtained. Sowings in May, June, and July, to stand hot weather, should be of the Long-stander and be even wider thinned. This fine thick-leaved variety is longer bolting to seed than is any other. In August sow both the Virolay and the Long-stander. Really, whatever be the names, there are not more than three distinct varieties of Spinach in cultivation, but all these have both smooth and prickly seeds.

GARDEN DESTROYERS.

Scale on Pear tree (T. S.). The scale on your Pear tree is the mussel scale (*Mytilaspis pomorum*), a very common pest, but commoner on Apple trees than on Pears. The easiest way of destroying this pest is by spraying the tree with a caustic wash before the buds begin to open. There are various receipts for a wash of this kind, but the following is the best: Dissolve 1 lb. of caustic soda in a gallon of water, then add 1 lb. of carbonate of potash, commonly known as pearlash, now add 9 gallons of water, and lastly 10 oz. of soft soap which has already been dissolved in a small quantity of boiling water; stir the mixture thoroughly and it is ready to use. The caustic soda should not be touched with the hands, nor be allowed to get on the clothes. The mixture is also caustic, and care should be taken not to get it on the hands or clothes more than necessary, as it is decidedly injurious to them, but at this time of year it will not injure the trees in any way; or the trees may be sprayed with paraffin emulsion diluted with ten times its volume of water, and then with a rough cloth or stiff brush rub off as many of the scales as possible and give another spraying with the emulsion and water. If the tree be trained against a wall, the branches should be unfastened as much as possible so as to allow of the insecticide being applied to their backs; if this be not done it will be impossible to free the tree from this pest. G. S. S.

FLOWER GARDEN.

Diseased Violets (A.). Your Violets are attacked by a fungoid growth. You have probably fed your plants too well. Use leaf-soil and loam by all means, but not too much manure. We think the wood faggots and straw manure may also be dispensed with, and stones or cinders substituted as drainage. The plants should not be lifted into the frames too early.

certainly not before the middle or end of October. They should be firmly planted, as close to the glass as possible, and when once in the frames they can hardly have too much air or too little water—within reason, of course. When the disease first makes its appearance, let the affected leaves be gathered and burned. Then give the plants a slight dressing of sulphur or newly-slaked lime, keeping the leaves quite dry for two or three weeks after this application. The more sun and air in autumn and winter the healthier the plants will be.

Weedy lawn (N. B.).—The surest way to get rid of such coarse weeds in your lawn as Dandelions, Plantains, &c., is to go over the lawn several times and extract the roots as intact as possible. The holes left should be filled up with a little soil, and where the grass is killed, which will generally be the case when the weeds have been growing for a long time, a few grass and clover seeds may be sprinkled on the bare places.

GENERAL.

Seaweed as a manure (S. G.).—Seaweed may be safely used as a manure, and indeed is largely used in many districts bordering on the coast. Its properties are very similar to those of farmyard manure, though it is generally hardly as valuable, containing a greater proportion of water. It is generally gathered from the shore after having been washed up by the sea, but is sometimes cut while growing, and is said to be richer in that condition. Seaweed often contains foreign matter such as shellfish, &c., which have a manurial value of their own on account of the carbonate of lime they contain.

WEATHER IN WEST HERTS.

The past week proved mild and wet. The days were all warm, but on one night the exposed thermometer showed 13° of frost, which is the lowest reading this instrument has as yet registered this year. At the present time the ground at 2 feet deep is about 1 warmer, and at 1 foot deep about 3° warmer, than is reasonable. Rain fell during the week to the depth of about three-quarters of an inch, which is equivalent to 3 1/2 gallons of rain on each square yard of surface. The wind varied greatly in strength, but the direction has ranged principally between south and west. On the 18th the sun shone brightly for over six hours, but during the next four days no sunshine at all was recorded. The Winter Aconite first showed an open flower in my garden on the 23rd, or one day later than its average date of flowering in the previous eleven years, and five days later than last year. An early-flowering Snowdrop I received under the name of *Galanthus Elwesii ochrolepis* was also in flower on the 23rd, or three days later than last year.

Berkhamsted, Jan. 23.

E. M.

TRADE NOTES.

NATIVE GUANO.

We have received a book containing a list of testimonials advocating the use of native guano, and the results of its application in the farm and garden. This good garden stimulant may be obtained from the Native Guano Company, Ltd., 29, New Bridge Street, Blackfriars, E.C.

MR. JAS. WEBBER, for over thirteen years head gardener to Mr. G. F. Luttrell, Dumster Castle, Somerset, will resign at the end of this month to enter business as florist, fruiterer, &c., at Minehead, Somerset.

GARDENING APPOINTMENTS.

MR. LINDSAY CARSTAIRS, late head gardener at Brooklands Park, Halifax, Yorks, has obtained the appointment of gardener to Sir Charles Barrington, Bart., Glenstal Castle, Murree, Co. Limerick.

CATALOGUES RECEIVED.

Tree and Shrub Seeds.—*Johannes Rafn, Skovforhandler, Copenhagen, E. Denmark.*

Chrysanthemums, Carnations, Dahlias, and Zonal Pelargoniums. *H. Shesmith, Clarence Nursery, Woking.*

Manual of Hardy Plants, Seeds, Bulbs.—*Messrs. Kelway & Son, Langport, Somerset.*

Bulbs and Plants for Spring Planting. *R. Wallace & Co., Kilmfield Gardens, Colchester.*

* * * We hope our readers will send their catalogues for notification, and any news likely to interest horticulturists. Their assistance will be greatly valued.

TERMS OF SUBSCRIPTION.

THE GARDEN is sent direct from the Office in London post free, payable in advance. For one year (52 weeks), 15s. 2d.; half year (26 weeks), 7s. 7d. THE GARDEN is also posted regularly to the United States, Canada, the Colonies, and the Continent of Europe, and all places under class "A" of Postal Union for twelve months at 15s. 6d. Postal orders should be filled up to the PROPRIETORS OF THE GARDEN, payable at the General Post Office, London, and should be crossed "London and County Banking Company, Limited."

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[FEBRUARY 3, 1900.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editors invite readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object they wish to make the "Answers to Correspondents" column a conspicuous feature, and when queries are printed, they hope that their readers will kindly give inquiries the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITORS of THE GARDEN, accompanied by name and address of the sender.

The Editors welcome photographs, articles, and notes, but they will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, they will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editors ask that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editors will not be responsible for the return of artistic or literary contributions which they may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will always be recognised as acceptance.

Edited by MISS JEKYLL and MR. E. T. COOK.

Offices: 29, Tavistock Street, Covent Garden, W. C.

JOHN RUSKIN. AN APPRECIATION.

OF all who have lived and worked throughout the length of the present century there is no one whose influence in matters relating to the fine arts has so thoroughly permeated all who read and think throughout the English-speaking world as this truly great man, who, though for some years retired from the outer world, was till so lately still among the living.

The death of John Ruskin removes from among us a man whose writings and whose personal teaching have undoubtedly been of more effect than any other agency to the awakening of men's minds to a comprehension of the ethical relation of art, not only to the higher human intelligence, but also to the simple needs and experiences of daily life.

Moreover, of all the artists of England who have lived and wrought throughout the length of the century, he is the one who has most effectively encouraged us to endeavour so to see with our eyes and so to receive with our hearts that we may have a more worthy apprehension of the good gifts that are within the grasp of all; of the beauty of flower and leaf, of the sunny smile of peaceful pastoral land, the angry menace of the storm-cloud, the fearful majesty of mountain masses. So he reveals and interprets the moods of Nature and her marvellous structure to minds dimmer and

duller than his own, but eager to receive, and so he tells us of the many ways in which artists of the later centuries have given expression to their comprehension of the Nature-inspired sources of guiding motive, whether in architecture, sculpture, painting or poetry.

In illustration of his teachings as to the reverent and pure-hearted enjoyment of simple natural scenes and objects, we may take one quotation from "Modern Painters," and all the more that it immediately concerns us, as bearing directly on our enjoyment of garden beauty:

"Hence it becomes a more imperative duty to accustom ourselves to the enjoyment of those pleasures of sight which are most elevated in character, because these are not only the most acute, but the most easily, constantly, and unselfishly attainable. For had it been ordained by the Almighty that the highest pleasures of sight should be those of most difficult attainment, and that to arrive at them it should be necessary to accumulate gilded palaces, tower over tower, and pile artificial mountains around insinuated lakes, there would have been a direct contradiction between the unselfish duties and inherent desires of every individual. But no such contradiction exists in the system of divine Providence, which, leaving it open to us, if we will, as creatures in probation, to abuse this sense like every other, and pamper it with selfish and thoughtless vanities, as we pamper the palate with deadly meats, until the appetite of tasteful cruelty is lost in sickened satiety, incapable of pleasure unless, Caligula-like, it concentrated the labour of a million lives into the sensation of an hour, leaves it also open to us, by humble and loving ways, to make ourselves susceptible of deep delight from the meanest objects of creation, and of a delight which shall not separate us from our fellows, nor require the sacrifice of any duty or occupation, but which shall bind us closer to men and to God, and be with us always, harmonised with every action, consistent with every claim, unchanging and eternal."

Those who possess the precious remembrance of friendly personal contact with John Ruskin have their memories stored with an undying recollection of his charming and brilliant personality. All the world knows him as a writer, teacher, artist and art critic, but only the favoured few, those who knew him in his home and daily life, knew how richly he was endowed, not only with an inexhaustible store of sparkling wit, but with the simpler charm of

an almost child-like love of pure playfulness. Even if Mr. Ruskin had taught us no other thing, his inspired words would have made us know, as we had scarcely known before, how to recognise and value the tender tunefulness, the supple serviceableness, the brilliant colouring, the mighty strength, the splendid dignity of our English tongue.

Later we shall hope to touch upon a few of the details of his teaching that bear upon matters more directly concerning our readers; but meanwhile we may remember that the chief aim of Mr. Ruskin's teaching was to search out and make clear to us what in Nature was most wonderful and lovely, and what in the best of man's work was true and honest and good and beautiful.

For some years, to the outer world at least, the eloquent voice has been silent; the hand that held the pen has written no more; the fertile brain has rested from the life-long strain of strenuous labour; but it was good to know that he was yet alive, and living the peaceful life that his weakened health could alone allow, closely tended with loving watchfulness, and within daily view of his well-loved scenes of lake and mountain. But we trust that he knew how many reverently grateful thoughts went out to that quiet northern home from the thousands of hearts that owed him thankfulness, and that feel so keenly that not they alone, but all England and all that wider world that speaks her tongue and shares her literature are the poorer now that he is gone.

FROM OTHER LANDS.

WHILE the days are wintry in England and our gardens can as yet do little for us, we think it well to give a rather larger proportion than has heretofore been the custom of THE GARDEN to letters and illustrations of gardens and of plant life in more southern countries, and especially in those that are most frequented by our countrymen.

Many English people have winter residences on the French and Italian Riviera, that coast so full of natural beauty and so genial of climate, facing, as it does, the full southern sun and sheltered from all northern chill. From Hyères westward in France to Spezzia at the easternmost end of the Bay of Genoa, first the Maritime Alps and then the more easterly range that dominates the whole Ligurian seaboard secure to all this coast-line of some 200 miles a warmer winter climate than even that of Algiers. Many English people also live in Rome and in Florence, some in Algiers, and from these and other winter resorts and their immediate neighbourhood come many of the flowers that are hardy in our gardens.

To name only a few of these, there is the great Asphodel (*A. ramosus*), a plant that, with the noble-foiled *Acanthus*, prevails throughout the whole circuit of the Mediterranean littoral; there is *Anemone apennina*, common at the edges of bushy thickets in the Roman Campagna; there is *Anemone fulgens* of the Riviera Olive yards, and the larger form of the same flower from Greece. From Greece also we have *Anemone blanda*, a near relative of *A. apennina*. Then there are the *Hexes* of all Italy that grow almost as grandly in Devonshire, and even in less badny parts of our islands. There are the *Cistinea* of the southern coasts, *Iris stylosa* and the giant Fennels of Algeria, the many Daffodils of Spain, Portugal, and the Pyrenees, all equally at home with us.

And though we deal mostly with English gardens, we must not forget that garden beauty, and the study and practice that go to its achievement, are not of one country only, but that such knowledge and observation as will help in its purposeful design may be gathered out of all lands. Moreover, it may be a matter of keen interest to many a good working gardener who sees the paper to have clearly pictured in their native plenty and luxuriance these growths of more southern lands that he may perhaps only know as potted individuals in a greenhouse or single plants in a flower border, but can have no other opportunity of seeing as natural masses, conspicuous either for intrinsic beauty or for some important presentment of distinctive character. We shall hope also to show some of the extremely curious and interesting gardens of Japan, another part of the temperate world from whence come many of the best of the plants that are now indispensable in our English gardens.

NEW AND RARE PLANTS.

CYPRIPEDIUM SANDERIANUM HYBRIDS.

WHEN the species *Cypripedium Sanderianum* first flowered, it was thought that the connecting link which had divided the Eastern section of *Cypripediums* and the South American *Selenipediums* had been found. As far as the records go at present this most desired amalgamation has not been effected. On the other hand, *C. Sanderianum* has proved a success as a parent in combination with others of the Eastern *Cypripediums*. It is unfortunate that *C. Sanderianum* is of a slow growth, and this doubtless accounts for its shy flowering character. In 1886 Reichenbach described *C. Sanderianum*, and, as far as records go, there are only five hybrids with this species as one of the parents. In each of these offspring the influence of *C. Sanderianum* has been remarkable, and in every case most distinct and desirable additions have been made. I have no doubt the number will be soon increased, as most Orchid collections have now crosses in a forward state that have been procured from this source. The first to flower among this section of hybrids was

C. SANDERIANO-SUPERBIENS.

It is the result of intercrossing *C. superbienis* (Veitchii) and *C. Sanderianum*. This is by far the best hybrid of the section that has yet appeared, the dorsal sepal being upwards of 3 inches in length, 2 inches broad, and the ground colour white, becoming suffused with purple towards the base, where there are tracings of green; the whole surface is banded with rich purple-spotted lines. The lovely petals are upwards of 5 inches long and about an inch broad, the greenish white ground colour heavily suffused with purple at the base, lighter

towards the apex, the whole surface being thickly covered with rich purple-brown spots, the outer edges thickly covered with prominent purple hairs. They are much crested on the margin, and have the characteristic twist seen in the petals of *C. Sanderianum*. The large lip is wholly deep brown on the outside, spotted with purple on the interior. It was raised in Mr. Norman Cookson's collection, Oakwood, Wylam-on-Tyne, and was exhibited at the Royal Horticultural Society's meeting on August 29, 1893, and received an award of merit.

The second hybrid to flower was

C. PRINCESS MAY.

which flowered in Messrs. E. Sander and Co.'s nursery in 1895, having been derived from the intercrossing of *C. callosum* and *C. Sanderianum*. It is another beautiful addition to the hybrid *Cypripediums*. In shape it reminds one of a superior form of *C. Morganii*. The dorsal sepal displays rich chocolate lines on a greenish white



CYPRIPEDIUM SANDERIANO-CURTISII.

(Shown by the raiser, Mr. N. Cookson, Oakwood, Wylam-on-Tyne, at the last meeting of the Royal Horticultural Society, and given a first-class certificate.)

ground. The petals also have the intermediate characters of the parent species, and are covered with numerous dark brown spots. The prominent lip is wholly of reddish purple.

C. HARRISANUM.

is a secondary hybrid derived from the intercrossing of *C. Harrisianum* (*villosum* - *barbatum*) and *C. Sanderianum*. This is certainly one of the most distinct among the hybrid *Cypripediums*. The dorsal sepal is greenish white, spotted and shaded with deep brown, the lateral one being similar in colour. The long reddish brown twisted petals shade to greenish white at the base, the whole being covered with numerous dark brown spots. The highly polished lip is deep brown, veined with a darker shade of colour. It first flowered in the collection of Mr. Clarke, who exhibited the plant at a Drill Hall meeting of the Royal Horticultural Society.

The next hybrid of this section to appear was

C. MRS. REGINALD YOUNG.

which was raised in Messrs. Hugh Low & Co.'s nursery by the intercrossing of *C. Lowii* and *C. Sanderianum*. It is distinct and pretty, and inter-

mediate between the two species. The dorsal sepal is bright yellow, suffused with rich purple at the base and longitudinally lined with prominent purple bands. The lower sepal is similar in colour. The petals are greenish white at the base, suffused with purple towards the apex, the basal half thickly covered with brownish purple spots. The lip is deep purple, veined with a darker shade of colour. The plant was exhibited by the above-mentioned firm on June 28, 1898, when it received a first-class certificate from the Orchid committee of the Royal Horticultural Society.

The subject of the accompanying illustration,

C. SANDERIANO-CURTISII.

is derived from the species indicated in the name. It is one of the most distinct and charming hybrids of this section. It was raised by Mr. N. Cookson, Oakwood, Wylam-on-Tyne, who exhibited a plant at the Drill Hall meeting of the Royal Horticultural Society on June 23 last, when it was awarded a first-class certificate. The dorsal sepal is upwards of 2½ inches long and about 2 inches in diameter, the ground colour creamy white, shading to green, thickly and evenly banded with bright purple. The petals are each about 6 inches in length, brownish purple, and thickly covered with darker brown spottings. The margins are much crisped and show the characteristic enrlings of *C. Sanderianum*. The lip is upwards of 2½ inches long, in shape resembling *C. Curtisii*, and deep brown, veined with a darker shade of colour. The shield-like disc on the column is most interesting and shows the intermediate characters of the parent species. The habit of growth is robust, the leaves pale green, indistinctly tessellated, and generally indicate the influence of the species used in its production.

H. J. CHAPMAN.

A NOTE ON THE CLEMATIS DISEASE.

A YEAR or two ago you asked for any memoranda on this disease; perhaps these few observations may be of interest. My drawing-room bow-window faces due south. A plant of *Clematis The Queen* grows fast up a rod, but quite in the shade of a *Cupressus stricta viridis* growing one on each side of the steps leading down from the bow-window. The *Cupressus* is 8 feet in height.

I thought the *Clematis* would be better for a little more light, though green and strong, so I trained it out into the open, out of the shade, with care. Next day, after sun, the whole thing drooped from root to crown, and it died down to the base as they always do when stricken. It seemed to me that at last I had mited cause and effect, and set a troublesome matter at rest. For I had indulged in a dream of beauty, and thought how lovely the effect would be of a double avenue of Irish Yews, each straight, 15 feet to 20 feet in height, and trimmed through long years to one stem and a tapering spire, each one draped with a different new *Clematis*.

I acted upon this thought. Behold, thirty or so Yews, each one supporting its frail sisters with its long wobbling canes, stick and brittle critic stems and big labels. Also imagine the critic of the hearth regarding the result with scornful eye, and observing that it was just like my foolish ways to suppose that anything would grow right on the top of a big old root, when all sensible people planted deep in good soil against their house windows, &c.

First year: All started and ran, and my soul swelled with anticipation, when suddenly what is this, and this? Can this be death? Water, water? But no, give up the hopeless task and fall back upon the only hope that the crown may start again from the bare ground. So as I had noticed that the plants went off in sunny weather, I thought that the strain of evaporation must be too great for such hair-like stems, and especially after the experience first told. So after restoring all gaps I watched them all next year and watered vigorously in bright weather. Result: Much the same, a little better, but plainly it was not that. Restored gaps again, built a cement circle round each crown to keep the crown dry, watered as before, but with less belief in the watering idea. Result: Decided improvement, and some of the

trees quite prettily clothed to the top kermesina, Jackmanii, Veitchii, Beauty of Worcester, &c. Restored galls, and filled in all round the crowns with dry sand 2 inches deep, and did not water at all. Result: This year no galls, no disease.

REFLECTIONS ON THE EXPERIENCE.

That no Jackmanii had gone off at all. That all the red Viteellas had gone, over and over, except kermesina, and at last I did not replant them, but must try again now. That the worst are the lanuginosa type, and especially the dwarfest ones. That the disease is caused by fungus which runs on the surface of the soil and rings the stem. That I am not sure of this, because I have seen a stem die off down to a high-up fork. But possibly this may not be from the same cause.

I saw in THE GARDEN last year some suggestions which tended in the same direction as my experiences, and I felt fortified accordingly. Some of the most delicate which I lost steadily till I gave them up for a time may yet fail. I do not know, but I do not think they will when I try them again. That neither sun, nor rain, evaporation, or quality of soil affect the plants, as I thought at first, but bright sun seems to bring on a crisis.

Ambl. sid. H. B.

CORRESPONDENCE.

(The Editors are not responsible for the opinions expressed by their correspondents.)

FALSE IDEALS.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—All lovers of the beautiful in the garden will have read with a feeling of unalloyed pleasure the leading article on "False Ideals" that appeared on January 20. Long may such sermons be preached in these columns in like unambiguous language, for it is only by the steadfast and continuous upholding of the banner of the true ideal—the ideal that follows the teachings of Nature—that we may hope to stem the tide of senselessly dwarfed and doubled abortions that threatens to banish natural beauty of form from the borders of our annual flowers.

Of old, as may be seen from the portraits of Yandyck and other painters, it was the fashion for every lady of title to be accompanied by her dwarf. Happily, such miserable travesties of "the human form divine" no longer degrade the *entourage* of the fair patrician, and in our flower gardens the artificially dwarfed and the mis-shapen, for the excessively doubled blooms of the present day are but monstrosities, should be treated with a like intolerance, since they are departures from Nature's true mould, and obscure rather than reveal her intentions.

The simple beauty of single flowers is oftentimes hopelessly marred by the doubling process, the precious form being lost in the multiplicity of petals. In the case of the Hollyhock, as stated in the article in question, many of the newer strains are hopelessly spoilt by extreme doubling. Far more beautiful is the Hollyhock of cottage gardens alluded to, where the outer frill of petals has a clear margin on which the moderately doubled centre does not encroach, but still more charming to many eyes are some of the single forms, such as the Fig-leaved Hollyhock (*Althæa trifolia*) with its pale yellow flowers of refined contour.

Tuberous Begonias have, perhaps, suffered more from doubling than any race of plants, many of the blossoms being simply shapeless balls of tightly-packed petals. I was glad, however, to observe at the Temple show last summer that in the best of the newer varieties this inartistic doubling had been considerably modified, and that shapely flowers with a clear sweep of outer petals were well represented.

The old, mahogany-red, single Wallflower, known by Somersetshire cottagers as the Bloody Warrior, formed large branching plants. Stocks may now be met with in village plots 2 feet and more through and masses of bloom, while on the south-western sea-board great *Calceolarias*, often as much as 5 feet in diameter, enlarge their borders year by

year and afford sheets of glowing gold through many weeks of the summer. In these cases each individual plant is a picture, whereas with the much-lauded "dwarf and compact" strains such effect as is possible is to be gained only by numbers, since the plants, singly, lack their natural characteristics of growth to so great an extent as to be merely insignificant spots of colour.

Dwarfed plants are doubtless useful for carpet-bedding, but here we have another "false ideal." Despite the eulogies of the advocates of this style, it is impossible to allow that geometrical figures in crude, flat colours are admissible in any description of garden whatsoever. Not even the meanest flower that blooms should be put to the debased use of forming patchwork patterns, which, bad as they are when composed of inanimate bricks and tiles within the precincts of the house, are infinitely more distressing to the artistic eye when fashioned of living flowers in the garden, where of all places the charm of Nature rather than the tricks of artifice should be studied. Happily, criticism of the carpet-bedding system, thanks chiefly to the author of "The English Flower Garden," is no longer as "a voice crying in the wilderness," for of late years the teachings and suggestions of Nature have been reverently followed in numberless gardens that have, as a consequence, been invested with a restful charm to which they were necessarily strangers in the days of their geometrical floral designs. There remain many, however, where foot-rule and shears still successfully restrain the Earth Mother from revealing herself in her fairest guise.

S. W. FITZGERBERT.

THE DOUBLE ROCKET.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—Your illustration and articles about *Hesperis matronalis* interest me greatly, as I have grown the plants somewhat as Mr. J. Hill Poe advises. But the cottage gardener who gave me the first slips showed me what he said was the real old English double Rocket, a much compacter flower-spike, unbranched and close, like a very double Larkspur. This rarer kind appealed more to the gardener's taste than to mine, and I do not know whether he succeeded in growing it. I do not know whether the *Rudbeckia grandicephala striata* described by "T. J. W.," Woodside Park, is to spare, but I would be very glad to have some if he would send a small scrap in exchange for other plants.

R. M. SIMMONS.

One Oak, Chesham, Herts.

STRAWBERRIES FROM SEED.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—I should be glad if you would give some information on the cultivation of Strawberry *Jeanne d'Arc* for late use. I sowed the seed last spring, but got no fruit. What I am anxious to know is, if the plants bloom this year, whether the early flowers should be picked off or not, and if so, for how long.

SOLPHINE.

[In reply to "Solphine" we gladly give a few notes on Strawberries for late use, *i.e.*, the alpine varieties. As is well known, there are other means of getting late Strawberries; for instance, plants that have been forced and planted out in June will give a second crop in September and October if well attended to. We have sown seed under glass early in the year and obtained a little fruit from each plant the following autumn, but to do this, of course the best possible culture and also glass are necessary. Seed sown in the ordinary way in the spring will not give fruit the same season, and my best late fruits have been obtained from seed sown in the late spring of the preceding year. Our correspondent names the spring of last year as the time he sowed, and this year should get a very good crop of fruit, and for late supplies it will be necessary to pick off all the flower trusses that show until well into July. Plants on a cooler border give a succession of fruit, but it is not well to grow them on a north border, as the fruit in some seasons fails to ripen, but the latest supplies are obtained from plants on a west border. These when planted are small seedlings, and they should

be denuded of their flower trusses till the date named, and as they are later in showing than those on warmer borders they are more useful.

We have also secured late fruit from runners planted in the spring. These placed out in rich land on an open south border 12 inches apart will give good fruit up to October. The plants do not show bloom so early as the seedlings, but when they do so it must be removed till June or July according to the date at which the fruits are needed. At the same time the plants must not suffer in any way from want of moisture or food, and those raised from runners need more than seedlings. We would advise "Solphine" to give the new St. Joseph a trial for late fruit; it is the best late Strawberry we have grown. This variety is larger than some of the alpine, and runners planted in spring will fruit in the autumn. St. Antoine de Padone is also a very fine perpetual and may be had very late, and so also is Louis Gauthier. These all do well if grown from runners, and are very late if the first flowers are removed. It is usually a safe practice to pick all flower trusses from the plants well up to midsummer and then feed freely with liquid manure till new trusses form.—Eus.]

A NOTE ON *TROPEOLUM SPECIOSUM*.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Four years ago I planted two in a compartment of cemented stone, with a hole for drainage below heaps of crocks, and filled (for *Cypripediums*) with peat and leaf-mould. On each side of this compartment stands a tall Irish Yew, and the roots are cut off from and beneath the compartment.

The whole is on the north side and in the dense shade of a 30-foot *Alicia Albertiana* and no ray of sun can pass. The two started and grew to the top of the 15-foot Yews and flowered gloriously the first year. In the winter I saw my gardener pulling out the dry stems. One he has cleared, the other not touched. I stopped it, and next spring this was the result: The untouched grew and flowered, a pillar of fire; the other never stirred. It was not dead, as there was life deep under ground, so I left it. The flowering one became a mass of blue seeds, and I left untouched both seeds and stems. Next year neither one nor the other stirred, till late in summer some runners started away from one or other crown, and are now, January 20, alive and growing (old roots alive, but dormant).

This seems certainly to show that it is bad to cut the old stems, as they are all alive. Also, probably, that it is wise not to let it over-fruit itself.

H. B.

Ambl. sid.

P.S.—I don't think it cares what it grows in.

KEW GARDENS.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—As a countryman to whom perhaps the greatest delight of a visit to town is the opportunity given for seeing the Royal Gardens, Kew, I should like to be allowed to offer my congratulations to the new editors of THE GARDEN on the appreciative tone of the initial article under the heading, "Our Botanic Gardens." My recollections of Kew go back over a quarter of a century, and though I always looked upon it as a garden unique in its interest for gardeners and garden lovers, the improvements carried out during late years have been vast, so that one goes now to see not only a botanic garden in a beautiful situation and of great scope, but a charming garden as well, in which our best plants are well planted and well grown. Kew must have been to many the teacher of how best to group and to grow many beautiful hardy plants, for though a few other private gardens must claim precedence in this work, it was the first and remains the best public garden to popularise these better methods, and I think I am right in saying that simultaneously with this forward movement came better culture in all departments of the huge establishment. Kew now stands as a teacher of how, as well as what, to grow. The special features which have been attained have been well pointed out by you, but those who know Kew know too

that you have by no means exhausted its beauties, and that it will repay the visitor far far more than the cursory "look round" which these noble gardens usually get. CORNISH.

THE NEW ZEALAND FORGET-ME-NOT.

[TO THE EDITOR OF "THE GARDEN."]

SIR, "E. J." in the sub-heading of his paper, published in your issue of 16th September last, on *Myosotidium nobile* (New Zealand Forget-me-not) inserts a mark of interrogation after the New Zealand as if he were in doubt as to the original habitat of the plant. It is not a native of the mainland of New Zealand, but of the Chatham Islands, a small group lying some 300 or 400 miles due east of Banks Peninsula, which lies, roughly speaking, about the middle of the eastern coast of the South Island of this colony. As the Chathams belong to this colony, I think the plant referred to may reasonably have assigned to it the name chosen as the English one. Here we call it the Chatham Island Lily.

I have failed more than once in establishing the normal or blue-flowered form in my garden here, but I have had a plant of the white-flowered variety for several years, and it is still healthy. The blue-flowered and prettier variety does not thrive well in Dunedin gardens, but does excellently on the Otago Peninsula, a few miles away, and I have seen splendid specimens at Port Molyneux, 60 miles to the south, where the winters are more severe than here. I am satisfied that the plant cannot be grown to perfection without sea air. In the Chathams it grows chiefly, if not exclusively, on the coast even within reach of the spray, but a friend who visited the Chathams not long ago informed me that the plant was rapidly disappearing from the islands, being eaten out by stock, and was only to be met with wild in almost inaccessible spots on the coast. Some growers say that the plant thrives best if the soil round it be occasionally sprinkled with a little salt. Probably an occasional spraying with sea water, if obtainable, or, failing that, salt and water would prove beneficial. That this noble plant grows well in some parts of England was evidenced by an illustration you published some time ago of a specimen in a Cornish garden. I am curious to know if it grew near the sea.

Dunedin, N.Z.

A. BATHGATE.

SELECTION OF TREES AND SHRUBS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Would you give me a small list of shrubs and trees, such as Thorns, &c., for a rather windy part near a moor? The soil is rather black, and I have mixed a lot of leaf-soil with it. I should like to know if flowering or evergreen Rhododendrons, Azaleas (we have a lot), and Laurels would do well. J. BEAN.

[Only shrubs and trees of vigorous constitution should be planted in your wind-swept part of the country, and you may rely upon those here mentioned answering your purpose. You say Rhododendrons and Azaleas do well in your locality, which, of course, is a splendid recommendation, as they are capable of producing gorgeous effect when judiciously placed, *i.e.*, having due regard to habit and vigour of plant, colour of flowers, and time at which they are borne. We are not very partial to the Laurel, as it is, like the Privet, a hungry plant and soon robs the ground of its goodness, besides it is frequently cut in bad weather. Barberries would be a success and produce a wealth of lovely blossom in spring and summer and showy fruit in autumn. The purple-leaved variety (*B. vulgaris purpurea*) is not only one of the most effective of dark-leaved hardy shrubs, it is also one of the least fastidious, as it flourishes in barren ground. The best colour effect is produced by plants which have been subjected to hard pruning in early spring. The *Phillyreas* form a small group of accommodating shrubs of compact habit with evergreen foliage. With the exception of *P. decora* (*syn. P. viburnifolia*), all have small deep green leaves and are thoroughly hardy. The Spanish Broom (*Spartium pumica*) is another first-rate shrub for your purpose. The Dogwoods (*Cornus*) flourish in moist situations, and the golden-leaved form named

Spathii is very attractive. The evergreen Oleasters give colour in winter, as the foliage is very bright and constant. The Thorns are delightful spring-flowering trees of medium growth, but require protection from the north and east. The under-mentioned sorts would suit you well. *Crataegus oxyacanthoides flore-pleno coccinea* is the well-known double scarlet Thorn. The red flowers are borne with great freedom and last a long time in good condition. The single-flowered form *pumica* should be planted freely, as a good-sized tree in full blossom is very pleasing. *Multiplex* is a grand double-flowered white variety, and *C. coccinea* from North America is very beautiful in October by reason of the glorious colours assumed by the decaying leaves. The common *Laburnum* is an old favourite, and when in flower few trees are more beautiful. The stronger growing forms of *Deutzia* do well in damp soil. The Bush Honeysuckles are also valuable and tenacious of life. *Pyrus Malus* and its allies should not be passed over without comment, and the Snowdrop tree can be well recommended. Few shrubs are more pleasing than the Lilacs, and some of the later introductions from the Continent are desirable garden shrubs. For damp soil and exposed situations the flowering Currants (*Ribes*) are difficult to beat. *Rosa rugosa* is beautiful in fruit as well as in blossom. It is free in growth and floriferous. The Willows and Elders love damp soils, and cold winds have little effect upon them. —EDS.]

THE SWEET PEA CONFERENCE.

[TO THE EDITOR OF "THE GARDEN."]

SIR, The letter of "Alpha" in THE GARDEN of January 20 last, and others which preceded it, are surely sufficient to prove how absurd it is to convene a conference for the purpose of classifying the varieties into groups of colour and form, &c. Does the Sweet Pea vary so much in form that it is considered necessary for growers and others to meet together to classify them into types, &c.? Surely the individuals who wish to identify themselves with the work of the proposed conference could find something better to do. As your correspondent rightly observes, the Sweet Pea is "a simple garden flower," and if a number of faddists, instead of meeting in conference, as is proposed, would make the best use of the material already available, and work the numerous exhibitions, large and small, throughout the country, encouraging competitions at these shows, a stimulus would be given to the cultivation of named varieties, and the best interests of the flower thereby served. As "Alpha" remarks, the Royal Horticultural Society might institute a trial of varieties, and this should be of a most representative character and quite up to date. Synonymous sorts would by these means receive the attention they merit, and this, after all, is the only good that a conference and trial combined could accomplish. Growers of these beautiful hardy flowers fully appreciate the generous offer of prizes made by the trade and others interested, and if their zeal were directed in the channel above suggested, they would be among the first to benefit as a result of their enterprise. J. DEN.

SIR, The note at p. 46 in THE GARDEN from "Alpha" so aptly expresses my own views of the proposed conference, that I should not have asked for your valuable space if the last few lines of "Alpha" had not touched upon a point that well deserves consideration. I think the promoters of this conference who settled this matter in Edinburgh, ignoring the Royal Horticultural Society, would have done well to have had the conference in that city, but amongst the names of its supporters, I find few who reside north of the Tweed, and I shall be anxious to know when and where the conference will be held, as certainly an outside self-constituted body cannot expect much support from the southern growers. It seems absolutely folly in this age, when there are in truth far too many conferences, to begin one about the Sweet Pea. It is a simple garden flower, and, as "Alpha" properly points out, trials for the purpose of ascertaining whether certain varieties are synonymous may be as well accomplished by the Royal Horticultural

Society as any specially constituted body. I am sure that if it were suggested to Mr. Wilks that the time had come for a thorough trial of Sweet Peas, it would be carried out. S. V.

SAXIFRAGA OPPOSITIFOLIA.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I should like to substantiate your remarks on *Saxifraga oppositifolia* in THE GARDEN of January 20 by the fact that I gathered some just about a year ago close to the summit of Snowdon, overlooking a precipice, which, as everyone familiar with Snowdon will know, probably to his cost, "is often bathed in mist," and just such a place as you describe. I may say that a bought piece is flourishing very well in my alpine garden here, but it has only been planted as yet about fifteen months.

ERNEST LINGFORD.

The Limes, Colthorstone.

THE PROTECTION OF TEA ROSES.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I am sorry to have to disagree with any contributor to THE GARDEN, but Mr. D. T. Fish's comments on Mr. Mawley's views on the delicacy of Tea Roses are so absurd and so incorrect, that I take up my pen to make a few remarks in support of Mr. Mawley's views. I have known Mr. Fish's name as a writer on Rose topics for some years. I do not know him, but I assume that he has been the head gardener in some nobleman's or private gentleman's garden, as I do not know his name either as a nurseryman or an amateur. I have frequently been inclined to write to various garden papers on what Mr. Fish has said in them on the culture of Roses, as his experience and statements have usually been absolutely opposed to the views entertained by some of the greatest of known rosarians. I refer more especially to such men as Mr. Lindsell and Mr. Benjamin Cant, gentlemen whom no one with the slightest knowledge of the leading men in the Rose world can ignore. With Mr. Lindsell's views on Rose culture I am well acquainted, and I may say that in every respect we agree; the essential difference between us is that he is the best amateur exhibitor in the kingdom, and that I can only, with others, play second or third fiddle to him in leading positions. Mr. Benjamin Cant has been the leading professional for over a quarter of a century, and he is both well known and deservedly respected by all rosarians. Both of these gentlemen have frequently expressed to me views in agreement with what Mr. Mawley has written in regard to the delicacy of Tea Roses, and Mr. Benjamin Cant once said to me, "Wait till we have a really severe winter, and then we shall see what want of protection will do to Teas."

We have not had a really severe winter since 1880-81, but the mischief done then was so great, that in the following autumn very few nurserymen could supply Teas. No difficulty at any time has been felt in regard to the supply of Hybrid Perpetuals.

I think I know as much as any other amateur, not more than any other, in regard to the cultivation of Tea Roses, and I grow about 3000 standard Teas. I do not believe in nor do I grow any dwarf Teas, having discarded my last lot of about 1000 this autumn, and I should not dream of allowing my men to leave my Teas unprotected after the end of November: the maiden Teas more especially. The fact in regard to Tea Roses is that there are not six varieties amongst them which are at all hardy, but there are gradations of delicacy also, and I consider amongst the most delicate to be *Mme. de Watteville* (specially named as hardy by the authority of Mr. D. T. Fish), *Mme. Cusin*, *Comtesse de Nadaillac*, *Ethel Brownlow*, *Cleopatra*, *Catherine Mermet* and all her children (well known to rosarians), and Ernest Metz. I could go into this question more fully, and certainly more carefully than I do in this short note, but I write in haste to catch post.

CHARLES J. GRAHAM.

Wrydehands, Leathchead.

THE OLD PALACE AT MATHERN AND ITS GARDENS. 2.

I AM not one of those who quarrel over Nature *versus* formalism in the garden. The sympathetic garden-lover sees nothing to clash in the two principles. Each has its sphere, and the boundary line is not difficult to settle by those who wish peace on earth.

The best of gardening is perhaps to lovingly tend one of Nature's choice spots; to remove what injures, and to heighten what improves its form, to vary and stimulate its flora, to retain the grace and feeling of the wild while adding the eclectic richness and reasoned beauty of the cultured.

But the immediate intrusion haphazard and unprepared, amid the countless curves, the suave lines, the disordered harmony of a bit of broken, woody, picturesque ground of so hard a geometrical unit as a house is apt to give to this latter the appearance of a philistine trespasser in Arcady, and it is generally well to interpose some neutral zone between the two. At the same time, the amount of terrace and formal garden and their character, simple or elaborate, should be in strict accord with the style of the building and the peculiarity of the site.

Here, where no two walls are quite parallel or precisely at right angles; where the original irregularity has been intensified by the entire and partial removal of some, the addition of other portions, and where time has mellowed the lines, the angles and the details, even the immediate surroundings needed a much-qualified formalism. Terraces perfectly balanced, severely geometric, elaborately balustraded would have been as a ring of haughty reproach and conscious superiority to the modest simplicity and amiable license of the dwelling of which they should be merely the supporters.

And so, in the forecourt, though the roadway is sternly straight and stifferly avennued with tubs of tall *Geraniums*, its grass sides are of unequal width, and flanked by rough, vegetation-clad walls of unequal height, one of them quite out of line. And, going through the house, the paved way from the garden door has on one side a little stretch of grass, fitting as best it may into the ruins of the banqueting hall. And on the other side, between it and the west wing building, are beds of dwarf evergreens, Heaths and *Sedums* (relieved by *Gladioli* in summer), which give some variety of form and colour in winter at a point commanded by many windows. Beyond this the wall of the first terrace is the original division between the farm potato patch and the field: 3 feet high only on the former side and not obstructing the prospect. The space within the small enclosure (25 by 40 yards) is, besides the portion above described, laid out in paths, beds, and borders all edged with stone (I found the cobbles which paved the farm buildings excellent for this purpose). Two of the divisions have depth enough for Yews and a few flowering shrubs at the back of the herbaceous plants and bulbs; the narrower ones are furnished with these latter alone. I greatly prefer a stone to a grass edge. The latter either is spoiled by the plants growing over on to it, or spoils the plants by their being cut back to keep it free. But the stone edging may be buried under *Stoncrop*, *Toadflax*, *Sandwort*, *Cyclamen* and a host of humble growths, which also make a carpet for the taller things behind, and may well be allowed to trespass pleasantly over the path.

This garden is entirely open to the sun and air, the far-spreading house sheltering it from all northerly winds. There are no trees to rob the roots and shade the stems, and the plants grow sturdily and yield an abundant wealth of

bloom. Thence we go down four or five steps on to the bowling-green. It rests the eye after the turmoil of path and bed and bloom. Its even surface of turf is carried right up to its low retaining walls, except where it breaks through as a wide Yew-bordered grass walk along a kitchen garden. But against the side where it drops from the upper terrace is a border of Tea Roses raised upon an 18-inch dry wall (over which tumbles a long line of Pinks), and divided

up were they, that the first summer I was here they went nearly dry, as the proper water level was reached by the mud. So I dug out the little upper pond, whose springs, working through the bottom, soon fed it again, much to our inconvenience. But the long middle pond I converted into a canal, a dozen feet wide, by cutting out the banks between it and the upper and lower ponds, by putting a little wattle barrier down the middle and by throwing the



MATHERN PALACE. THE WATER GARDEN.

from the grass by a gravel path along its length. The west wing of the house is also set upon its own little terrace. But here formalism ends, and we descend to the rock garden, where the naturally rapid slope of the orchard is varied and intensified, and through which paths, pushed into irregularity by the contours of the broken ground, dip down to the water garden.

I found three oblong ponds, overhung by pollard Willows, occupying the hollow of the meadow at the foot of the orchard. So silted

yard-deep mud of the one half into the other. The loam of the bank, which I altered into a gradual slope, added to any rough stone, cinder, sand and leaf-mould I could get, solidified this bit of reclaimed land full of humus. I stretched a broad grass path down it with a narrow boggy border for common Flags, Rushes, Forget-me-not, *Mimulus*, and other water-lovers on the canal side, and on the other side a wide gradually rising border, wet at the bottom, dry at the top, and so capable of satisfying the idiosyncracies

of plants with more or less thirsty habits. At the bottom, scarlet Lobelias, Japanese Flags, Rocky Mountain Columbinas, Meadow-Sweets, Rudbeckias and the like flourish in large colonies; above them are deciduous shrubs, *Althæa frutex*, *Hydrangea paniculata*, *Viburnum plicatum*, *Staphylea colchica*, *Spiræas* in variety; and along the top runs a hundred and fifty feet length of varied Michaelmas Daisies, bordered by another grass path, which, being the end of the garden, no one who cares only for plants in bloom need pace except in autumn. The ground about the ponds and on the other side of the canal is little gardened. The Apple and Willow trees largely remain. Quinces, Medlars, and a few shrubs have been added, and the grass is studded with Primroses and Daffodils. Phloxes and a few other perennials, whose bloom the hot sun of the terrace gardens scorches, are being moved down there also. The damp of the ground and the partial shade of the trees give great value to this section of the gardens in the cycle of arid summers which we are passing through. With all our watering the terrace gardens have shown signs of flagging. But the water-garden, with no weary playing of the watering-pot, has flourished exceedingly—moist, luscious, green and restful.

The kitchen gardens have no special feature or great extent, but they have space for a nursery and reserve of plants, and a section for cut flowers, Carnations and Sweet Peas, bulbs and Violets, and, very especially, China and Tea Roses, so that long shoots, with plenty of bud and leafage as well as bloom, may be cut with recklessness, and, wedged in bronzes, carry even into the house the air of luxuriant growth which it is my aim to realise out of doors. This I can only attempt by limiting myself to those sections of plant life, happily numerous, which like my soul. I have to bar the gate to American plants and the whole tribe that fattens on peat and sand, but which here, even with much pains and soil-making, ekes out but a precarious and joyless existence. I have a vision of rock and wood and stream where *Rhododendron* and *Azalea*, *Pernettya* and *Gaultheria*, *Trillium* and *Cypripedium*, and the whole of the desirable Lily clan are revelling in the moist gritty vegetable mould set about amid the mossy boulders by the rushing water's edge, and backed by cliffs out of whose clefts rise the indigenous Yew trees. But to realise this is a future task. I can now only watch the site, with hope mingled with impatience. For the nonce, in a world where time and means are apt to have narrow limits, I have plenty of scope close around me here, and it would be grasping and ungrateful to be much dissatisfied with the results attained.

H. AVRAY TIPPING.

[The photographs for this article were kindly taken by Mr. J. E. Laurence, The Cedars, Cheltenham.]

Jasminum nudiflorum. This beautiful winter flowering climber is in full beauty now in many gardens. It is very welcome at this season, especially when associated with some dark-leaved climber, such as *atropurpurea* or *nigra*.

WOODLAND AND FOREST.

FENCES FOR WOODS.

ONCE heard a proprietor say that the margins of woods should never be of formal outline if good landscape effect were desired; that woods should never be fenced where fences could be dispensed with, and that where fencing was necessary the fencing should, as far as possible, be invisible. These rules have not been observed hitherto, for nearly all the woods in this country are fenced, and often fenced in the most objectionable fashion. Stone walls round plantations are horrors; formal hedges are not

or squares. In many of the pastoral districts of North Yorkshire and Westmoreland, where planting has been done for shelter and ornament combined, this kind of planting is the rule, and many notable examples are to be seen from the Midland Railway between Skipton and Penrith. Within sight of each other I have seen on the sides of the hills at intervals plantations in the shape of squares, circles, parallelograms, and acute angles of various degrees, and the inevitable stone fence round them all. The marvellous taste displayed in the region named has always struck me, and I have often had occasion to go there. I said to an estate agent there one day, "Why on earth do you stick so rigidly to such formal devices?" and his reply was, "Well, I suppose the fields, you see, are mostly square, and they have made the woods to correspond." Owners of estates have usually some taste in such things, and the wonder is that they permit such outrages.

Of all kinds of fences round woods, live fences are the worst, because they never thrive, are most expensive to keep up, and are always formal. I am speaking of estates of considerable size on which the wood fences extend to many miles, the expense of which is great and debited to the woods. I do not know of one single estate on which the live fences of long standing are in good order. The fence is always close to the wood and the shade kills it. The gaps are then mended up anyhow with stakes or wire or loppings stuck in anyhow to fill the gap. Tenants are continually troubling the estate office about their cattle straying into woods, which means frequent journeys to distant points of the estate with men and materials and much expense. What between rabbits on one side and cattle on the other, the getting up of a live fence round a wood is about one of the most futile proceedings I can think of. If a wood cannot provide its own fence, then tightly-strained wire ought to be resorted to. The least objectionable fence for a wood is one made of stout rails with the bark on. It looks rustic, is strong, not expensive, and can be run as close into the wood as desired. One serious objection to a live fence is that ample space must always be allowed between it and the wood, and that means a serious loss of ground to the timber crop. In a wooden fence the posts are the main thing. A man can make



MATHERN PALACE. THE ENTRANCE THROUGH THE RUINED GATEWAY.

much better, and wooden palings are not, to say the least, elegant. Yorkshire and Derbyshire are notorious for their dry stone walls. On some pretty estates, nicely planted for effect, every plantation is surrounded by stone fences about 4½ feet high, or higher, and the effect of such walls seen from the mansion or points of view are extremely bad—stiff, hard, and formal in the extreme, especially in the case of young plantations, in which the trees remind one of cattle penned up in an enclosure. This walling of our woods struck M. Boppe and his companions, French forest officers. "The woods were all enclosed," they said, "and the forester usually carried the key in his pocket." Formality in planting is almost always quite inexcusable, yet many planters or their agents seem to have no idea of planting except in rounds

these in the wood for from 3s. to 4s. per 100, cutting out, riving, and charring at the bottom. If these posts are from 3 inches to 4 inches thick they will endure for a lifetime, provided they are not driven in below the charred line, which should stand 6 inches above ground, otherwise the posts will rot off at the junction with the soil. We use any kind of wood, but prefer Oak or Fir for the posts. As to the rails, it is not of much consequence whether they are straight or crooked; and if they have the bark on, the fence will have a natural appearance that no other fence ever has. In some of the German forests the wooden palings, 6 feet high, against deer, struck us favourably. The materials are got on the spot, and consist of long, smooth Spruce or Scotch Fir rails, such as are never seen in our young woods being

of great length with the bark on and hardly visible. On the approach to the famous Castle of Wartburg the fences are of this kind, consisting of posts, set widely apart, and two or three long Spruce rails with the bark on and smoothly trimmed. The most remarkable thing about these German forests lining public and private roads everywhere is that they are not enclosed at all as a rule. We need fences in this country between woods and pasture fields, but not expensive ones; and fences are not needed on highways any more than on the Continent, where the woods come close to the road. At present the county councils keep the fences on the roadsides, and in many districts these fences about on roads that need no such protection.

Where wooden fences cannot be had, then wire is next best. Annealed, strand, and barbed wire are coming more and more into use, and make a good fence for a wood, especially when strained to wooden posts about 6 feet apart. No kind of fence can be erected more cheaply, and it is easily repaired and lasts long. The wire, or wire rope, staples, and posts are all that are required, and a labourer can set the fence up. Wooden posts are preferable, because they give a better stay than iron, cost much less, and are sooner fixed. Galvanised wire No. 4 costs about 22s. per cwt., and 1 cwt. contains about 300 yards. Annealed wire costs less. The staples cost a few shillings per 1000. In setting up a simple wire fence of the kind suggested, the terminal posts should be strong and well stayed—so, \nearrow inside. That done, a strand put on the top from end to end thoroughly tight, and nailed afterwards to the intermediate posts, will make the framework firm, and then the other wires can be put on. Stays like the above are also needed inside going round curves.

J. SIMPSON.

COLD WEATHER NOTES.

RHODODENDRONS.

THE wind this morning was exerting cold, with a hungry whistle which belied the pale sunrays, which were doing their best to redeem the situation. On such a morning one's thoughts, even before going out, fly to the younger and weaker amongst one's plants, and one's imagination towards devising new shelters, and, if possible, more efficient ones. Creepers are, in my experience, easily protected; either there is a wall against which mats can be laid, or, at the worst, a post that they can be fastened to. It is shrubs out in the open that present the greatest difficulty, nightcaps of sacking or tents of matting not adding exactly to the picturesqueness even of a winter garden.

Our more recently planted Rhododendrons look anything but happy, and I have just been prescribing a good shovelful of nourishment to be laid about the roots of each. It is not, of course, actual protection that they need, for they are hardy enough, but they sicken in this very thin, dry soil, which seems to reach them through their 3-foot blanket of peat.

Even when well grown and long established I must confess that Rhododendrons hardly seem to me to be the ideal thing for these rustling Oak copses of ours. We plant them, of course, partly for their colour in its season, partly because one is sure to need evergreens, and the common ponticum is one of the best of evergreens. But they seem to me to remain exotics, and not altogether happy ones. There are two quite distinct varieties of scenery with both of which Rhododendrons consort magnificently. One is heavy, boggy ground, deep, and dark, and oozy, under large trees, into the con-

crete recesses of which they can settle, and, spreading out in all directions, re-root themselves as they choose in the black earth, their flowers catching the divided sunrays, and turning every hollow place into a pool of colour. Another, and a still more ideal place is a steep hillside, provided that it is furnished with boulders, and provided—*bien entendu*—that the said boulders are not of limestone. There is one such hillside above the Bay of Dublin which I should find it difficult to believe might not be able to hold its own, were it confronted with any similar extent of ground, even amongst the Himalayas. It begins as a stony ravine, rising up out of a rather thin wood. As you mount, the ravine opens up, and the trees fall back. The boulders, with which both slopes are covered, rise higher and higher, and grow larger and larger, till they tower into the air over your head perfect monoliths. In and out, above, behind, and between them grow the Rhododendrons, always enjoyable, but in the flowering season a simple feast of colour, the sort of thing that in a cultivated age pilgrimages will be formed to venerate. To see them in such a place is to get a new impression of the possibilities of heroic gardening. To compare them with the Rhododendron as it is usually grown is to compare Milton with Mason, Turner with the average amateur. Your eyes are caught, your whole mind and spirit swept away upon a tide of colour; the grey micaceous granite of the ravine, the heather looking down over its top, the long undulating river of sky, even the sea below and all its ships, seeming to be merely so many adjuncts and accessories of the central picture.

Such conditions as these, it may fairly be said, are not to be found any day in the week, or in everybody's back garden. We have to work out our own redemption, each of us as we best can, and with such materials as the Fates have lent us. Happily, so far as honest natural conditions go, here in West Surrey the garden-lover, whatever other difficulties he may have to contend with, has much to be grateful for. Thanks to that blessed unproductiveness, so anathematised by Colden, the harrow has literally in many cases never passed over his soil. Its very weeds, as often as not, are of Nature's own introduction, not imported ones. Her handiwork is still plainly visible on every side. She looks up at him out of the Bracken with an aspect not very different from what she wore at the Prime, and if he wishes to spoil her—well, he has to do it for himself! This to many—and, doubtless, excellent—gardeners would seem but a poor compensation for a sadly unproductive soil and a most deplorable lack of any summer moisture. There are others, however, to whom a certain sense of indwelling peace, a certain feeling of underlying harmony, are the very first of all possible requirements. Now both of these are more easily to be found than made.

EMILY LAWLESS.

Hazelhatch, Gomshall, January 15, 1900.

TREES AND SHRUBS.

THE SERBIAN SPRUCE (PICEA OMORICA).

It does not appear probable that many more hardy species of conifers will ever be introduced to this country. The regions of the globe where such species can grow have by this time been pretty well ransacked, except perhaps the unknown parts of China. Still, odd ones keep on appearing. Little more than a decade has passed since this Spruce was first introduced and it is still uncommon. A native of the mountains of Servia, Montenegro, Bosnia, &c., it was first discovered

by Dr. Panic. Judging by its behaviour up to the present time, it is likely to prove one of the most useful and quick-growing of the Spruces, several of which do not thrive well in many parts of this country. It is a distinct species, and although a native of Eastern Europe, its nearest ally (*Picea ajanensis*) comes from Japan. Its habit is slender and pyramidal, and in its adult stage is said to equal the common Spruce in bulk and stature. Its leaves are $\frac{3}{4}$ inch long, and marked with two blue-white lines on the upper surface. The young branches are clothed with short black hairs. At Kew young plants raised from seed increase in height at the rate of 1 foot to 18 inches yearly. To those interested in conifers this Spruce may be recommended as worthy of notice. It is offered in the catalogues of several firms.

W. J. BEAN.

Kew.

CANDLEBERRY MYRTLE.

Will the editors kindly furnish the botanical name of a flowering shrub which is locally called Canterbury Myrtle? It has small bushy leaves 4 inches in length, growing like a tuft at the end of the branch. Underneath the leaves it has dark seeds like a bunch of peppercorns. The shrub is highly aromatic. It grows about 4 feet in height.

Tijshire, N.B.

S. BERRY.

[The shrub is the Candleberry (not Canterbury) Myrtle, or Candleberry Gale, of the Northern States of America, an ally of our native Bog Myrtle or Sweet Gale, with larger leaves of still stronger and better fragrance. This good shrub should be in every garden, for, though not of conspicuous beauty, the delightful aromatic scent of a leaf crushed in the hand makes it a source of much enjoyment. It is most at home in boggy, peaty ground, but will do well in drier places in peat or in sand and leaf-mould. The botanical name is *Myrica carifera*. Ebs.]

CUPRESSUS MACROCARPA LUTEA.

WHERE the Monterey Cypress flourishes, its golden-leaved form may be planted also. For decorative planting in the western and southern counties, *C. macrocarpa lutea* is well adapted. In habit it resembles the type, but its general effect is much superior. As a lawn specimen it is effective, and if well exposed to the sun the golden-coloured leafage is intensified.

CHIMONANTHUS FRAGRANS

THE Winter Sweet, as this is frequently called, is a cherished wall garden shrub, and although received from Japan upwards of 130 years ago, the number of specimens to be found in these isles is by no means great, the reason no doubt being that it is difficult to propagate. It may, however, be increased by layering in autumn, and plants favourably situated sometimes bear seed from which young plants may be raised in quantity. It succeeds best in turfy loam and leaf-mould, but abhors anything like stagnation at the roots. Although perfectly hardy and suitable for planting in the mixed shrubbery, it is advisable, but not essential, to train it against a wall, as it is then afforded protection from cold winds at flowering time. The small, deliciously scented yellowish flowers, stained with purple on the inside, are produced along the leafless twigs about the middle of December and remain objects of admiration for about two months, and will, if severed from the plant and placed in a little water in shallow saucers, keep fresh for a long time in the dwelling-room. The variety named grandiflorus is more vigorous than the type, the flowers larger, but the fragrance emitted is not so powerful. A mistake in the culture of these charming shrubs is that they are too often left to take care of themselves. This is not as it should be, as immediately the flowering period is past, pruning should be attended to. Remove the worn-out shoots and cut back the lateral growths, the object being to encourage as much young wood as possible, as it is upon the wood made during the previous growing season that the blossoms are borne in winter.

E. B.

Surrey.

WORKERS AMONG THE FLOWERS.

ROSE HYBRIDISATION AS PRACTISED BY THE LATE LORD PENZANCE.

(Described by his Gardener.)

IN contributing this short account of the work done and the methods employed by my late master I cannot help feeling that the task should rather have been allotted to someone who was better able to put into words the devotion to the queen of flowers of him whom King Death has recently taken from our midst, and who was a just and kind master to all who served him faithfully.

It was a few years before my engagement at Easing Park that the late lord turned his attention to the Sweet Briar (*Rosa rubiginosa*). Being attracted by its vigour and admirable perfume, he thought how much more attractive it might become if by some judicious crossing the flower could be improved and the scent of the foliage retained. Obtaining plants of the Sweet Briar in pots, he commenced operations, not only by fertilising the Sweet Briar with the pollen from the various Roses, but *via versa*, inoculating the Hybrid Perpetual with the pollen of the Briar. In the first batch of seedlings very few crosses were found, and upon close examination of the Sweet Briar blooms the following season it was observed that unless the anthers were taken from them very early in the morning, they burst and the pollen was shed, all blooms being in consequence self-fertilised. Buds were therefore cut open and prepared for the hybridist long before bursting, and all possibility of their becoming self-fertilised prevented. Thus the road was paved for success, many crosses being visible in the next batch of seedlings. But it was not until the tiny plants became well established that any weeding out could be attempted, as it required an experienced eye to detect the slight variation in foliage or spine in the early stages. Well do I remember cutting the bloom from the first cross, which resulted from pollen of an old Hybrid China Rose named William Jesse.

From that time onward frequent were the rewards of perseverance and patience. Many crosses resulted from the Hybrid Chinas. In the Hybrid Perpetual the most successful as a pollen parent was *Souvenir d'Anguste Rivière*, from which almost all the dark coloured varieties of the Hybrid Briars owe their origin. The Scotch Roses, *Rosa lucida*, and the Persian and Austrian Briars also played an important part. Many also were the crosses made from various Teas and Noisettes, but in no case was it a success: the hard glossy foliage and rambling habit were often produced, but no advance in flower was gained. That race, in consequence, was in future left to itself.

I should here mention that the crossing of the Hybrid Perpetual with the pollen of the Sweet Briar showed but very little result, the seedlings having no scent and but very little

vigour, while the flowers were reduced in size and slightly spotted or striped.

The next taken in hand was the species *camelliaefolia*, but here considerable difficulty was found in getting a sufficient supply of pollen; but having given the plants a good baking in the sun, the following season flowers were much more abundant, and a good supply was obtained. The idea was to transmit the glaucous foliage to the Hybrid Perpetual, so that it might be made better able to withstand the ravages of that arch-enemy, mildew. On this attempt *Dame Fortune* did not smile, for though several crosses resulted, only two could be said to carry the foliage satisfactorily, and

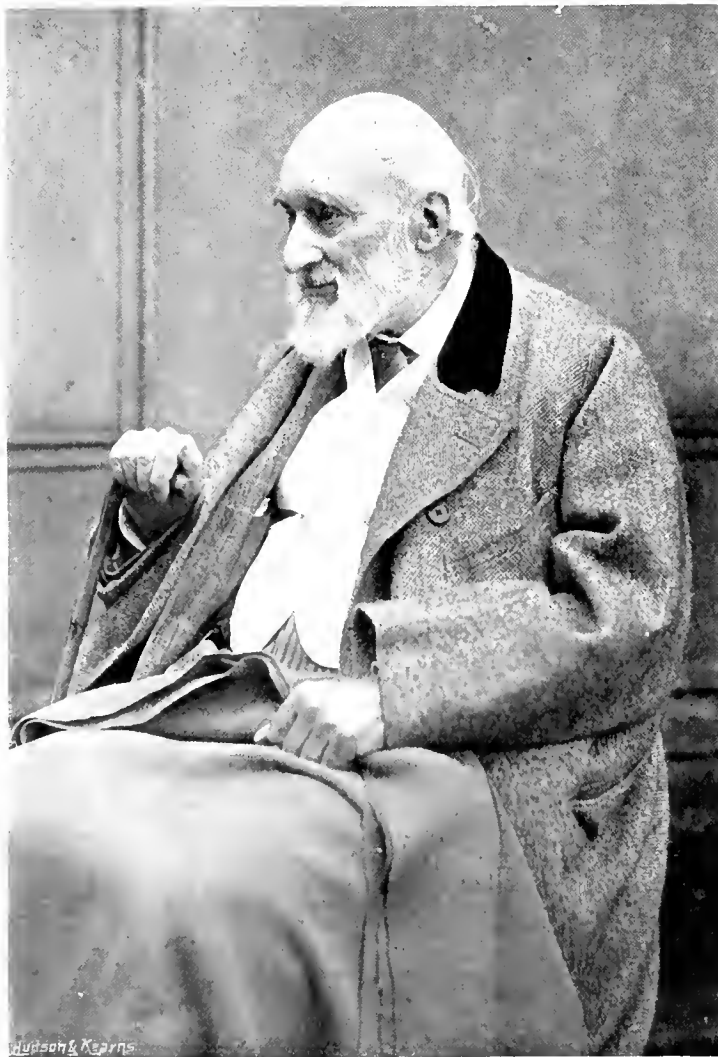
some very fine Roses resulted, but in most cases they proved to be summer flowering, and were almost, if not quite, identical with the race of the old Hybrid Chinas. These have great vigour and hardiness. The Musk Rose did not escape, and by its use some beautiful garden Roses were obtained, one of these, a cross from *Princesse de Nassau* with *Isabella Sprunt*, being one of the finest garden Roses I know, growing into bushes 8 feet or 10 feet in diameter, and covering itself with flowers of a creamy white colour, the flowering season extending until late in the autumn. It is extremely hardy, a fact which is surprising, as both parents are decidedly tender. Several other crosses from

similar plants are all more or less beautiful, being of a climbing or rambling habit and covering themselves with flower.

Rosa rugosa was early in the field as a seed parent, and I have no doubt that many beautiful Roses, both single and double, may be had from this source; moreover, in all cases that have come under my notice the progeny is, as our friends across the Channel say, truly *remontante*, and sufficiently hardy to withstand our varying climate. Hybridists would do well to give attention to this race.

Many Hybrid Teas have resulted from this crossing, some of very lovely and uncommon colours, and in all cases they proved quite as hardy as the Hybrid Perpetuals. In one case that must not be overlooked the yellow Persian Briar was used with Hybrid Perpetuals with a view to transmitting its colour. Many seedlings resulted from the combination, but among them were many disappointments. These showed the spine of the Briar and foliage almost identical, though slightly enlarged. Others having the Hybrid Perpetual as seed parent were sadly wanting in constitution, and their flowers, all but one, were very poor, being of a peculiar ragged form and tawny hue. The one exception was from a summer Rose, *Catherine Bell*. Here was a poser, as both parents are summer flowering and strong growers. This seedling proved to be of medium growth and as perpetual flowering as one could wish to see, the colouring of the flower varying from pale yellow to a deep rosy pink, and often blending into a most lovely hue. Such are the vagaries of Nature! The work enlisted the service of many other varieties, but I have only mentioned those that gave the most interesting results.

And now for a few words as to the care and work needful for the welfare of the seed plants. As all hybridisation was carried on under glass, the greatest care was taken to avoid confusion; each bloom operated on was carefully labelled with the name or number of the pollen parent and the date of the operation, the same being recorded in a book kept for the purpose, with a note on the state of the weather at the time. No brush was ever used for the application of pollen, or anything that could possibly convey admixture of foreign matter. No blooms bearing anthers were allowed in the seed house, and the ventilators were carefully



THE LATE LORD PENZANCE.

most of the others were lacking in constitution, being spindly and extremely tender. One plant that resulted grows strongly, carries the foliage well, and bears a white flower, fully double but small, and though some seven or eight years old has not shown any signs of being attacked by either mildew or rust.

The Sweet Briar was next crossed with the Moss Roses and several mossy varieties obtained, but of a constitution less robust than that of the others. Many other varieties were tried, but more as chance experiments and without aiming at anything definite. I will here mention a few of the chief sorts dealt with. Many were the crosses made between the old Gallica Roses, the Bourbons and Hybrid Perpetuals. From these

guarded to keep out insects. All the work was planned and carried out with that method and forethought that were characteristic of him who has passed to that bourne from whence no traveller can return. G. BASKETT.

NOTES ON WINTER FLOWERS IN ROME.

JANUARY, 1900. It is winter in Rome. The *padrona*, with a significant twist of the shoulder, greets us in the morning with "*Brutto tempo*" (nasty weather), and we return the greeting, secretly wondering at the unlooked-for aspersion on the weather. Looking out, we see the tall Eucalyptus opposite swaying and tossing its light branches. A slight hoar-frost whitens the grass in the moisture-laden corner of the Borghese Villa, which we overlook. A *Ricinus* rears its noble crimson stem and broad palmate leaves just below our windows. No sign here of winter's grip: the day is brightly beautiful. Under foot, when we go out, the tufa-paved street is dry and clean; overhead, the sky is serenely blue, and the sunshine is deliciously warm. We turn the corner. Ah! now we draw our wraps closer, for the icy *tramontana* meets us, and sends a shiver through every limb. Yes, truly it is winter in Rome! Men throw their heavy warm cloaks over their shoulders; women, bare-headed, gather their scanty knitted shawls about them, for in winter weather Italians look intensely miserable and "shrammed," as the Dorset word goes; but the *forestieri*, in warm furs and thick garments, are supremely happy, and go by chatting and laughing.

At the top of the Spanish Steps we pause to look over into a garden. A white scented Jasmine in full flower and bud clings to the wall; a Camellia shows its waxy rosettes; and Oranges gleam amongst their shining leaves. A group of Date Palms stands out in relief against the clear sky, and an Abutilon hangs its buff-coloured bells over a neighbouring parapet. A lovely, unknown evergreen bush arrests the eye, and we make a mental note of it for future investigation. This, also, is winter in Rome, and we need not grumble at the keen blast when Nature is so kind.

For all that, Rome, in such matters, scarcely makes the most of her opportunities. At the foot of the lovely old steps, with their curved balustrades and broad platforms, the flower-sellers have grouped their basket stalls round the edge of the quaint *Bacaccia* fountain. What masses of bright colour they display! Roses everywhere—magnificent Roses, too—*Maréchal Niel*, *La France* (or a near relation), *Safrano*, *Marie van Houtte*, and many more. These are arranged in tasteful bouquets of one variety only, cut with plenty of foliage and fairly long stems, assisted, however, as we find when we begin to muddle them, by pieces of stick. And not Roses only. Brilliant, many-hued Carnations, double Neapolitan and deep blue *Czar* Violets in huge bunches, Paper-white Narcissi and yellow Marguerites, and a host of others crowd the stalls. Who could guess, with such a home climate, that these have been imported all the slow way from the Riviera, through countless tunnels, reeking with a sulphurous atmosphere which might safely be warranted to creep into the most carefully packed box or basket, to grace in such dewy freshness these Roman stalls for the *feste* of Christmas and New Year!

A gardener's eye seeks instinctively amongst the florist's flowers for something more local and characteristic: and, in welcome profusion, on some of the stalls, big bunches of an old garden friend, *Iris stylosa*, are to be found. Chary of its favours sometimes in English, or

shall we say, Welsh gardens, here in Rome it is evidently quite at home, and free enough to be grown as a market flower. These, cut in bud, may be bought, by the wise, before they expand, and then last many days in water, in spite of their delicate, fragile beauty; but, alas! for those who prefer the soft blue of the tempting open flowers.

Another notable feature, giving a characteristic touch, is the framing of the wicker stalls in drooping sprays of Eucalyptus and Mimosa (*Acacia dealbata*). Several species of Eucalyptus are used, one especially beautiful, with ruddy reflections from the crimson leaf-stalks distinctly tinging the long grey-green foliage. Eucalypti are just now bearing creamy wheel-shaped flowers, together with their crinkled seed capsules, and branches of these, mingled with the soft cascades of Mimosa tassels combine to make a worthy setting to the gay blossoms below.

Apròpos of the transit of flowers, it took one by surprise lately to read the following statement in Signor Lanciani's delightful book on "Ancient Rome," which is given verbatim, as it may be of general interest. It refers, be it understood, to the days of the emperors: "The Roman flower—the flower *par excellence*—was the Rose. So excessive was the demand for Roses in the cold season, that to supply the requirements of the market, and to meet the deficiency of native production, they were imported from Egypt. Means were employed, of course, for keeping them as fresh as possible during the journey." This excites one's curiosity. What means were employed, and what the duration of the voyage! But Roman gardens and greenhouses of those early days are no myths, and present a subject of deep interest, and one as yet scarcely touched upon.

Butcher's Broom, well set with large scarlet berries, supplies in Rome the place of Christmas Holly. This is a species of *Ruscus* much to be commended to the notice of English gardeners. Acclimatised, it would be a precious addition to our woods and hedges. It is near akin to our British *R. aculeatus*, but is more elegant in growth—the leaves larger and less densely set on the stems, and the handsome berries, freely produced, are about the size of an ordinary marble. It grows abundantly in the high country about Siena, which would seem to indicate tolerable hardiness. Together with the *Ruscus*, the peasants bring in bundles of a pretty and distinct wild Asparagus, which has the property of lasting for weeks out of water, and is useful in certain kinds of floral decoration where long trails are desirable.

Flowers are not particularly cheap at present, but in November one could decorate a room with yellow, white, or bronze Chrysanthemums, or delightful little bouquets of pink or crimson China Roses and greenery for a few *soldi*. Amongst notable flowers in late November there appeared for a brief season in flower shops and at street corners long stems of *Dahlia imperialis* hung with pale drooping bells. Impossible to flower out of doors, except under genial skies, yet how grandly beautiful it is! Snowdrops, taking time by the forelock, began early in December and are still fresh and fair. A few Christmas Roses are occasionally to be seen, and the first early Anemones of the coronaria section are coming in, but look rather as if they had taken a short cut and had arrived too soon. K. L. D.

PLANTING ROSES.

No time should be lost in bringing the planting of all Roses to a close. The recent sharp spell of wintry weather postponed much planting—in some parts at least for a month. Now that the soil has again got into a workable condition, no time should

be lost. There is no doubt whatever but that early November planting of Roses is much the best plan. The soil at that time retains some of the summer warmth: the consequence is, roots are at once formed even if the plants themselves appear quite dormant. At one time I was somewhat sceptical as to the autumn formation of roots, but now I am not. I know quite well that root action is brisk even in December with newly-planted Roses. E.

NATIONAL ROSE SOCIETY.

THE TROPHY CLASSES.

THERE can be no doubt, I think, that Mr. Charles J. Grahame has given the National Rose Society a somewhat hard nut to crack, and as he appealed to me, I think it only fair and courteous to give my opinion on the matter. That there is a foundation of truth in the statements that he makes is, I think, unquestionable. When one exhibitor carries off the trophy eight times in the last ten years, other competitors must feel that as long as he is in the field there is very little likelihood of unhorsing him, and that this is the prevalent feeling, I conclude, from two reasons: First, that before that period the trophy was often carried off by amateurs whose gardens were much smaller than those of the present winners of the prize. There may have been, of course, exceptional causes in the character of the season that may have accounted for this, but I note that, whatever be its character now, whether it be an early or a late one, a wet or a dry one, Mr. Lindsell is sure to carry off the coveted trophy. The season of 1899 is a remarkable instance of this. A week before the metropolitan show he told me that he did not think his flowers would be in, but they were, and as much superior to the other competitors, as usual. The other reason why I think the statement well founded is, that there are growers—some of them in Mr. Grahame's own neighbourhood—who, I think, ought to be able to put in a good appearance in that class, and it is just possible that it is this feeling that keeps them back. But the difficulty arises when we have to decide what course to adopt. From one point of view Mr. Grahame's proposition is an easy way of solving it; but then would the trophy be a champion trophy? If the probable winners were to be excluded, it would surely take off from the honour and glory of winning it, and it could hardly be called a champion class. Moreover, those excluded might resent the exclusion and say they would not exhibit at all, and we should lose some of the best flowers likely to be shown at the exhibition. Time is often a solver of many difficulties, and as nothing probably will be done in a hurry, the matter might be well talked over at some of our meetings, and careful and deliberate opinions formed as to the best course to be adopted. I need hardly say that, in whatever way the difficulty may be solved, I shall be very glad to give it my earnest support. I know that Mr. Grahame's motives in making this suggestion are quite disinterested, and that his sole object is the prosperity of the National Rose Society. H. H. D.

Winter Aconites (ERANTHUS HYEMALIS).

Amongst a large colony of this beautiful little winter plant there is one small patch in my shrubbery the flowers of which are of a distinctly paler shade of yellow than all the others; indeed, they might be considered a sulphur. I should like to know if such a variation is common, and if so, whether it has been established. I went carefully through the gardens of St. John's College, Oxford, where there must be nearly an acre of these flowers beneath the trees, but could not find any of this pale shade. The gardener there, in answer to my inquiries, told me that he had never noticed any such variation. I carefully removed my little clump last year to a different part of my garden, so as to preserve the integrity of the seeds, and I am glad to say it is thriving and the blooms come up true to their pale colouring. If such a shade of colour could be established, I think it would be a great gain, as they are very beautiful. I would forward one of the blooms to you for inspection were I not very anxious to secure all the seed can possibly collect. G. D. LESLIE.

AN ARTIST'S NOTE-BOOK.

AN IRISH CHRISTMAS ROSE.

THE accompanying sketch gives a charming idea of one of the best of all the so-called Christmas Roses, viz., *Helleborus niger* var. *invernus*. It is recognised by its shapely pure white blossoms being borne on long stalks of a clear apple-green colour without any red or purple dotting whatever. The leaf-stalks are also clear green and unspotted, while the leaves themselves have leaflets with their margins but very slightly serrated. I originally described this distinct form in THE GARDEN as St. Brigid's Christmas Rose, it being quite different to Miss Hope's variety, which the late Mr. McNab called *H. niger* var. *angustifolius*. There is a legend that the late

dare, and was so fond of them, that she reared more than one batch of very fine seedlings. These were from *H. n. invernus*, or St. Brigid, as the seed parent, the pollen used being from blooms of good varieties obtained from England by post. Of the first batch of forty-two seedlings all were more or less different, but none were absolutely superior to the mother parent. Seed grows very freely sown as soon as it is ripe, and the seedling plants grow very rapidly and are at their best from the third to the fifth year.

There are besides these numerous other seedling forms or varieties of *Helleborus niger* some imported from wild habitats and others reared in British and Irish gardens, but the best of them are *H. niger maximus* (*altifolius*), *H. n. Riverston*, *H. n. Mme. Fourcade*, *H. n. Apple Blossom*, *H. n. St. Brigid*, *H. n. angustifolius*, and *H. n. Bath major*. All these are very beautiful as well grown, and flower at different times, so that they yield a succession

of evergreens when successfully grown. If not perfectly happy either in relation to their position or with regard to soil, not only do the leaves die off prematurely, but all the *Hellebores* of the *H. niger* section are peculiarly liable to the attacks of fungoid disease. On both peaty and loamy soils in England and Ireland I have seen clumps of the *Riverston*, *St. Brigid*, and *altifolius* varieties 4 feet or 5 feet across perfect masses of healthy leaves and snow-white blossoms. Small plants may be protected with hand-lights or cap glasses, and in this way the blooms develop cleaner and better than if exposed to wind and rain, but now and then I have seen plants from five to ten years of age that could only be sheltered by a two-light frame.

No other hardy plant I know, not even the blue or white *Iris stylosa*, can give such a profusion of flowers during November or December and January as does a well-grown bed or border of the best of Christmas Roses.

So far as my own experience goes, the present season has not been a very good one for these *Hellebores*, the flowers being dwarfed or stunted-looking, and this is, as I suspect, owing to the long spell of hot and dry weather experienced last autumn. It would be interesting to hear the experience of other growers as to these seasonable winter flowers.

F. W. BURBIDGE.



THE INVERNUS VARIETY OF CHRISTMAS ROSE (*HELLEBORUS NIGER*).
(Reproduced from a painting in oils by W. G. Moon.)

Miss F. J. Hope drove all the way from Edinburgh to Aberdeen in order to obtain the last named plant for her gardens at Wardie Lodge, where it increased and prospered, and long after her death I saw a long narrow or frieze-like bed of it in flower. Miss Hope during her lifetime was very proud of her Christmas Rose, to which allusions will be found in her classical posthumous work, entitled "Garden and Woodland," a work every true gardener should read who has not already done so. To return to St. Brigid's variety of the Christmas Rose, I first saw it in Mrs. Lawrenson's garden when she lived at Sutton House, on the breezy hill of Howth, near Dublin, but it is common here and there throughout Ireland, and stock has during recent years been obtained by nurserymen in England as well. Mrs. Lawrenson grew her Christmas Roses well both at Howth as also previously in Co. Kil

of flowers from October or November until February, or even later in some localities.

All the true Christmas Roses are seedling or selected forms of *H. niger*, which so far has resisted all attempts made to hybridise it with other species. On the other hand, the Lenten Roses are forms of *H. orientalis*, *H. colchicus*, *H. olympicus*, *H. guttatus*, *H. torquatus*, and other so-called species, which intercross or breed very freely with each other, the results being varieties innumerable. Again, the true Christmas Roses are not easy to grow to perfection on all soils, and are especially apt to fail on light sand or gravel or on limestone unless special provision is made for them. A deep rich loam, well cultivated, suits *H. niger*, and a situation that is shaded from mid day sunshine is an advantage. Like their first cousins, the Hepaticas, they like the proximity of rocks or stones, and like them are true

Chrysanthemums are grown for the supply of cut bloom, pot-culture has perforce to give way to a rougher and readier method that involves less labour. In the case I have in my mind cuttings are taken when available during the winter and planted in beds close up to the glass in brick pits. When they have rooted and made a little growth the points are pinched out to induce a bushy habit, and after being hardened off they are planted, about the end of April or commencement of May, direct from the pits into the open ground. Towards the middle or end of June varieties that mature at too early a date are cut down with the shears to a height of 6 inches from the ground, and in the first week of November the plants are lifted with good balls of soil and stacked close together on the floors of large Tomato houses. A good watering soon settles the soil about their roots, and a little heat in the pipes and ample ventilation for a day or so dries up any superfluous moisture that might induce mildew. Treated in this manner, the majority of the varieties develop

LATE CHRYSANTHEMUMS.

In his interesting note on the above topic "H. S." (page 521, vol. lvi.) speaks of *Niveum* being quite as late as *L. Canning*. I am not aware that this is a general experience. Certainly in the cases that have come under my notice during the past three years in South Devon, *Niveum* has been at its best from the middle to end of November, while *L. Canning* has lasted in absolute freshness until Christmas. The former, as perfect a flower for cutting as one could wish for, has not been available when most needed, and could it be prevailed upon to defer attaining the zenith of its beauty until Christmastide, I imagine that no other white would be required. *Princess Victoria* is also an excellent white, but this variety, though later than *Niveum*, has proved a trifle too early.

Where large numbers of Chry-

their flowers satisfactorily; indeed, as regards Niveum and some others, no difference is apparent between the blossoms on the lifted plants and those borne on plants that have throughout been subjected to pot culture. L. Canning, admittedly not too easy a variety to bloom satisfactorily, has fully answered expectations, this kind, however, not being subjected to the severe summer cutting back already alluded to. W. H. Lincoln, though doing well in pots, has proved useless for lifting, as it loses its leaves and produces scarcely any flowers. Luckily, its failure to accommodate itself to this treatment is a matter of small moment, as in Mrs. J. F. Fogg and E. J. Hill we have two fine late yellows that retain their vigour well and flower freely. The last-named variety is precisely similar to Tuxedo, mentioned by "H. S.," in habit, and its unexpanded buds show exactly the same bronzy-orange tint; when the petals reflex, however, their surfaces are bright gold, whereas in Tuxedo the petals are of similar colour on both sides.

Lady Lawrence does not take readily to the lifting process, but l'Enfant des deux Mondes produces quantities of delicate blooms under the same method which are useful towards the end of November and commencement of December. Possibly if cuttings of Niveum are struck as late as May, as recommended by "H. S.," the flowers might be available at Christmas, but cutting the plants down, even as late as July, has apparently no retarding effect. S. W. F.

THE STRAWBERRY TREE (BENTHAMIA FRAGIFERA) IN FRUIT.

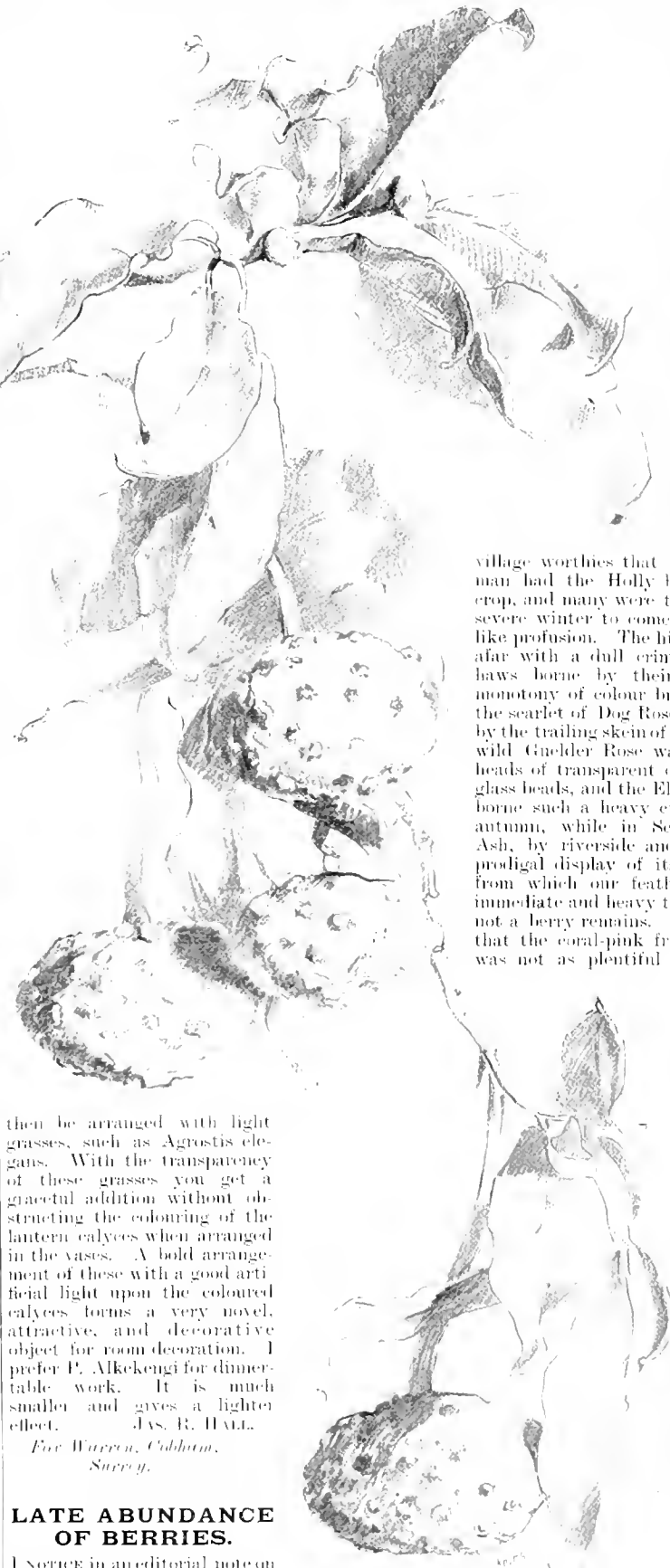
WITH this note I send some fruit of the above shrub. In consequence of the absence of much frost the birds have left the fruit on the bushes later than usual, and thus prolonged the ornamental character of the shrubs. Should we continue to get soft weather, the feathered tribe will doubtless get more palatable food, and leave the pendent branches laden with their large Strawberry-like fruit to lend a charm to the shrubberies for some months to come.

The Benthania is seldom seen except in the southern counties of England and Ireland, but there is no reason why it should not succeed further north, especially where there is a small annual rainfall and hot summers and autumns to harden the wood. When the wood is perfectly ripened it will stand 30° of frost, and where it would not succeed in the open, it is quite worth a place upon a hot south wall. Its large white sessile flowers are very ornamental in early summer, to be followed with abundance of fruit, as sent. It can be easily raised from seed, and as it belongs to the order Cornaceae, it thrives best in a moist situation planted in rich soil in a mild climate. When planted out as a single specimen on grass, it has a fine effect when in flower, as its lower branches sweep the ground. In such a position it spreads about equal to its height, but planted in a mixed shrubbery it will grow from 30 feet to 40 feet high. W. O.

Fota.

THE HARDY PHYSALISES.

THESE well repay good cultivation, more especially the variety Franchetti. For indoor decoration I very highly feed this kind, and support the stems with 2-foot stakes, and when the lower calyces are well coloured and the top ones still green the stems are cut 2 feet long, more or less, at the same time picking off all the leaves and tying the stems in bunches of about half-a-dozen in each bunch. They are then hung up in a dry room head downwards, which gives straight stiff stems. They can



then be arranged with light grasses, such as Agrostis elegans. With the transparency of these grasses you get a graceful addition without obstructing the colouring of the lantern calyces when arranged in the vases. A bold arrangement of these with a good artificial light upon the coloured calyces forms a very novel, attractive, and decorative object for room decoration. I prefer P. Alkekengi for dimmable work. It is much smaller and gives a lighter effect. J. S. R. HALL.

For Warren, Cobham, Surrey.

LATE ABUNDANCE OF BERRIES.

I NOTICE in an editorial note on p. 31 that in many districts of England Holly berries have been scarce. The opposite has certainly been the case throughout a great portion of the south and south west. During the

late autumn of the past year I journeyed by road from the easternmost limits of Southern Hampshire, through Dorsetshire to South Devon, and never have I seen such a wealth of berry on the Holly. In many places along the country roads great Holly bushes grew in abundance in the tall hedgerows, their shoots scarlet with tightly-packed berries. Here and there these lofty Hollies were garlanded with Traveller's Joy (Clematis Vitalba), the bright vermilion of the clustering berries, gleaming through the smoke-grey trails of the seed-laden Clematis, affording a charming colour contrast. In these three counties I

was assured by the village worthies that never in the memory of man had the Holly borne such an abundant crop, and many were the prognostications of a severe winter to come. Other berries were in like profusion. The high Thorn hedges glowed afar with a dull crimson from the countless haws borne by their loaded branches, the monotony of colour broken here and there by the scarlet of Dog Rose or Sweet Briar hedges or by the trailing skein of the berried Bryony. The wild Guelder Rose was brilliant with its flat heads of transparent crimson fruits, like large glass beads, and the Elders have probably never borne such a heavy crop as that of the past autumn, while in September the Mountain Ash, by riverside and copse, glowed with a prodigal display of its scarlet berry clusters, from which our feathered friends take such immediate and heavy toll, that at a month's end not a berry remains. In one district I noticed that the coral-pink fruit of the Spindle Tree was not as plentiful as usual, but this was

evidently due to some merely local cause, since in other localities it occurred in unwonted abundance. The Sea Buckthorn (Hippophae rhamnoides), with its grey-green foliage thickly set with clustering orange berries, has also presented a delightful picture.

S. W. F.

Chimonanthus fragrans from seed.

This wall shrub varies from seed, some forms being much poorer than others and less sweetly scented. Only the best forms should be preserved. A fine plant of the Winter Sweet against a sunny wall is an advantage, for the sake of the flower laden shoots to cut for room decoration.

FRUIT OF STRAWBERRY TREE (BENTHAMIA FRAGIFERA), SENT FROM FOTA, IRELAND. (This drawing, by H. G. Moon, shows a reduction of one-fifth from the natural size of the fruits.)

THE ROSE GARDEN.

ROSES AS STANDARDS.

DOUTBLESS readers of THE GARDEN can call to mind many fine specimens of Roses growing in various parts of the British Isles, but I am of opinion that more attention should be given to this subject, for the possibilities are great with many of our glorious Roses. I am thinking more especially of the vigorous growing Teas and Noisettes known as climbing varieties, and which embrace some of the loveliest colours imaginable.

How many of these fine Roses are seen in their true beauty when almost burnt up upon a hot wall. Much more pleasure would be derived from such Roses if they were grown as half or full standards, and as they developed their long growths trained out horizontally. I have seen many fine examples of such Roses as Niphetos, Belle Lyonnaise, W. A. Richardson, Réve d'Or, and others cultivated upon this plan.

There is one Rose in particular that everyone admires, but few can flower it successfully. I refer to Climbing Devonensis. I would advise those who have hitherto failed with this fragrant Rose to procure a half-standard of it, and plant very carefully in well-prepared soil. There should be a depth of 2½ feet to 3 feet of really good fertile soil, which, if not naturally, must be artificially drained.

The first year the tree is pruned back rather severely, and by the following autumn there will be a fine low growths. These must be protected with straw thatching or with mats during the winter if it is very severe, for it is a very tender variety, then the following spring no pruning is necessary beyond removing the extreme ends of the shoots and cutting any soft wood clean away. The long growths are secured in a horizontal position by placing some hop poles beneath the branches, arranged in such a manner as to form a kind of staging.

As the growths extend and increase in number annually this staging is also extended and widened as circumstances require, and in three or four years quantities of lovely fragrant blossoms may be obtained from the laterals which the long growths produce. These laterals are shortened back each spring to three or four or more eyes, according to their strength, and if too numerous the weakest are removed. When any of the old growths exhibit symptoms of exhaustion they are cut clean away in the autumn.

Naturally, the plant's requirements must be studied. A tree producing much growth will need extra nourishment, and after a time the soil must be replaced by some turfy loam. Manure from the cow-yard is recommended above any other, but two or three handfuls of bone-meal will be extremely helpful if applied each season.

This same principle of horizontal training could be adopted with what are known as dwarf plants, or, better still, with dwarf standards. A few of these introduced into the garden would not materially interfere with the cultivation of low-growing subjects that possess a very shallow rooting habit.

Roses such as Climbing Perle des Jardins, which grows so luxuriantly, the rich citron-yellow Duchesse d'Ancstadt, and the lovely E. Veyrat Hermans, reminding one of a bronzy-golden Charles Lefebvre, would be first-rate kinds to grow in this manner. So also would Maréchal Niel, the rich apricot-coloured Mme. Moreau, the nanken coloured Mme. Chauvry, one of the most delightful Teas in cultivation, the grand carmine-tinted Souvenir de Mme. Joseph Metral, the creamy-yellow Le Soleil, the pure gamboge-yellow Henriette de Beauveau, the last of the late Monsieur Lacharme's productions, and, indeed, a host of others too numerous to mention. In a good sheltered position and with careful attention in the matter of straw coverings, little apprehension need be entertained as to their capabilities of passing through an ordinary winter uninjured.

PHILOMEL.

AMATEUR ROSE CULTURE

PRUNING (concluded).

In one year (I think it was 1888) I had an extraordinarily fine growth on my trees—shoots from 12 inches to 18 inches long—and overnight I fancied a frost was coming; this was in May, and I told my man to be at my house quite by 4.30 a.m. Sure enough there was a terrible frost, and my lovely shoots, from which I was expecting so much, appeared to be perfectly ruined for the season. However, I said, we will either kill or cure; we will first of all syringe and afterwards with a small birch (made out of an old broom) we will knock the frost off as quickly as possible. The result was simply marvellous; I scarcely had a bad flower that year, and won over fifty prizes, many of them in very severe competitions. One box I remember in particular, consisting of six blooms of Annie Wood; they were perfect beauties, and Mr. d'Ombrain (who was one of the judges) said those six blooms were "absolutely perfect specimens." I owed my success to that early syringing; it saved my Roses for the year, and although it was only my third year of growing, it was a most successful one; notwithstanding, owing to that terrible May frost, 1888 was a very, very bad year for Roses in our neighbourhood.

When the shoots are well started I always mulch with short litter, being very careful not to bark the trees or damage the young shoots, and at the same time I give a small dressing of artificial manure, either pure dissolved bones or rape dust. Nitrate of soda I never use in spring or early summer, as it brings wood and foliage, and the blossoms are not so perfect either in colour or texture. Although I prune early, I do not find it brings me earlier blossoms than other growers obtain who prune later. I admit I am often very successful in the early shows, but I obtain these successes by carefully selecting the best early varieties. Now I must call your attention to that most dangerous pest—the maggot.

Maggots fat, maggots lean.
Maggots large, maggots green.
Maggots long, maggots short,
Catch 'em soon, or Roses nought.

The only cure for this pest is catching them. This can be done in the morning before the sun has any power, or at sunset. I go carefully over my plants every day, and with thumb and finger catch every one I can find, and by the end of May I will almost defy anyone to find a single maggot in all my 1250 trees. I make it a rule to pinch off every damaged leaf, so that if a maggot has been missed you may be sure to find it. Friends who visit me always remark on the cleanliness of my foliage. If specks of mildew should here and there make an appearance, I remove them also by pinching the leaf off and burning it. The aphid blight gives me very little trouble. The early coat of gypsum, lime, and soot which I give the earth I believe has much to do with this; but where it does appear, syringing with a solution of soft soap and quassia is the safest and best cure, and this should be used immediately the green fly makes its appearance. In this case truly "a stitch in time saves nine." One early washing is worth ten washings after the vermin has established itself thoroughly.

Next comes the thinning-out of the buds. Some varieties require to be done early; others, such as Annie Wood, the Verdier tribe, &c., are best left till comparatively late. It is quite a study to watch the growth and to do the thinning-out at the right time. I can lay down no hard-and-fast rule; but I can assure you that with a little experience in the matter, gained by your own experiments, you will find no difficulty in arriving at a decision as to when to disbud your different varieties.

Now, I will add a few words on the different varieties of Roses. Some, of course, do much better than others, and in this, situation and climate of course are big factors. That grand Rose, François Michelin, is a very good doer. I have now no less than three medals for this variety, and each time the bloom has been cut from trees planted close under a Thorn hedge which is sheltered from the morning sun. Trees of the same variety in another part of my rosery never do well. It is a grand

flower when you can get the colour right. Another Rose of which I am very fond and which I often show (although I seldom meet with it at shows) is Mrs. G. Dickson; it comes very full with me, but often has few petals; however, if cut at the right stage, it will stay as well as any Rose I know. Mme. G. Luizet is a grand variety, but apt to mildew, especially if over-fed with manure water (one year I lost nearly all my blooms of this variety through doing so). There are really such a vast number of lovely Roses grown now that one hardly knows which to choose. One thing we ought all to be proud of, and that is that Messrs. Dickson & Son should be the pioneers in introducing new varieties, driving foreign rivals clean out of the field. If only I had sufficient room, I would have two dozen trees of each of their best new sorts as soon as introduced.

Now as to

SHOWING.

I am ignorant of many points in the art of showing. I see men exhibit blooms at shows, and it fairly puzzles me how they manage to get the flowers just right for the judges. At times my flowers come lovely, at others they seem to stand still and do not expand as they ought to. However, I must not grumble. Last year with my little lot of trees I won sixty prizes and two cups, including the Reigate challenge cup (open to all England for growers of less than 2000 trees), and three medals, and if I do no worse this year I shall be quite content. During the thirteen years that I have grown Roses I have taken over 500 prizes and a goodly number of medals. I select my best blooms and protect them from wet previous to cutting for exhibition. This is quite a necessity when one is so limited for space and trees as I am, especially as I show against competitors who have as many as 12,000 trees. The system of limiting exhibitors in certain shows to exhibit only against men of their own weight in regard to number of trees has given great satisfaction, and I for one hope that the plan will be extensively adopted, as otherwise small growers are unfairly handicapped and become quite discouraged. I advocate separate classes at all shows, which will prevent a grower with only 200 or 300 trees having to show against a competitor with 2000 or 3000 trees; and also which will prevent the man who has perhaps from 10,000 to 20,000 trees competing with the smaller man who has 2000 or 3000 plants. I myself have been swamped in a north of England show by an exhibitor who has many thousands of trees to cut from, and who did not disdain to compete in the small classes of six and twelve varieties, as well as in the classes for twenty-four and thirty-six varieties. The man with a medium-sized rosery is entirely swamped in such cases, to say nothing of those enterprising Rose lovers who have only a few trees, and who, I hold, should be given every encouragement in the work of beauty which they have undertaken.

Leaving showing and reverting for a moment to cultivation, I may add that as soon as I have finished exhibiting I always go carefully over my trees and thin out the spindly-looking new wood. I then wait till the first week in September, when I cut the whole of the old wood and leave only the new growth to supply the cut-backs for the next year. You will thus see that however old my roots may be, my Roses are produced each succeeding year on absolutely new, or maiden wood. By cutting away all the old wood in September, one, of course, sacrifices some autumn blossoms, but by doing this the new wood ripens off so much better, and the strength which would have gone into the old wood, in order to produce a few autumn blossoms, is conserved and the plants will return the capital, with good interest, in the following summer.

In conclusion, I ask of you to remember that every flower that is produced adds to the beauty of this earth on which we live, and I believe that even the most callous and unimaginative beings we meet cannot remain long in the presence of these most beautiful flowers without being awakened to some sense of the beauties of Nature, and without turning their thoughts to the Creator of all, who sends these beautiful things to make our life here bright and happy.—R. E. West, in "Rosarian's Year-Book" for 1900.

THE FLOWER GARDEN.

CYCLAMENS AND HEPATICAS.

I THINK that two good old-fashioned flowers are not generally grown enough in gardens—hardy Cyclamens and Hepaticas. At Oakwood we have a long side of a mound facing south with a ditch in front, having nut trees on the other side giving shade. At one end of the mound are established plants of different forms of hardy Cyclamens with a sunk piece of stone to each plant; next to these, Hepaticas, and then seedling Cyclamens. Last year drought did not agree with the Hepaticas, so we moved them to the north-east side of the mound, planting them in nests of sunk stone, with small pieces of stone laid on the surface between the plants. Stone, if it has been exposed to weather and has mossed, is no disfigurement, and the plants seem happy in their new quarters. Many years ago we planted a single pink Hepatica on a rather dry bank where it got some sun; this had good sized pieces of sunk stone all round it which seem to have given sufficient moisture, as the plant has every year flowered beautifully and held its leaves. My friend Mr. Frank Miles told me that Van Swaelman, a Dutch grower, had Hepaticas of many shades of colour. I got a set. They have good flowers, but the plants did not increase as fast as I could wish. I have great hopes that in their new place they will grow stronger. We shall fill up the space on the mound from which they were taken with Cyclamens. The beauty and variety of their leaves make the mound pretty even when flowers are not out, and the effect is much better with a good large bed.

GEORGE F. WILSON.

AURICULAS IN WINTER.

THE Auricula plant is one of the earliest to wake up into life and beauty; but as I write these lines (about the middle of January with 7° of frost in the air) there is no sign of any movement in leaf or bud. I write a few lines about the Auricula at this time because I have heard from two famous growers in the north, who both report, "Auriculas look well, and make a good show of green foliage for the season of the year." It is rather singular that my own plants are the reverse of this, having lost their foliage to a greater extent than usual owing to the severe frost, which tried them greatly. It was keen for several nights, and fell once 25 below zero. Auriculas can stand a low temperature fairly well, but such a low temperature as 7° Fahr. destroys many leaves. After the frost is gone it is

necessary to go over the entire collection and remove all the dead leaves. They must be taken clean out at the base, for if parts of the decayed leaves are left they may destroy the plants by causing the main stem to decay, and when decay has fairly set in on the main stem of an Auricula the chances are that the plant itself will be destroyed. I am alluding to the show Auricula, which comprises the green-edged, grey-edged, white-edged, and selfs. These are quite distinct from the alpine Auricula, although all Auriculas may be called alpine, as they are all found in mountainous districts in the south of Europe, especially in the Alps. The show Auriculas are not quite so easily grown as the alpine section, and seem to suffer most in damp and wet weather.

Probably the first parent of the show Auricula is less hardy than that of the alpine type. At the

pots. The plants are very small, and a dozen of them may be put into a 3-inch pot. The most curious phenomenon about Auricula seed is its irregularity of germination, and if the seed-pans are kept for three years, seedlings will still be produced, the latest to flower being usually the best varieties. Seed is also very difficult to procure. The best flowers have to be sacrificed by cross-fertilising them when in their best condition, and only about one pod in six will contain seed; but of course if it was easy to obtain good seed, and as easy to raise good Auriculas, good flowers would not be so scarce as they are. The progress is still very slow, and it would be well if some amateur with leisure would begin the raising of new Auriculas, for we ought not to let these lovely flowers remain as they are, as we are still far from perfection. The two Ne plus Ultras of Smith and



A COLONY OF HARDY CYCLAMENS IN THE WISLEY GARDEN.

Auricula and Primula conference in 1885 it was decided, as far as the matter could be decided, that the first parent of the show Auricula was the Primula Auricula of the Austrian and Styrian Alps, and that the alpine Auricula was from Primula pubescens. These two species are well known, and it is also known that both were cultivated in gardens upwards of 300 years ago. At the time when Clusius published his "Rariorum Plantarum Historia," in 1601, both of them were in cultivation. Clusius himself introduced P. pubescens, but P. Auricula in the time of Clusius was widely grown in Belgian gardens. The latter Clusius figures as Auricula ursi, and his own introduction as A. ursi 2. How the show section has been brought to its high degree of excellence it is difficult to say, probably by crossing with some other species, or, what is not improbable, by selection from seminal varieties. The selection of distinct varieties from seed is an interesting process, and no lover of the Auricula can resist the temptation to raise seedlings; but to a beginner in Auricula cultivation much patience is needed, for the seed, though well and fairly sown, does not all germinate in two or three weeks. In less than a month tiny plants will show themselves, and when these have made one good leaf after the seed leaves it may be best to re-plant them into small flower-

Fletcher have long been surpassed, and the latter's flower has been discarded from every good collection. There is plenty of room in all the classes for other Ne plus Ultras, but it requires much patient waiting for the development of flowers possessing the highest points of excellence. Nevertheless, there is much pleasure in waiting and watching the development of the plants, for if there is anything in Nature more beautiful than an Auricula flower it is an Auricula leaf. A fancier who loves and values his Auriculas can distinguish one plant from another as well by the leaves as by the flowers. Some of it is green of various tints, while the green-edged varieties always have green foliage; the white-edged, grey-edged, and self classes contain others with foliage pure white and some cream colour, owing to its being densely coated with farina. In April the trusses of flowers develop, and the plants ought to be placed in a glasshouse, so that they can be attended to when the weather is wet or in any way unpleasant outside.

Having written so much, it may be well to finish with a few remarks on culture.

SEEDLINGS.

The seed is sown as soon as it is gathered in July, and some of the seed will germinate in three weeks, more of it in February and March, and, as previously stated, many belated seedlings will appear in the course of the next three years. They must all be attended to as they appear, and be grown into nice flowering plants. A seedling will take twelve months to grow into a flowering size; but it is exceedingly interesting to watch this development of leaf and plant into full fruition, and it is probable that the first truss produced on the seedling plant will be better than any future one, as they do not always maintain their maiden promise of goodness. Named varieties and choice seedlings are propagated by offsets, and in no other way; consequently when a new variety is shy in

producing offsets it takes long to get up a stock of plants. A good plan to hasten the production of offsets is to cut off the head of the plant when it has a main stem long enough above the surface of the soil in the pot. Before doing this the root part must be in quite a dry condition, as not only will the top part strike out roots more freely, but the plant itself will not be so likely to rot.

Early in February the entire collection of flowering plants should be surface-dressed. To do this effectually a portion of the top soil must be removed, and in doing so examine the neck of the plant, for around it may be clustering the troublesome *Auricula aphid* (*Triana auricula*). This must be carefully removed with a small brush. I keep a pepper-box beside me and dip the brush into the tobacco powder contained in this receptacle, dusting it well into the aphides and brushing them out. The surface-dressing consists of good fibrous loam and decayed manure in equal portions. Press it in firmly; see also that there are no aphides (green-fly) on the leaves. The plants having been kept in a dry position up to the time of surface dressing, it is well to give them a good watering, and if the plants have been placed in an Auricula house, they should not suffer from frost under favourable conditions. The plants must be placed near the roof glass and freely aired. Attention must also be given to keeping the plants in a satisfactory condition at the roots. Do not give too much water, however, but rather be careful not to err on the side of over-dryness; also be careful not to apply any water to the leaves. The time for blooming is from the second week in April to the end of that month, but some early bloom may even open in March, and a few specimens may run into May, but there is a saying in the north that "The Auricula in May has had its day."

When the blooming period is over the plants should be again removed to garden frames on the north side of a wall. This is the right position for them during the summer months. At this time also the plants should be repotted and rearranged in their order in the frames, always beginning with the green-edged varieties, following on with the grey edged, the white-edged, and, lastly, the selfs. Some care is necessary in repotting. The flower-pots used should be clean and well drained, some fibre shaken out of the loam heap being placed over the drainage. The compost should consist of four parts good fibrous loam, one part leaf-mould, one part decayed stable manure, and, if necessary, some coarse sand. The plant itself after being turned out of its flower-pot must be carefully examined. The base of the main stem, called the "carrot," is sometimes in a rotten condition. All decayed parts must be removed, and, of course, all the *Auricula aphid* on the roots must be cleared off. Work the soil well in amongst the roots and pot firmly. After repotting, watering must be done very carefully until the plants have well established themselves.

A very good time for getting off the offsets is in February, when the plants are being surface-dressed. They must be carefully removed from the parent plants, using a sharp knife, or in some instances they may be removed by hand. When Auriculas are in flower they must be shaded from the sun, as the blossoms shrivel if exposed to sunshine for a few hours. J. DOUGLAS.

GARDENING OF THE WEEK.

HARDY FRUIT GARDEN.

THERE is much work that must be got through in this department between the falling of the leaves and the bursting of buds in spring, such as pruning, tying, nailing, and cleaning the trees, and also manuring and digging the ground. The work done should be regulated according to the weather, the lighter work, such as nailing, being done when it is mild, and that which requires more exertion when it is cold. When the weather is too rough to allow of working out of doors,

shreds may be cut, stakes sharpened, and fruit looked over undercover.

FILBERTS AND COB NUTS.

The Kentish system of growing these is the best. A main stem branches a short way from the ground, the branches forming a flat top with the centre open. Remove the suckers, prune off from the branches all shoots having a tendency to grow erect, and do not allow the branches to become crowded.

APRICOTS.

The pruning of these is similar to that of Plums and Cherries. The work of nailing (tying if the walls are wired) may be done at the same time.

ENEMIES.

Protect the buds of Plum trees with nets of small mesh against the ravages of bullfinches; or the buds may be made distasteful to these wholesale destroyers by syringing with water and paraffin oil at the rate of a gallon of the former to a wine-glassful of the latter. The mixture must be kept in motion by one man syringing into a pail, while another puts it on to the trees with an insecticide syringe. Another method is to syringe with water, and while the trees are wet to dust over with newly-slaked lime and soot. Their numbers may be reduced with a gun, taking care not to injure fruit and other valuable trees. These birds have also attacked Cherries.

The trunk and main branches of trees with moss and lichen growing on them may be painted with limewash containing an admixture of soot.

For American blight, wash the affected parts with paraffin oil and water of the same strength as recommended above for buds, or use soft soap water at the rate of 8 ozs. of soap to a gallon of water, rubbing it in well with a brush. Protect Gooseberry bushes from bullfinches in the same way as Plums. Another mode of protection is to pass black thread round and round the bushes.

After the pruning and tying is done, dig the ground between fruit trees, being careful not to damage the roots.

RASPBERRIES.

Shorten, stake, and tie Raspberry canes and manure and dig between them. G. NORMAN.
The Gardens, Hatfield House, Herts.

KITCHEN GARDEN.

POTYROES.

The seed should now be started for either frame or pot culture. Often a few pots may be sowed, and these stood in early fruit houses will give tubers at Easter. Some cultivators pot up the sets in small pots, but my method is to place them in light compost in shallow boxes. They will be ready in three weeks to pot or plant out if given a warm place to sprout in.

SPINACH.

Few vegetables are more uncertain in old garden soils than Spinach. If there are any bad plants, now is a good time to make up losses. I am aware this vegetable is not often grown under glass, but it well repays frame or pot culture. A few lights of a frame sown with Spinach early in February will give a good cutting in April, but all cannot give frame culture, and if seeds are sown in small pots in a frame and planted out early in April on a warm border, there will be a good return.

EARLY CABBAGE.

This vegetable is more appreciated in April and May than later, and the most should be made of the early crop. To assist growth I draw the soil well up to the lower leaves to prevent frost damaging the stems. I find we obtain better results by feeding when growth commences early in the year with a good fertiliser, than by placing large quantities of manure in the soil when planting.

CUCUMBERS.

Early in the spring there is a demand for Cucumbers, and there should be no delay in sowing the seed and preparing the beds for the plants. With hot-water pipes as the heating agency there is little trouble, but with manure more attention is needed. If the latter is used, it is well to sow and make the beds up at the same time, as by the time the plants are large enough—that is as soon as the third leaf appears—the bed will be in proper

condition. Avoid rank manure from any source, as this means trouble; the manure should be prepared in the open and sweetened by turning occasionally. By close attention to details such as heat and moisture, fruits may be had in six weeks or two months from the time of sowing. Seeds are best sown in small pots, using bottom-heat and only just enough moisture to effect germination. When the seedlings are planted out, only a small quantity of soil is needed at the outset, and this should be light and rich, as it is best increased later on by frequent top-dressings. Cucumbers rejoice in a warm temperature—about 70° or more in the daytime, and 5° to 10° lower at night in cold weather, with very little ventilation indeed. Avoid over-cropping to begin with, as the plants bear so freely if allowed that they are much weakened. In planting, place near the glass, but free of cold winds. In winter I cover the glass at night. GEO. WYTHES.

Syon Gardens, Brentford.

INDOOR PLANTS.

CLIMBERS.

CONSERVATORY and greenhouse climbers of many kinds, including Passion Flowers, *Taesonias*, *Clematis indivisa*, *Tecoma jasminoides*, *Jasminum azoricum*, *Lapagerias*, *Plumbagos*, and *Heliotropes*, should now undergo their annual pruning, as it is well to get this work out of hand early to give time to deal with pressing work, which will soon come in plenty. With most of the above, pruning resolves itself into simply cutting away all the weak growths and some of the strong, leaving only skeletons of the plants, which will soon break again into vigorous growth and cover all the space allotted to them. Vigorous plants of the *Lapageria* may have many of the smaller spray pieces cut out entirely and a judicious thinning all over, shortening some of the strongest leads that have got out of bounds, but it is not wise to cut away too much or to make the plant over-thin, as it will bear more crowding than the others mentioned, and even weak growths on established plants flower freely. Plants which have not yet become vigorous should not be pruned at all, for the more growth they have the more freely will they root, and it is impossible to get the vigorous shoots one wants from badly-rooted plants. *Tecoma jasminoides* should have some young wood left in, and I have found it best with this plant to cut out now and then an old growth boldly to make room for vigorous back breaks. With the *Jasmine*, too, it is well to lay in some young wood at the expense of sacrificing older pieces.

HELIOTROPES AND PLUMBAGOS

may be spurred close in to the main shoots, and *Fuchsias* (climbing) may be served in the same way. *Taesonias* often get infested with white scale, and as the wood is too tender for the use of insecticides of sufficient strength to kill the insects, all efforts to thoroughly clean the plants are unavailing, though much may be done to reduce the pests by a vigorous application of soft soap and water to the old wood. As *Taesonias* come true from seed and are vigorous in growth, I like to have a few young plants always at hand for planting when the scale gets too bad on the older plants rather than leave the latter to become a source of danger to their neighbours.

For many positions unsuited, through shading, for flowering plants I find the various climbing or running forms of *Asparagus* suitable. *A. Sprengeri* is the quickest grower, and, grown in large suspended baskets from which the growths may be trained to cover with a graceful light greenery much roof space, they answer all the purposes of climbing plants and are clean. *A. deflexus* is also beautiful, but looks best when the growths droop vertically from the basket to or near the floor. For planting out and climbing upwards *A. plumosus* is the best. To keep up stock young plants of the two former may now be transferred to baskets, using good loam and sand as the staple soil. Such baskets, if big enough (I use them 16 inches in diameter), will keep the plants in good condition for two or three seasons. J. C. TALLACK.

Livermore Park, Bury St. Edmunds.

CHRYSANTHEMUMS.

PROPAGATING.

THE old method of striking the cuttings in cold frames is now almost obsolete, and should only be resorted to when necessary, for the reason that the cuttings remain far too long inactive. During severe weather in the depth of winter the young plants must often be securely covered to exclude frost, which means that no light, air, or attention can be afforded them; on the other hand, a strong forcing heat should always be avoided, or a weak, sickly growth will result. The most satisfactory mode of treatment that I am acquainted with is to place a small frame or hand-light on a stage as near the glass as possible in the greenhouse, or some other structure kept at a greenhouse temperature. This should be filled with finely-sifted cinder ashes, leaving sufficient depth only for the reception of the cuttings, or, better still, plunge the pots close to the glass in cocoa-nut fibre. The cuttings can then be attended to at any time and in any weather. The lights should be ventilated more or less at all times, keeping them sufficiently close to prevent the cuttings from flagging. Very little water will be needed until they are rooted. Syringe gently once a day in early morning for the first week or two to keep them in a tresh condition.

The above remarks apply to Japanese, incurved, reflexed, and large-flowered Anemones, whether intended for large flowers or specimen plants.

BEST VARIETIES.

Those on the look-out for new and promising varieties, and have not had the opportunity of seeing them cultivated, may be recommended to grow the following:

Japanese. Miss Alice Byron, pure white; Pink Minc, Carnot, very promising; Lord Salisbury, bronzy yellow; Mme. von Andie, a very pleasing sport from Mutual Friend, sulphur yellow; Mr. H. E. Fry, good light yellow; Mrs. A. Tate, sport from the well-known Etoile de Lyon, a most desirable and pleasing shade of red, quite distinct; Mme. R. Cadbury, a magnificent white, but a little late for November shows; Mrs. W. Morgan, yellow and cream; Souvenir de Marquise de Salisbury, a pale yellow sport from the popular Chenon de Leché, should prove of much value; Mrs. W. Cussham, white flushed with blue, a fine exhibition flower; Florence Molyneux, pure white, an immense flower, and one of the finest seen during the past season; Edith Pilkington, splendid yellow, much in the way of Boule d'Or, should become a general favourite; Vicar of Leatherhead, a seedling from Mme. Carnot, golden yellow, large and fine; Silver Queen, mauve-pink, good; Sir R. Buller, very fine crimson, said to be a seedling from E. Molyneux; Mrs. Ewart Barber, another fine white; Mrs. G. Barnes, primrose, tipped pink, very refined; W. H. Whitehouse, a promising flower, colour rosy red; Nellie Perkins, sulphur-shaded pink; Edith Perkins, a fine incurved Japanese pink.

Incurved. Ralph Hatton, purple, fine form; General Symons, bronze, good; Matthew Russell, bronzy red, excellent form; Mr. F. King, silvery

pink; Mrs. W. Howe, amber, very pretty; and Annie C. Love, striped pink. EDWIN BETKETT.
Aldenham House Gardens, Elstree, Herts.

A BORDER AT SEVERN END.

THE border, of which an illustration is given, in the beautiful gardens at Severn End, Worcestershire,

PEAR BEURRE BOSC.

RECENT notices of this handsome Pear remind me that I have never seen it so good, or so much grown elsewhere, as it is in East Anglia. Many gardens in Suffolk contain trees of it, and I do not remember seeing any undersized or poor fruit in the Bury St. Edmunds district, though the soil in that neighbourhood, speaking generally, is not a good



A BORDER IN THE GARDENS OF SEVERN END, WORCESTERSHIRE.

is interesting for the succession of flowers and high Box edging. I think it is unfortunate that this form of edging is disappearing. There is a fresh bushy look about healthy Box that appeals to me, and it should not always be kept severely clipped. Amongst evergreen permanent edgings I count the Box one of the most important. E.

one for Pears. Beurre Bosc when well grown and ripened on a wall is of very good, if not very distinct, flavour, and the fruits would no doubt be appreciated by most people. The tree is a first-rate grower, strong, and at the same time forms fruit spurs freely and bears well. It is a good garden Pear. J. C. T.

KITCHEN GARDEN.

MUSHROOM GROWING.

MUSHROOM growing has always been the conundrum of horticulture. Everyone who has a garden or a greenhouse has at one time or another tried to solve the question how to grow Mushrooms. Success has attended the efforts of the few, but many have been disappointed. To see a good bed of Mushrooms is a sight to be remembered, and they appear to be easy to grow, and yet the majority of those who attempt their cultivation fail to succeed. And yet what is more sought after in the market and shops? The wild Mushroom confirms the idea of the simplicity and the mystery of its growth. What other product of the garden asserts itself with such freedom and wilfulness? There is never a glut of them so as to stop their sale, as the public will give 1s. per lb. for wild Mushrooms as readily as they will

day three or four times, when it will be ready for making up into beds. A good open shed is the best place to prepare the manure, so as to dry it thoroughly and allow the steam to escape. If the building in which the Mushrooms are to be grown is about 8 feet high, it will be easier to make the bed. This should be trodden as firmly as possible, and when finished should be about 18 inches deep. It should be left in this state for one week. If the spawn is in bricks it should be new, and purchased from a reliable firm, or if gathered from an old hotbed or Mushroom bed it should look fresh, and not stringy. Break the spawn into pieces about 2 inches square, and place each portion in a hole made with any suitable iron tool about 2 inches below the surface of the bed and 1 foot apart. When the bed is spawned, firmly tread it again and cover it with 2 inches of soil. This should be trodden down and finally beaten level with a spade or shovel. Cover over with a foot of clean straw—long manure may be used, but as this harbours insects, the straw is best—and close the place. The heat of the bed will cause the spawn to run. The time for making may be March, or

sourness and poverty. But when brought to the surface, a heavy dressing of short manure, decayed garden rubbish, and soot, spread over the surface and forked in, soon creates fertility, and exposure to the air rapidly removes moisture and sourness. A. D.

As one who studies vegetable culture I have read the note on the above with considerable interest, and, much as I admire Mr. Beckett's splendid exhibits of vegetables, I am sorry to differ from him in his treatment of clayey land. Having failed myself in my early days, I would ask readers of THE GARDEN to mark, read, and inwardly digest before going to the extremes advised. In every garden circumstances differ. In the first place, with a deficiency of labour I would hesitate to bring up poor, inert soil 3 feet in depth and bury the top soil. The writer adds he worked in plenty of manure and other aids, and this procedure is not always practicable, as in many gardens the difficulty is to get sufficient manure. Indeed, I envy Mr. Beckett: his lines have fallen in pleasant places in obtaining sufficient labour and the materials to make the soil so good. My experience is so different; and once I buried a good soil, following Mr. Beckett's advice, with the result that our crops were a failure for years, and though I am at one with him as to the value of trenching, so much depends on the soil trenched. Some soils at 3 feet are so poor, that years of labour and unlimited supplies of food will not make them good. In my own case we have say 12 inches to 15 inches of soil on a sandy gravel subsoil. Now what use would this latter be on the surface, as so far I have found it will not do for vegetables? AN OLD HAND.



AN OPEN-AIR BED OF MUSHROOMS.

for the cultivated ones, and occasionally they may be brought for one penny per lb. The accompanying photograph of a Mushroom bed proves that the grower understands them, though this was not his first attempt at their culture. A successful grower, not only of Mushrooms, but of any flower, fruit, or vegetable, meets many a reverse before he is finally successful, and this is one reason why he refrains from giving publicity to his experience. A wooden building without any means of artificial heating was the place in which these Mushrooms grew, and the month of May the time they were gathered. They were not grown to photograph, but to sell, and every saleable Mushroom had been gathered three days before the photograph was taken. They were all sold for 10d. and 1s. per lb., and the bed was in full bearing for weeks. Several tons of horse droppings were used in the making of the beds.

The droppings which have been shaken out of stable manure should be taken and left in heaps under cover, lying as lightly as possible, not more than 3 feet deep for a day or two, then turned over and shaken loose, letting it remain on the floor about 2 feet deep. Repeat this process every other

any of the following five or six months, for cold buildings, or any time for heated buildings; clear off all the straw five or six weeks after spawning, care being taken not to knock off any of the young Mushrooms.

Accomb, York.

GEO. HOLMES.

DEEP CULTIVATION OF SOIL.

WHATEVER may be the nature of Mr. E. Beckett's reply to Mr. Hall's query as to the Aldenham method of trenching soil, he cannot very well, without showing undue egotism, say, what others can so much better say, that if ever results have justified methods, they have been furnished in the kitchen gardens at Aldenham. Mr. Beckett is a famous grower of the most beautiful of vegetables, literally everything thriving luxuriantly under his treatment. Those results speak volumes for the success of his deep culture. No doubt many persons have had cause to look with fear on such very drastic operations as bringing from low down any form of subsoil, whether clay, sand, or otherwise, because of its

Mr. EDWIN BECKETT has opened up a large and interesting subject upon which there are many diverse opinions. I may say at once I most thoroughly agree with what he has advanced on deep cultivation, and those of a contrary opinion may well study what Mr. Beckett has so clearly set forth. In the deep digging question I got my lessons many years ago when working side by side with my late father. Any attempt at shirking the bottom was soon known by my father exclaiming, "Now then, young man, fetch that bottom up," and similar remarks to the same end. In the course of the work I got various hints about the bit of "yellow stuff" down below. "There is money in that; it only wants bringing to the surface." These and similar remarks to the same end, coupled with the fact that I was working beside a thorough spadesman, made me an excellent master of that tool long before I was sixteen. There are those to-day who dread seeing a bit of yellow soil on the surface—soil they have been brought up to nickname "inert" for want of a truer description. Those that talk so much about inert soil at a few inches deep have given no thought to the subject. Trace the deep roots of any big Oak or Beech, and where do we find them but in this very material. But the giant trunks of these trees do not endorse the idea of "inert" soil; far from it. It is the same in the garden. In trenching a new piece I was always taught to put the best soil where one expected to find the great mass of roots later on, and bring the bottom soil up for treatment by aeration, &c. Only a few weeks ago I saw a piece of ground being muddled over in the way I deplore, while the "dressing" of manure may have come through a pepper castor, so nicely as it arranged. The greatest depth moved by the spade and the man would not average 5 inches if honestly measured. I would like to ask those who talk about inert soil at what depth they consider this to occur. I will give two instances. The one was of soil taken from a deep cutting of the Banbury and Cheltenham direct railway, at a depth of 20 feet to 30 feet; the other was of soil taken from the Penge tunnel frequently at 100 feet or 150 feet in the earth. In the first the soil was blue lias clay, solid, heavy and retentive to the last degree. Of this material hundreds of loads were carted on to a piece of sharp sand that previously would not grow wheat straw a foot high, and no other crop was of the slightest use. On this land cartload after cartload was

shot down side by side, and eventually rough levelled, and left for the frost to pull to pieces, for it was in great clods many pounds in weight. In this case the clay was carted on for a definite and good purpose, and the crops taken without the aid of manure were simply astounding. In the Ponge tunnel case the soil was the output of one of the shafts, and it so happened that the kitchen garden was largely made up of the most greasy and treacherous rolling clay of which I have had experience. When I took charge of the garden a pail of water was an absolute necessity in digging at any time. All flower beds had to be specially made, which was no light work, seeing there were hardy bulb and flower beds by the dozen. Before taking charge the kitchen garden had been a hopeless failure, and to this I gave much time and trouble. Deep digging, the addition of leaf-soil, of which luckily a great quantity existed, light manure, and abundance of grit gradually brought this into a most prolific garden, and finer Leeks, Cauliflowers, and Celery I have yet to see. Special strong forks were the chief tools, spades and all akin being, I found, out of the question and unreasonably laborious. Rough winter ridging I greatly favoured, and by growing Leeks Celery fashion, the ground was deeply moved in summer also. A near neighbour solved his difficulty by firing, burning a set piece each year. In this case also splendid crops resulted. And yet there are those who talk about inert soil at less than 18 inches deep. My own belief is that common-sense and proper working will render any class of soil productive, and, regardless of its quality, nothing short of rock or stone should prevent every atom of soil being rendered available for the crop on the land.

E. H. JENKINS.

Hampton Hill.

Mr. E. BECKETT, like many other good men who have preceded him, has advanced new ideas relative to the advantage of a thorough and exceptionally deep system of trenching, and his advice, I notice, has already been questioned by a correspondent in THE GARDEN, January 29 last. This may be but the forerunner of many others, the writers of whom may or may not have attempted to follow the advice given. What I have seen in the gardens at Aldenham House within the past twelve months goes to prove that Mr. Beckett practises what he preaches. Just one instance will perhaps suffice. A new piece of meadow land had been taken in and the ground deeply trenched, if my memory serves me rightly, between 3 feet and 4 feet, and treated exactly according to the information given on page 32. A heavy crop of Potatoes was first gathered, and this was followed by an exceptionally fine lot of Savoys later in the year. This method of deep cultivation is consistently carried out in all parts of the kitchen garden, and if proof were wanted of the success of Mr. Beckett's system of treating the soil, his excellent exhibits at the meetings of the Royal Horticultural Society in recent years should be ample for this purpose. The crops as a rule are of a high order of merit in all departments.

D. B. CRANE.

WHEN a strong man with deep convictions has an object in view he goes straight for it. This is what I admire in Mr. Edwin Beckett's remarks upon deep cultivation on page 32. But if we bring up the crude, bad subsoil to the top, we must also add improving substances in a very liberal manner. This Mr. Beckett has combined with his deep trenching, hence his success; and the absence of this ameliorating treatment will in most cases account for failure when failure has followed a reversal of the top and bottom spits.

Many years ago, when I was a youngster, I served for seven or eight years under one of the best fruit and vegetable growers I have ever known. He was a hard-headed York-shireman, and always went straight for his object; but, like the careful, skilful man he was, he made provision for improving the bad stuff brought to the top as he went along. In those days a good deal of forcing was done on the old hotbed system, chiefly with oak and other leaves. Hundreds of loads were raked up every

winter and carted to the kitchen garden for the purpose. In addition, all the rubbish of the garden and waste soil from the potting shed was available. Some of the rubbish was smother-burned, with lumps of clay piled over the fire when well started. With such means at disposal and plenty of labour, six or seven acres of heavy land were soon brought into a splendid condition for cropping, and even a timid man similarly placed would not hesitate to adopt the same method of improvement. I have known cases where trenching in the way described has, for the time being, done harm, but that was because the bad soil was brought to the top and nothing done to improve it. I have heard men argue that if the same liberal treatment had been adopted with the surface soil, the labour of trenching might have been saved. But the surface-scratching men were in a bad way last summer, as they always are in a dry time. A mule of manure is, of course, valuable in a dry time, but especially so when the hard pan has been broken up below to let up the moisture stored away there. The top soil was once in the condition the bottom soil is in now, but exposure to the atmosphere and the annual decay of vegetable life have improved it, and the same course should be taken with the bottom soil. Of course the intelligence of the cultivator will suggest that it should be done in a more rapid manner. No vegetable grower should be satisfied with less than 3 feet of good workable soil—that ought to be the aim, though in many cases, from the lack of means of improvement, the whole object has to be deferred. There is one means of improving cold clay land which everybody might adopt with advantage, and that is burn some of the clay, and top dress with it to the depth of several inches to open up and warm the staple.

E. HOWARD.

FRUIT GARDEN.

APPLES AND PEARS.

PRUNING takes a long time and requires to be done with judgment, according to kinds and varieties of fruit. With the majority of varieties of Apples I adopt a free-growth system by leaving young growth its full length, on which flower buds form when two years old. To avoid crowding I prune awkwardly-placed branches back to a wood bud, so that warmth from the sun and air have free access amongst those remaining. I resorted to this system with pyramid, bush, and standard Apple trees, as practice and observation had taught me that the close-pruning system I formerly followed brought on canker with free-growing trees. Weak-growing varieties which do not require much pruning should be selected to form espalier-trained trees; such are Manks Codlin, Manning-ton's Pearmain, Wealthy, and Dutch Mignonne.

Pears are amenable to close pruning. Under this system they continue for many years in good health and bear regularly. They are therefore adapted for training into different shapes. The best are those trained horizontally or as cordons and pyramids. The pyramid is by far the best for open ground. I prune my trees to form pyramids of cordoned branches—that is, they have a main stem in the centre with branches starting from it. Many trees have as many as fifty branches, some of which are 12 feet long, so that I have as it were fifty single cordon trees in one. Most of the pruning is done in August by shortening the summer side growth to within an inch of the base. Now is the time to shorten second growth and shorten and thin out spurs. It is a too common error for spurs to be overcrowded; they require room to allow the leaves to attain their fullest size, when large, well-ripened bloom buds will follow. It is better to err on the side of thinness rather than for the spurs to be crowded.

Stake and restie trees that are not sufficiently established to hold themselves firm without this aid. In the case of horizontally-trained trees one pair

of branches is as much as can be obtained in one season. To induce the leading shoot to break to obtain them, shorten it so as to leave three eyes, two to be opposite as near as possible; these will form the first pair of branches, and one above them will make a leader the following season.

PLUMS, DAMSONS, AND CHERRIES.

Thin out the wood of Plums, Damsons, and Cherries growing on open ground, and shorten any shoot growing beyond the outlines of the trees to keep them in good shape. The two former are liable to throw up suckers, and if any exist, they should be traced with a fork down to the roots and cut off with a knife. The pruning of these trees on walls consists of taking out dead and worn-out branches to make room for young shoots left their whole length at the summer pruning. Shorten the longest of these a third of their length, cut out all old "snags," and shorten and thin out spurs.

Advice on Peach trees will be given in a later article.

G. NORMAN.

LATE WHITE GRAPES.

I have just placed my late white Grapes in water for keeping, and "J. C. T.'s" note at p. 34 is most opportune. I have Vines of Lady Hunt, and planted it on account of its thick skin and lateness, but somehow it fails to keep as long as I could wish. Probably this may be owing to various causes, such as too early ripening or other defects in culture, but so far I have been unable to keep this variety as well as the Trebbiano. One difficulty with this variety is its close, compact build, as even with ample thinning the berries spot badly and decay more quickly than one would expect. This season I intend to give this variety different culture, and by so doing may have better fruit at the time needed. If its season can be extended it will be of great value, as we have so few late white Grapes. As is well known, Trebbiano cannot be relied upon after next month, as the berries, though good, decay at the footstalk. I note "J. C. T." does not include the White Lady Downe's in his list of late white Grapes, and it is surprising how this variety has dropped out of cultivation. The variety I grew was poor indeed, but I believe there are two kinds. It would be interesting to know if growers find it reliable.

G. W. S.

[This note has been unavoidably held over.]

PROPAGATING POLYGONUM BALDSCHUANICUM.

As previously stated, this has proved difficult to propagate, yet anyone possessing an old plant may well try the following method detailed last spring in the French journal *Le Jardin*. Its increase there is spoken of thus: "After trying various methods with but little success, we resolved some weeks ago to take the woody shoots of the preceding year, and treat them in the same way as is done in the case of the Vine when propagated from eyes. The branches were cut up into lengths and laid flat in well-drained pans of soil, with a layer of silver sand on the top, the whole being placed on a moderate hotbed. Slightly burying them in the sand by simply pressing them with the fingers and kept sufficiently moist, these cuttings gave very good results, especially those that had been made rather long—that is from 8 to 10 centimetres in length." T.

THE WHITE CORYDALIS.

I wonder how many people grow *Corydalis cava albiflora*? Not many, I expect, as a large firm of florists, who supply most things, had "to get it for me." It always seems to me worth looking for in spring. The delicate green prettily-cut leaves and panicles of creamy-white flowers, interspersed with reddish-brown bracts, form a pretty combination. It seems to prefer a moist, shady situation in vegetable soil. Care must be taken to mark where it grows, as it dies down early in autumn.

Woolside Park.

T. J. W.

NOTES OF THE WEEK.

Forced Daffodils. Mr. Jenkins, Hampton Hill, sends us some blooms of Daffodils, double *Telamonius* and some of the early Trumpets, apparently *Priniceps*. The colour of the blooms is quite equal to the normal colouring out of doors, that of *Telamonius* being specially rich, and the foliage is tall and stout.

A small Narcissus. I enclose a small *Narcissus* which began to flower, as usual, about January 20. It is not in form exactly the same as *N. minimus*, and always precedes it by about three weeks. It was a kind gift to me from Mr. Barr after one of his expeditions to Spain. — J. H. ARCHER-HIND, *Cumbria-shire, Devon*.

[The flower is *N. minimus*. Imported bulbs of this *Narcissus* vary much both in size and form of bloom as also in the actual time of flowering. In its native habitat *N. minimus* increases from seed, and hence its variable character. — Eds.]

Ulmus alata. — Among deciduous trees which are particularly noticeable during the winter when devoid of foliage is this, the Winged Elm of the United States. Both its specific and popular names are derived from the peculiar corky excrecence which is disposed on either side of the stem, and to such an extent that at a little distance the smaller branches appear to be at least two or three times their actual stoutness, which on closer inspection is found to be caused by the corky ridges on the bark. It forms a medium-growing tree, the head being composed of long wide-spreading branches, which in conjunction with its winged bark gives it a very distinct appearance. It is a native of the Southern United States, and was introduced in 1820. Its timber is said to be valuable, but in this country its principal claim to recognition is the peculiar corky bark. — T.

Pear Broompark. To look at this little Pear, with its dumpy, Apple-like figure and its rough-feeling, coarse-looking brown skin, one would hardly think that its unattractive exterior could be the covering of so truly dainty a morsel as there is within. The flavour is indeed first-rate, recalling in an idealised manner the excellent taste that a good stewing Pear develops in cooking with the added attraction of the freshness of the perfectly ripened raw fruit. The toughness of the thick skin is shown by the fact that we received some of these Pears, just ripe, in a parcel without box or any protective packing material, but merely done up in squarish shape in a sheet of newspaper, tied across both ways with string in the usual way. They arrived quite unharmed thus packed by the sender, who knew what he was about, but we should scarcely have dared to pack a sample of Potatoes thus. This capital little fruit is thus described in Dr. Hogg's "Fruit Manual": "Fruit small, roundish, obovate; skin yellow, sprinkled with cinnamon-coloured russet; eye small, dry and horny, set in a slight depression; stalk an inch long, curved, and inserted in a slight cavity; flesh yellowish, melting, juicy, and sugary, with a rich musky flavour. An excellent dessert Pear; ripe in January. The tree is very hardy and vigorous, an excellent bearer, and succeeds well either on the Pear or Quince stock. It was raised by Mr. J. A. Knight, and first produced fruit in 1834."

Flowers of *Phaius grandifolius*.

The enclosed flowers are from seedlings raised by crossing *P. grandifolius* with *P. Wallichii*. My seedlings that have flowered have all shown improvement both in flower and vigour to the parent plant. I have now about fifty spikes opening their flowers in various stages of development and carrying from twelve to eighteen blooms and buds like those herewith enclosed. Spikes of these arranged with foliage of *Iris botanica* are very acceptable at this season of the year when tall flowers are none too plentiful. The spikes are very enduring in a cut state. I often wonder the *Phaius* are not more grown considering their usefulness and simple requirements. They can be grown and flowered in from 9 inch to 5 inch pots, in which they are well adapted for room decoration. Cultural requirements are as follows: I always pot them

after flowering and when new growths are well started, using good fibrous peat, loam, sphagnum moss, with the rough charcoal siftings from the burnt rubbish heap freely worked amongst the potting material as the potting proceeds. They should be given an ordinary stove temperature. Be very sparing with the water in the early stages after potting until growth is vigorous and the plants are making fresh roots, when they will require to be kept moist. When the flower-spikes show themselves give the plants weak cow manure, and they will do well. *Phaius Norman* and *P. Cooksonii* respond well to the same treatment. The latter variety with me throws two spikes from strong growths. — JAS. R. HALL, *Four Warren, Cobham, Surrey*.

[Very richly coloured flowers of this *Phaius*. — Eds.]

Galanthus Elwesii var. *Whittallii*.

— One is pleased to see this fine Snowdrop figured so artistically in *THE GARDEN* by Mr. Moon. As I had the pleasure of suggesting that the name of one of our kindest friends should be attached to this Snowdrop of his introduction, one feels pleased to be in a position to say that this season it quite bears out the promise it held out to us last year — the first since it was sent from Smyrna by Mr. Whittall. It is truly a fine plant, with its great leaves and fine bold flowers. The only difference it shows is its blooming rather later, when compared with others, than last season. This did not surprise me, as I have often found that imported Snowdrops flowered earlier the first season than in succeeding years. Mr. Whittall's Snowdrop is well worth having, and it appears to be doing well here in both moist and dry positions. — S. ARNOTT, *Corsythorn, by Dumfries, N.B.*

Protea cynaroides. Among the popular indoor plants of fifty years ago the various Proteas, including the Banksias, Dryandras, and Grevilleas, as well as numerous species of the genus *Protea*, occupied a prominent position, but are now rarely met with. The subject of this note, *P. cynaroides*, is one of the showiest of the Proteas, and a good example of this is just unfolding its blossoms in the succulent house at Kew. Planted out in an unshaded structure it succeeds well, and forms either in bud or in flower an attractive object. The pinkish flowers, which are borne in a terminal head, are surrounded by large bracts, suggesting the Globe Artichoke, hence the specific name of *cynaroides*. These bracts are more or less silvery, and this is particularly noticeable before the flowers open, as in that stage the bud resembles a whitish cone. This *Protea* is a native of that continent towards which so much attention is now directed, viz., South Africa, where the name of Sugar Bush is applied to different members of the genus. In this country it needs the protection of a greenhouse, a soil composed principally of sandy peat, a liberal water supply, and above all thorough drainage. — T.

Narcissus monophyllus. Among the greenhouse plants which are in blossom at this early season of the year I think this little Algerian *Narcissus* takes a high place. It is just now among flowers in the greenhouse what *Cyclamen coum* is in the open border, and is sure to be an object of great attraction. Its chalice-shaped blossoms are borne on Rush-like scapes of a few inches in height, and their whiteness cannot be exceeded. For some reason or another it used to have the reputation of being an excessively difficult plant to grow, so difficult in fact that it was scarcely worth while to take much trouble about it. I remember a long time ago my old friend Mr. Rawson, of Windermere, sent me a long memorandum which contained all the information which he esteemed to be desirable on this head, and no doubt all he said was perfectly correct; but I think the gist of it might have been reduced to one single point, and if care be taken about that, the rest will follow as a matter of course. *Narcissus monophyllus* will stand very little watering, if, indeed, it will stand any at all, before root action has begun. The roots must be somehow coaxed into action before anything like safety can be proclaimed, but when this is done there is no more occasion for any

special anxiety about watering or anything else. At any rate, I have now grown *Narcissus monophyllus* for a good many years, and its cultivation has long since become a piece of ordinary routine. It is highly attractive in my greenhouse just now. As my pen is in my hand I may perhaps as well say that *Niphon Histro* is coming out well in the open border, and, of course, *Iris stylosa* is sure to enliven the dead season of the year. — HENRY EW BANK, *St. John's, Ryde, I. of Wight, Jan. 20.*

Primula sinensis fimbriata. — We have received specimen blooms of the beautiful strain of Chinese *Primulas* raised by Mr. William Bull, 536, King's Road, Chelsea. The flowers are fine as regards size and extremely pretty. Novelty among them are: Comet, bright magenta; Countess and Blushing Beauty, both of a delicate pink colour, the latter being semi-double.

Moræa iridioides Macleanii. — Can any of your readers who may happen to have cultivated the above plant suggest any approximate limit to the longevity of the flowering scape? My plant threw up a scape in the summer of 1897; this bloomed (in a greenhouse) at Christmas, again in the summer of 1898, and has continued ever since to produce blooms every three or four months. I am not aware of any *Irid*, or, indeed, of any soft-wooded plant, that has the same peculiarity. This is an extremely beautiful *Irid*, or *Iris*, for all gardening purposes. Except in the matter of complete hardiness, it is an *Iris* pure and simple. The falls are milky white, the standards (which — the plant being a *Moræa* — are spreading and not erect) are yellow, and the stigmas bright mauve-purple — a perfect tricolor. *M. iridioides Macleanii* — also known as *Dietes Macleanii* — is a hybrid. — J. C. L.

Begonia Haageana. — In any selection of *Begonias* for autumn and winter blooming this is worth a place, as it is in every way a good decorative plant, being well worth growing for the sake of its foliage alone, and when in addition the massive clusters of blossoms are produced, its ornamental qualities are greatly enhanced. The flowers are of a blush tint, with conspicuous red hairs on the outside of the sepals. Though spoken of as an autumn and winter-blooming plant, it might almost be regarded as perpetual flowering, for blossoms are also produced at other seasons. Treated liberally it will form quite a bushy specimen 3 feet or 4 feet high and as much through. It succeeds best in the temperature of an intermediate house, as in the stove it is apt to become rather weakened. This *Begonia* was introduced from Brazil in 1887, and at first a certain amount of confusion prevailed between this species and *B. Scharfiana*, which is somewhat similar, but *B. Haageana* proved to be the better garden plant of the two. — H. P.

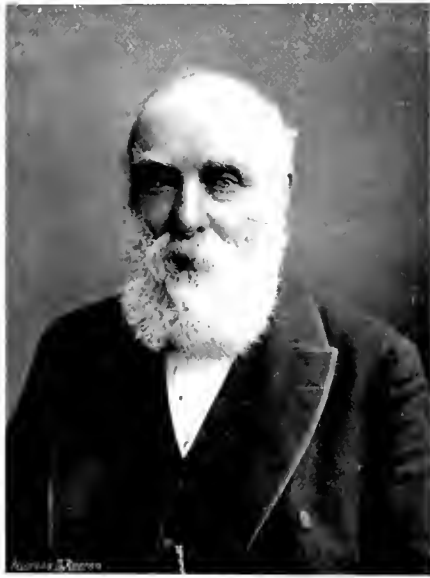
Adonis amurensis. This species of *Adonis*, which has not long been introduced, has proved to be the first hardy herbaceous flower to open in my garden in this the last year of the nineteenth century. It has beaten the *Aconites* even, and, in fact, every bulbous plant except a solitary specimen of the new *Galanthus Whittallii*, which opened about four days before, on January 18. There is no denying the fact that January is mid-winter, and that, as Count Smolrtork said, "he surprises within himself" some of the worst potentialities in the way of weather; consequently it may reasonably be doubted whether flowers coming into bloom in the open at this season can be of much value. The wind and the snow, however, are more surely tempered to certain species of *Ranunculaceæ* than they are even to stony larks, and *A. amurensis* appears to be quite as weather-proof as are the *Hellebores* or even the *Aconites*. How far any of the species of perennial *Adonis* can be said to be "distinct" is a question that depends a good deal on the way you look at it. All have glistening yellow flowers, the apothecis, so to speak, of the common *Buttercup*, and all have very similar finely-cut foliage. The flowers also vary in size, but they do this very often in plants of the same species, which is a mere matter of soil or cultivation; on the other hand, they certainly seem to differ in the matter of cultural requirements. *A. pyrenaica*, which is generally admitted to be the finest

variety, appears to many of us to be especially difficult to establish or keep. I remember years ago noticing a remark of the late Mr. J. Wood that he considered the growing of this species to be the crux of successful cultivation of alpine plants. In this I agree with him, although it disposes of my own claims in this respect. On the other hand, I have observed that some of the nurserymen in their catalogues seek to enhance the attractions of this plant by adding that "it is very easily grown." As this is otherwise unnecessary and gratuitous, it must be assumed that they, at any rate, have always found it so. There seems to be no special difficulty in the culture of *A. amnensis*, although, inasmuch as bought plants are not likely to be very strong, it should be looked after when first planted, for slugs are fond of it. The common *A. vernalis* is, no doubt, the easiest to manage in a general way. *A. volgensis* is, I believe, merely a variety of this with somewhat smaller flowers. I do not remember ever having seen it, and I certainly have never grown it. There is, or was, a certain *A. Walzii* in commerce, but I have never seen this either and know nothing about it. *A. amnensis* was figured in vol. lii. of THE GARDEN, p. 6.—J. C. L.

OBITUARY.

THE LATE JOHN FRASER.

So widely known and highly esteemed was Mr. John Fraser, an account of whose life was given in THE GARDEN of last week (p. 70), that we thought a photograph of our late friend would interest many readers of THE GARDEN. He was a thorough horticulturist, and his assistance upon the floral committee of the Royal Horticultural Society will be much missed.



THE LATE J. FRASER.

"ALMOST A CENTENARIAN."

THE FATHER OF SCOTCH GARDENERS.

In all probability the father of Scotch gardeners has passed away in the person of the late Mr. James Fraser, who died at Castlehill, Turriff, on the 18th ult., aged 98 years. Mr. Fraser was engaged by the late Dr. Adam as gardener at Ardmiddle House, Turriff, in the year of the disruption—1843—and for the long period of thirty-three years he conducted gardening operations at Ardmiddle with great acceptance by his employers. The gardens and grounds at Ardmiddle saw many improvements carried out under his management, and during Mr. Fraser's long engagement he served

three generations of the family. It was with great regret that the late Mr. Milne parted with his faithful and trusted servant twenty-five years ago, when Mr. Fraser retired from active duty and took up his residence in Turriff, which just now, by his death, mourns the loss of its oldest inhabitant. Mr. Fraser was a pawk, shrewd, typical Scotchman, and a gardener all over. Locally Mr. Fraser enjoyed a reputation as being an authority on all matters connected with horticulture, and in his day few could outdo him in the art of growing good vegetables and hardy fruits, while from personal remembrance I can speak of him as an expert in the cultivation of Strawberries, Melons, and Cucumbers. The immediate cause of Mr. Fraser's death was a sharp attack of influenza, that deadly enemy of all mankind.

Terrigles, Dunfermline, N. B.

JOHN MACKINNON.

SOCIETIES.

SWEET PEA BICENTENARY CELEBRATION.

The first general committee meeting in connection with the bicentenary celebration of the Sweet Pea was held, by kind permission, in the Horticultural Club Room, Hotel Windsor, on Friday, January 19, when Mr. George Gordon, V.M.H., presided over a very representative gathering.

Business being the purpose of the meeting, no time was lost in speechifying. The chairman briefly alluded to the desire expressed in 1899 by leading amateurs, nurserymen, seedsmen, and market growers that a comprehensive exhibition of Sweet Peas should be held during 1900, together with a conference, one duty of which should be the classification and selection of varieties. This desire led to a meeting in Edinburgh in September last, when Mr. Gordon (chairman), Mr. H. J. Jones, and Mr. R. Dean (secretary) were elected as a preliminary committee to draw up a scheme for the celebration and submit it as early as possible to the general committee. After this brief and formal statement, the chairman requested the secretary, Mr. R. Dean, V.M.H., to read the letters received from the Crystal Palace Company and the Royal Aquarium Company. The former offered to accommodate the exhibition, provide the necessary conveniences for a conference meeting, and subscribe £20 to the prize fund. This being the best offer, it was agreed, on the proposal of Messrs. H. A. Needs and H. J. Wright, that the bicentenary celebration be held at the Crystal Palace, Sydenham, on July 13 and 14, 1900, or as near those dates as could be conveniently arranged without clashing with other exhibitions.

Having settled the place and date of celebration as far as possible, the next point for discussion was the schedule of prizes, of which a preliminary draft had previously been communicated to the vice-presidents and committee. Before the discussion of classes and prizes a list of subscriptions received and promised up to date was submitted by the secretary, amounting to nearly £90. As the whole of the subscriptions received were unadmitted, the committee felt that the success of the undertaking was practically assured, believing that those interested in the most beautiful, useful, and fragrant of annual flowers—the Sweet Pea—would not fail to show their practical sympathy with the committee's efforts as soon as affairs had received definite form. The schedule is a comprehensive one of twenty-eight classes, each with four, and some with five prizes, offered on a most liberal scale. Class by class the schedule was discussed, and numerous minor alterations made. Nineteen open classes are provided for cut blooms, all to be shown in vases, these including classes for forty-eight, thirty-six, and eighteen bunches, and thirteen classes for one bunch of a specified colour or colours. Four classes are limited to amateurs employing either one or no regular gardener, and then there is a division, open to all, consisting of five classes instituted for the purpose of demonstrating the value of Sweet Peas in all forms of decoration known to the florist's art. The total amount offered in prizes in the preliminary schedule exceeds £90, and this comparatively large sum should ensure a display of the most beautiful and instructive character.

Special prizes are invited, but they must, in accordance with the resolution passed at the Edinburgh meeting, be free from any trade conditions. Already several firms have intimated their intention of providing the prizes in certain classes, and at this meeting it was decided to accept Mr. Henry Eckford's generous offer of £15, the sum offered in class one for forty-eight bunches of Sweet Peas in not less than thirty-six varieties, an offer made by the Wem veteran to commemorate the fact that this is the twenty-first year of his work in selecting and cross-fertilising Sweet Peas. Mr. H. J. Jones offer to supply the prizes in class twenty-five, for an ephebe of Sweet Peas, £2 17s., and Mr. R. Sydenham's offer to supply the prizes in two of the amateur classes, amounting to upwards of £5, were accepted and acknowledged. With reference to the rules and regulations for competitors, it is worth while noting that from subscribers of 10s. 6d. and upwards no entrance fees will be demanded, but non-subscribers must pay an entrance fee of 2s. to entitle them to compete in any six classes (subject to divisional schedule regulations), but a further entrance fee of 5s. must be paid if this number is exceeded.

Conference proceedings, subscribers tickets, publication of report, and other matters were referred to, but reserved for final discussion and settlement at the committee meeting to be held on Friday, February 23, by which date the complete schedule, regulations, &c., will be ready for acceptance and immediate publication.

Meanwhile, the committee desires the sympathy and financial assistance of all horticulturists, so that the forthcoming celebration may be made the unqualified success its interest and importance demands. Any surplus funds remaining after the payment of prizes and necessary expenses will be given to the gardening charities. Further particulars can be obtained from the hon. secretary, Mr. R. Dean, V.M.H., Ranelagh Road, Ealing.

ROYAL HORTICULTURAL SOCIETY OF SOUTHAMPTON.

We have received the report and schedule of prizes for the coming summer and autumn exhibitions of this society, which will take place on Wednesday and Thursday, June 27 and 28, and Tuesday and Wednesday, November 6 and 7, respectively. We are pleased to see from the report that the society is in a very satisfactory condition. The adverse cash balance of over £117, with which the society commenced the year, has been so reduced, that the net deficit, allowing for the value of the society's material and one or two outstanding subscriptions, is now practically nil, a position the society has not enjoyed since 1887. The credit balance on the years working amounts to over £97, as shown by the following figures: Net receipts for the year, £54 3s. 6d.; net expenses (not including bonds redeemed), £47 2s. 6d. The hon. secretary is Mr. C. S. Fudge, Heckfield, 17, New Alma Road, Southampton, from whom all information may be obtained.

BRISTOL AND DISTRICT GARDENERS' MUTUAL IMPROVEMENT ASSOCIATION.

The fortnightly meeting was held at St. John's Parish Room, Redland, on Thursday, the 25th ult. Mr. C. Lock presided over a large attendance. The meeting was specially interesting by reason of a paper read by a member from the Cardiff Gardeners' Association, Mr. J. Graham. Under the title "Gleanings from a Horticultural Class," Mr. Graham dealt with a variety of subjects, all of great importance to gardeners, such as soil and its constituents, bacteria, thermometers, dew and rain, laying out of pleasure grounds, rocky formation, draining of land, plant diseases, &c. Mr. Graham strongly urged the formation of botany classes in connection with gardeners' associations, claiming that a knowledge of theory was a great help to the practical worker. An exhibit of great interest was provided by Mr. Graham, who showed over fifty dried specimens of British plants. A motion of sympathy with the relatives of the late Canon Anstey was passed. The late canon was a vice-president of the association during his residence at Redland, and took a keen interest in the work from the time of its formation.

ROYAL GARDENERS' ORPHAN FUND.

The annual general meeting of the subscribers to this fund will be held at the Essex Hall, Essex Street, Strand, London, W.C., on Friday, February 16 next, for the purpose of receiving the report of the committee and statement of accounts for the past year, to elect officers for the ensuing year, to elect nine children to the benefits of the fund, and to transact such other business as may arise. The chair will be taken at 3 p.m. The poll will close at 4.30 p.m., after which time no votes can be received. B. WAXNE, Secretary.
S. Dimes Inn, Strand, W.C.

CHISWICK GARDENERS' MUTUAL IMPROVEMENT SOCIETY.

We are pleased to know that this society, held in the famous old council room in the Chiswick gardens of the Royal Horticultural Society, is well supported, and its flourishing condition is due in no small measure to the interest taken in it by the president, Mr. Wright, superintendent of the gardens. The subjects dealt with recently have been "Odontoglossums," by Mr. Hollingsworth, and "Onions," by Mr. A. Dean. The following meetings will take place on February 5 and 22 and March 8 and 22, and those who will give pupils include Mr. McLeod, Mr. Chas. Harding, and Mr. John Fraser.

READING GARDENERS' SOCIETY. CHEMICAL MANURES.

This was the subject of a lecture delivered by Mr. F. W. E. Shrivell, of Thompson's Farm, Tonbridge, at the fortnightly meeting of the Reading Gardeners' Mutual on Monday evening last. The lecturer in an interesting and easy manner laid before the members the results of the various experiments carried out at Tonbridge during the past five years with chemical manures on vegetable and fruit crops, under the auspices of the Permanent Nitrate Committee, who wished to find out whether animal manure could be dispensed with altogether, relying solely on chemical manures. An interesting discussion followed, in which Messrs. Fry, Neve, Pinks, Chamberlain, Burfitt, Alexander, Wilson, Hinton, Lever, and Ager took part. On the proposition of the chairman (Mr. Fry), a hearty vote of thanks was accorded to Mr. Shrivell for his lecture, and to Mr. F. Lever, The Gardens, Hill-side, for staging an exceedingly well-flowered plant of *Gelogyne cristata*. Six new members were elected.

NATIONAL CHRYSANTHEMUM SOCIETY.

The annual general meeting of the above society will be held at Carr's Restaurant, 265, Strand, W.C., on Monday, February 5 next, at seven o'clock p.m., to receive the committee's annual report and balance sheet to elect the president, vice-president, officers, and a third of the committee for the year ensuing, to consider certain alterations and amendments to the rules, and transaction of other business which pertains to the annual general meeting. An important notice of motion has been made by Mr. Thomas Bevan: "That the election of the present general secretary be postponed, and that an advertisement be

inserted in the gardening papers for a properly qualified person to fill the post of secretary at a salary of £100 per annum.

The report of the committee for the past year seems satisfactory. The committee in presenting their report feel they can congratulate the members upon a condition of affairs in relation to the society of a generally satisfactory character. The exhibitions have maintained their high quality without decreasing in extent; the hold of the society upon the numerous provincial and foreign societies affiliated to it is as wide and firm as at any time; the work of the floral and classification committees has been carried out with spirit; the financial position of the society is decidedly encouraging, the balance sheet statement for the year showing a substantial balance in hand, while the assets of the society are of an improved character. The committee recommend that the sum of £50 of the reserve fund, now on deposit, be increased to £100.

The committee note with regret that the incurved, the reflexed, and the Anemone-flowered types appear on the exhibition stages in decreased numbers, though this fact may not, of itself, justify any apprehension that there is an actual lack of interest in the culture of the varieties of these sections.

The vase class was the leading feature at the November exhibition, and made a most imposing display, arousing a large amount of public interest. The competition was numerous and keen, though some who had entered for competition found themselves at the last moment unable to bring their flowers. The large-hearted liberality shown by Messrs. James Green and Nephew in providing such a considerable number of handsome vases free of charge for the purposes of the class was highly appreciated by the committee. At all the exhibitions, miscellaneous exhibits, mainly supplied by the trade, afforded features which enhanced the interest of the various displays, and imparted an attractive variety as well.

It is satisfactory to notice that the competition among affiliated societies for the possession of the challenge trophy is maintained with spirit. Still, it is desirable more societies should take part in the annual contest. The possession of the Holmes Memorial cups appears to continue to fire the ambition of growers, and give occasion to close competitions.

The committee are under a great obligation to their president, Sir Edwin Saunders, for his valuable special prizes; to Mr. P. Waterer for his special prizes for an essay on the Chrysanthemum rust, which failed in its objects; and to other donors of special prizes, which enable the committee in a few instances to introduce special features into their schedule of prizes.

A sub-committee have had under consideration the relation existing between the National Chrysanthemum Society and affiliated societies, and having reported that it is desirable certain amendments be made to the privileges enjoyed by affiliated societies, the committee have adopted the same; and as alterations in the rules are made necessary, such alterations will be proposed for adoption at the annual general meeting.

In November last a deputation from the committee visited Lyons, in response to an invitation from the secretary of the French National Chrysanthemum Society, for the purpose of taking part in an important exhibition of Chrysanthemums; and an interesting account of the proceedings of the same, compiled by Mr. C. Barnum Payne, will be published with the annual report, &c. A very hearty vote of thanks was passed by the committee to the deputation; they at the same time placing on record their belief that the exchange of international courtesies in this and other ways between home and foreign cultivators and lovers of the Chrysanthemum is most desirable, and should be promoted in every possible way.

ANSWERS TO CORRESPONDENTS.

Names of plants. W. H. A. A very good form of Cattleya labiate.

Names of fruit. T. L. 1. Round Winter Nonsuch; 2. Bismarck; 3. Lady Hamaker; 4. D. Vex Spice; 5. White Nonpareil; 6. Knight & Monarch. H. J. P. Round Winter Nonsuch.

TREES AND SHRUBS.

The Rose of Sharon (*Hypericum calycinum*) (R. M. S. STOCKPORT). This is really a low-growing evergreen shrub, but in some positions it is quite common for it to become sub-evergreen in severe winters and thus present a somewhat unsightly view for a short time each year. The plant increases rapidly by means of underground growths, the younger ones being more vigorous than the older ones. As you have a plentiful supply of leaf-mould, &c., you would do well to apply a top-dressing in early spring, as it will be of immense benefit in affording additional stimulus. Remove the dead and useless growths. It is not necessary to cut the plants down to the ground line.

Planting Yew (G. A. M.). In planting Yew trees to form a hedge a very suitable size is well-furnished bushy plants from 2 feet to 3 feet high, and if these are planted 18 inches apart they soon form a dense and effective break. Of course a good deal depends upon the plants having been frequently removed, a practice carried out in all good nurseries, as then their transplanting is done with but little risk. Larger specimens, if suitable and can be obtained, may be employed, in which case a somewhat greater width may be allowed, but it should at most not exceed 2 feet, and unless the plants are particularly bushy, 18 inches distance will be the best. In planting a hedge in two rows a distance of 1 foot to 1½ inches should be kept between them. The plants in the two rows should not be opposite one another, but placed at an angle, as by this means a more

regular hedge is formed. Planting may be done from autumn up to February or March, in which latter, should the weather keep dry, care must be taken that the Yews do not suffer from drought. Clipping may begin the spring following the planting of the hedge.

FLOWER GARDEN.

Spacing and colouring of flower bed. The Rev. R. M. asks our advice both as to the spacing and colouring of a bed he proposes to plant with Stocks and Tufted Pansies. We think it would be better not to distribute the two kinds of plants evenly all over the bed, but to group the Stocks towards the middle, with a thinner outer ring not reaching quite to the edge, and to plant the Tufted Pansies so that they will fill out the edge and run up towards the middle between the thinner row of outermost Stocks. We are not told what the shape of the bed is, but in a round or square or any other solid form, we think that this would be the best way of disposing the plants. A bed of white and mauve in the two kinds of plants would be likely to be prettier than one all mauve. A colour-word such as mauve might cover so large an area of tinting, that it would be quite possible to plant together a mauve Stock and a mauve Pansy that would be inharmonious, though if the colours were rightly chosen they might go together very prettily. This is a case in which it is quite impossible to give a helpful answer without seeing blooms of the plants proposed to be grown together. If Rev. R. M. would care to take the trouble to get from any Pansy nursery several kinds for mauve bloom and to try them for one year with the colour of the Stock he proposes to use, we shall be happy to advise him further if he will send us the blooms of both for consideration.

Sweet Peas sown for succession (REV. R. M.). The quantity of Sweet Peas you think of sowing seems too much for the space. You desire to plant two hedges 6 feet apart in three sections for succession, and to have the kinds arranged in harmonious colouring. If the length is divided in three there would be a one-third section on each side of the space, between the two rows, in flower at the same time. For colouring, row 1, section 1, might have kinds whose flowers are French white (pinky white), pink, cool rose, scarlet and pink and white, or a selection from these. Row 2, section 1, whites and lilacs (Princess May and Countess of Radnor for the lilacs). The next in succession in row 1 might be deep pinks, the dark Boreatton and dark scarlet, and opposite, in row 2, light and dark purples and white. The last two sections could have in row 1 salmon-pink colouring and Orange Prince, and opposite Captain of the Blues, whites, and pale yellow. If, instead of sowing thickly in one drill, each row is of two drills 2 feet apart, and the seeds are placed by hand 4 inches apart in the drills, and mulched after they have made some growth, less seed will be used and the Peas will be much finer. The plants in the double drills should be staked with two lines of spray-leaving towards each other, when the flowers will stand up free. It is important to pick off the overblown flowers so that the plants may not be weakened by forming seed.

INDOOR GARDEN.

Celosias (GHESS). We are pleased to learn that you like Celosias. They certainly rank when well grown as amongst the most beautiful plants, whether in grace, in form, or in colouring, that are grown in gardens. We are very pleased to see that, whilst being of such tender constitution, their time of beauty outdoors is limited, their frequent introduction into bedding displays during July, August, and September adds so much that is pleasing to a style of gardening that needs so much of such added beauty to commend it. But whilst mixed packets of seed give all the rich colours found in the plumes of Celosias, yellow, orange, vermilion, violet, carmine, and other tints, these plumes can only be seen at their best when good culture is given, then a well-branched pyramidal plant is a lovely object. As a rule the middle of March is a good time to sow the seed. Small shallow pans well drained and filled with sandy soil is the best medium, and these, when the seed is sown thinly, should be stood in gentle warmth to induce early germination. When the plants are 1 inch in height they should be picked out into other pans thinly, and then later be put singly into 3-inch pots.

Double Chinese Primulas (ASTON). We do not quite gather from your note whether you inquire concerning double Primulas, such as named varieties, that can only be increased by ordinary propagation, or whether you want to obtain the semi-doubles, that can be raised from seed. In the true double forms the fertile organs of the flowers have been changed into petals. In these semi-double ones that change is limited, and seed-growers can, by splitting the flowers open, find organs that will bear fertilising. Of these there are white, pink, carmine, scarlet, crimson, blue, flaked and other colours, all being, if desired, purchased separately, or may be had mixed. Seed should be sown in May to have strong plants to flower well in November and through the winter. Sow in shallow pans on sandy soil, the seed being just buried, and after gently watering, stand in a warm greenhouse frame, shading it during the day with paper. Plants large enough to lift and prick out thinly into other pans should be ready in about seven weeks, and from these pans they may be got into small pots and so grown on.

KITCHEN GARDEN.

Double digging (F. KREP). This is more simple and there is less work. A space of say 2 feet in width is marked off and the soil taken out two spades deep to the portion of the land where the work is finished and the digging then proceeds; the top spit is placed at the bottom of the space cleared and the second on the top of that, and the same process continues until all is completed. This is double digging, or two spades deep is dug from start to finish. Some cultivators also dig the bottom up before placing the soil, others only remove one spit deep, and the other is dug and left, and double dug in. The proper way is doubtless

to remove the top spit and dig the bottom one. This is a simple, but effective process with poor soils.

Asparagus planting (CHOSE).—Although you can quite easily raise Asparagus plants from seed, yet, if time is an object to you, it will be much better to purchase fairly strong roots now. You can get good ones at about 7s. 6d. per 100, and if they be two years old, then none could be better. That would, if you plant early in April—the best time for such purpose—give you two years' start over seed-sowing now. But, even if you sow seed, do not do so until early in April, as it is unwise to induce the tiny growths to come up until hard frosts have gone. When seed is sown, let it be thinly in drills 2 inches deep and 12 inches apart. Thin out the little plants so soon as high enough to be seen to 6 inches apart in the drills. Hoe freely between them all the summer, and in August give a thin sprinkling of salt to hoe in. If the soil has been worked deep and well manured, the plants at the end of the season will be all the stronger. To make an Asparagus bed in April, get the ground trenched 2 feet deep, bury down a heavy dressing of manure, and fork in a further one with bone-dust on the top, then plant in broad, deep furrows 20 inches apart, the roots being 16 inches apart.

WEATHER IN WEST HERTS.

THE early part of the past week was unusually warm for the time of year, but since the 26th ult. low temperatures have prevailed. On no night did the exposed thermometer show more than 7° of frost. Notwithstanding the cold of the last few days the soil at the present time is at about a reasonable temperature at 2 feet deep, and only 1° colder than the average at 1 foot deep. Rain fell on all but two days during the week, and on the morning of the 28th the ground was covered with snow to the depth of 1½ inches.

JANUARY.

One of the most noteworthy features of this mid-winter month was the frequent changes in temperature. Indeed, during the course of it there occurred three distinct periods of cold, and three distinct periods of mild weather. Taken as a whole, it must be regarded as having been a decidedly warm month. It was not, however, nearly as warm as the two previous Januaries, which proved exceptionally mild. There occurred no cold nights worth mentioning, the lowest reading registered by the thermometer on the lawn showing only 13° of frost. Up to the time of writing, the evening of the 30th ult., there have been only eight days without rain since the year began; whereas the average number for the month is fifteen. The total rainfall amounted to nearly 4 inches, or about 1½ inches in excess of the January mean. It is now fourteen years since we have experienced so wet a January. As affecting the underground water supply I may state that since the winter half of the present drainage year began in October, the fall of rain has exceeded the average quantity for the same four months by nearly an inch—equivalent to about four gallons of rain on each square yard of surface. Although such a continuously wet month, there was more than the usual amount of sunshine.

Berkhamsford, January 30.

E. M.

FORTHCOMING EVENTS.

- Feb. 5. National Chrysanthemum Society. Annual meeting, Carrs Restaurant, Strand, London.
13. Royal Horticultural Society. Show and meeting of Committees, Drill Hall, 12; annual meeting, 3 p.m.
13. Horticultural Club. Annual dinner, Hotel Windsor, 6 p.m.
16. Gardeners' Orphan Fund. Annual meeting, Essex Hall, Essex Street, Strand, 3 p.m.

CATALOGUES RECEIVED.

- New Plants. *V. Lemoine et Fils, Rue du Montel, Nancy.*
 Garden Seeds. *Dobie & Mason, 22, Oak Street, Manchester.*
 Garden Seeds and Roots. *Vilmorin-Andrieux et Cie., 4, Quai de la Messagerie, Paris.*
 Garden Seeds. *Morse Bros., The Nurseries, Epsom.*
 Garden Seeds. *Potter, Ducks & Co., 46, Dennis st., Manchester.*
 Horticultural Buildings. *Foster & Prayson, Beeston, Notts.*
 Flower and Vegetable Seeds. *Vilmorin-Andrieux et Cie., Paris.*
 Seeds of Alpines, &c. *H. Carrerou, Geneva.*
 Spring Bulbs, Dahlias, Cammas, &c.—*C. G. Van Tubergen jun., Houtjeven, Holland.*
 Pansy Seed List. *H. Weide, Lanchbury, near Highbury, Germany.*
 Greenhouse and Hardy Plants, Bamboos, &c. *Robt Feilich & Son, New North Road, Exeter.*

Erratum. In the article "Notes on Winter Flowers in Rome," first column, line 33, for "Date Palms" read "Fan Palms."

THE GARDEN.

No. 1473.—VOL. LVII.]

[FEBRUARY 10, 1900.

EDITORIAL NOTICES.

Every department of horticulture is represented in THE GARDEN, and the Editors invite readers to send in questions relating to matters upon which they wish advice from competent authorities. With that object they wish to make the "Answers to Correspondents" column a conspicuous feature, and when queries are printed, they hope that their readers will kindly give inquiries the benefit of their assistance. All communications must be written clearly on one side only of the paper, and addressed to the EDITORS of THE GARDEN, accompanied by name and address of the sender.

The Editors welcome photographs, articles, and notes, but they will not be responsible for their safe return. All reasonable care, however, will be taken, and where stamps are enclosed, they will endeavour to return non-accepted contributions.

As regards photographs, if payment be desired, the Editors ask that the price required for reproduction be plainly stated. It must be distinctly understood that only the actual photographer or owner of the copyright will be treated with.

The Editors will not be responsible for the return of artistic or literary contributions which they may not be able to use, and the receipt of a proof must not be taken as evidence that an article is accepted. Publication in THE GARDEN will alone be recognised as acceptance.

Edited by MISS JEKYLL and MR. E. T. COOK

Offices: 20, Tavistock Street, Covent Garden, W. C.

THE ROYAL HORTICULTURAL SOCIETY.

THE report of this society for 1899-1900, which will be submitted to the annual meeting on Tuesday afternoon next, displays a straightforward, honest policy of advancing true horticulture in our land; and so long as this is the watchword, the society will prosper. It would be a disgrace if it failed to win support from horticulturists of all degrees when endeavouring to set forth the principles of gardening and scientific pursuits. The old and evil days of elaborate gardens for fêtes and amusements generally are, we devoutly trust, for ever past, and certainly during the last few years the society has pursued the course of true horticulture, and for this satisfactory condition of affairs, this solid foundation upon which the structure now rests, we must thank those who during troublous times have held firmly the reins of office, guiding the society through a quagmire of distrust and pessimistic belief in its future. We remember well those days; the society was almost a derelict, and many who loved it well believed that its days were numbered, or it not numbered, that a new organisation must be raised up upon the ashes of its predecessor.

Those who are interested in this splendid organisation, knowing that it represents horticulture in this country with an influence even beyond the sea, rejoice greatly in the report that has been prepared for the meeting on Tuesday.

We refer to it prominently on this occasion believing that the society deserves hearty support from horticulturists, and for its future welfare we have nothing but good wishes if it adheres to the present satisfactory policy.

Several features of the report deserve close attention. One is the new experimental garden, and the "acquisition of a new garden in the place of Chiswick" is one of the projects for celebrating the centenary of the society, which will occur in March, 1904. The celebration is already arousing interest, and this departure of seeking fresh fields for experimental horticulture and trials of novelties is excellent. It displays the true gardening spirit. In the old days at South Kensington some wild scheme, notable for its absence of anything concerning horticulture, would have been put forward to celebrate a great epoch in the history of the organisation. To encourage experiments and trials is to promote a love and interest for horticulture and assist the amateur in his selections of flowers, vegetables, and fruits by sifting out synonymous kinds and those not worthy of culture. A garden in the country, removed from smoke or fog influence and from the overshadowing of houses, is essential, and we look forward to the future, as the Royal Horticultural Society without a good garden would lose much of its charm and utility. The council are taking steps at once to ensure co-operation, and mention that "a garden for experiment and trial is an absolute necessity. Chiswick has recently become so surrounded with buildings and the atmosphere so heavily charged with smoke, that not only has the difficulty of cultivation enormously increased, but it is feared that the results obtained from the trials are rapidly ceasing to be reliable. It is therefore proposed to issue an appeal to all the Fellows, and to raise a fund for the purchase of a more suitable site for a garden in memory of the first hundred years of the society's existence." We may remark that the garden should not be many miles from the metropolis and in a convenient district for members and committees to attend for judging the trials, which will probably be extended under the new conditions, and the garden should provide a school for students who wish to follow some branch of horticulture as a means of livelihood. "The council wish to call attention to the good work being done at Chiswick under Mr. Wright's superintendence, not only in the garden, but among the students," and Mr. Wright reports that "The demand for energetic, trustworthy young men from

Chiswick is rapidly increasing; there is no difficulty in placing each in good situations, our supply being unequal to the demand, but they must all be workers."

The fate of the fruit show, held annually at the Crystal Palace, will hang in the balance unless the Fellows betray keener interest in it than exists at present. This annual representation of British-grown fruit is of greater importance than a mere show; it should stimulate greater enthusiasm in an important branch of industry, and become an object-lesson with far-reaching results. The report says, and with truth: "As an object-lesson in British fruit cultivation this annual show stands unrivalled, and is of national importance. Those who have visited it from year to year cannot fail to have been impressed by the wonderful advance which has been made in the quality of the hardy fruits exhibited, and as the importance of fruit growing in this country cannot well be over-estimated, the council invite Fellows and their friends to support them in their efforts to maintain and improve this exhibition by visiting it and subscribing to its funds, for it cannot be too widely known that the continuance of the show is absolutely dependent on at least £100 being raised by subscription each year towards the prize fund. The show involves the society in a very large expenditure without the possibility of any financial return. The council have, therefore, established the rule that they will not continue it unless sufficient interest in it is taken by Fellows and their friends to provide £100 towards the prize fund, and this will in the present year (1900) be even more important than heretofore, as the directors of the Palace have signified to the council that they feel compelled to decrease their contribution by £50. A glance at the list of subscribers will show how small has been the interest taken by the bulk of the Fellows. The council would point out that this is not a local show with a few large prizes, but that a multitude of small prizes have been arranged in order to secure the best fruits in each section; special prizes have been allotted to market growers, and counties have been grouped in such a way that growers should not have to compete with exhibitors from localities more favoured by climatic conditions. These points will be still further extended should sufficient financial support be forthcoming."

It is pleasant to record that the exhibition held in the Temple Gardens, by kind permission of the Benchers, retains its popularity, and that the last show was "as successful as ever; it is

a matter of satisfaction to the council to find that this meeting is now universally acknowledged to be the leading horticultural exhibition of this country." Fashion, of course, is as fickle as the weather, but we hope she will continue to smile benignly upon this beautiful annual display of flowers and fruits, showing British skill in culture and hybridisation. To the uninitiated into the mysteries of plant raising and hybridising to develop new departures this exhibition is a glorious feast of colour and perfume, and nothing more, but the connoisseur knows that it is a manifestation of new plants, Orchids, indoor flowers, Roses, and so forth from the nursery gardens of England and abroad.

The hybridisation conference held in July last in the Chiswick Gardens was a distinct success, "not only for the value of the papers read and communicated, but also for the pleasant opportunity it afforded for the meeting of horticulturists from all parts of the world." We are pleased to know that the report of this conference will form a volume of the society's valuable journal. Such a record is of immense scientific importance.

The question of the legality of some of the bye-laws which since the "great revival of the society in 1887" received consideration, is now practically settled. A strong desire was expressed to throw off the mesh of South Kensington entanglement inseparable from the existing charter. "There appeared to be only two alternatives: either to abide by the existing bye-laws, or to petition Her Majesty to grant a new charter. The expense involved in the latter course has hitherto been an obstacle, but at the beginning of the past year (1899) the condition of the society's finances appeared to the council to be such as to warrant a petition being made to Her Majesty for a new charter, and a considerable part of the year has been employed in drawing it up. The petition to Her Majesty and a draft of the new charter were submitted to a general meeting of the society held on June 21, 1899, and were unanimously adopted and ordered to be sealed with the society's seal and presented to Her Majesty the Queen. The council have much pleasure in announcing that, on the advice of the Privy Council, Her Majesty acquiesced in the petition, and on November 14 signed the supplemental charter and ordered it to be sealed with the Great Seal of the Kingdom."

The council "fully recognise the advantage of the society possessing a hall of its own in which plants, flowers, and fruits can be seen by the Fellows under more favourable conditions as regards light and space," and ask for suggestions. This important matter is in the hands of the Fellows and all interested in horticulture in this country. It is idle to condemn the present building as dimly lighted and comfortless. It must remain so until some scheme can be thought out for obtaining the "Hall of Horticulture" which has yet to become a reality. Horticulture is pursued as ardently, more so probably in this land than in any other country of the world, and its great society is housed in a drill hall admirable for volunteers, but not

for the interesting fortnightly gatherings which attract amateurs, gardeners, and nurserymen from the length and breadth of the British Isles. These meetings have become in the truest sense meetings of all interested in horticulture, and neither dim light nor uncomfortable surroundings damp the ardour of visitors or committees.

It is satisfactory to know that the Lindley Library has not been forgotten, and the books are now enclosed in glass-fronted cases to preserve them. We wish more use were made of this valuable storehouse of horticultural and botanical literature.

To the roll of those earnest horticulturists and botanists, Fellows of the society, who have crossed the silent stream, many names honoured in the world of horticulture and science have been added during the past year. Amongst those whose work has finished are recorded the Duke of Westminster, president of the Gardeners' Royal Benevolent Institution; Sir E. Frankland, Lady Howard de Warden, General Berkeley, Major Mason, Mrs. Milne-Redhead, Mr. T. Francis Rivers, V.M.H.; Mr. Malcolm Dunn, V.M.H.; Mons. Henry de Vilmorin, Mr. S. Courtauld, Mr. T. W. Girdlestone, Mr. J. T. Saltmarsh, Mr. W. Protheroe, Lord Penzance, Sir Henry Tate, Bart., Mr. John Lee, Mr. Alfred Ontram, Mr. James Martin, Mr. S. Spooner and others.

May the society prosper in the future, and increase tenfold its usefulness in promoting a love for gardening and the great horticultural industry of these isles. Its management is in strong hands, and whilst true horticulture is followed, free from anything likely to revert to a former unfortunate policy, then all will be well, and the centenary celebration mark the strongest epoch in its long life.

A HEDGE-BANK GARDEN.

It often happens that a garden is bounded on some side by a hedge-bank, such as is the usual division between fields in many parts of the country. Where this is the case there is an opportunity for treating it as garden space in several different ways. The special way that best suits the individual case will be determined partly by the aspect, partly by the soil, and a good deal by what growing things the hedge may already contain.

A case that lately came before us may be taken as an illustration, and may be the more useful in that it was desired to treat the whole hedge on both sides.

The bank had formerly been the extreme limit of the garden, but the owner, having bought a field beyond, had the happy idea of taking a strip off the field a few yards wide and planting a Holly hedge, of laying down turf between this and the hedge-bank, and of converting the bank into a garden of rambling flowery growths.

On the garden side for the first 150 yards it is flower garden; for the rest of its length, a rather longer stretch, it is kitchen garden. This side there will also be a turf walk extending the whole length. Where pleasure garden ends and kitchen garden begins there will be partly a screen of Roses and other pretty things to hide the vegetable ground, and partly some of the handsomer of the kitchen garden plants, such as Globe Artichokes and Rhubarb, and dwarf fruit trees.

The first thing to consider in the conversion of the hedge is to decide what growths are in it already that can be left and utilised. For the most part the bank is rather bare and scraggy. There are a few poor Hollies, some Whitethorn scrub and some Blackthorn. At the kitchen garden there are one or two Elms, not good-looking in themselves and serious robbers of the garden. The Elms are therefore condemned and will be grubbed down. This will pull the bank right down where it occurs, but at one such point a way through is wanted, so that the opening will come in handy, and in the other places the bank will be rebuilt with turf sods. It is well not to disturb the sides of the bank more than can be helped, so that they will only be attacked with any degree of vigour where they harbour Nettles and bad patches of Couch Grass and strong establishments at the base of deep-rooting Docks. Then we examine the top and dig it deeply wherever it is clear of bushes, but not so near the edge as to weaken the shoulders, except at a few points where it is distinctly desirable to make a break in the general regularity.

As there are already Thorns and Hollies, and as it is desirable that the bank shall present some kind of unity of solid foundation, for the better display of the more ornamental planting, we plant more Holly, Thorn and Blackthorn, and with them a fair quantity of Cherry Plum. Towards the further kitchen garden end some common Elders will do well and look handsome. The Thorns and Hollies are not planted in a straight row, but in groups, breaking here and there into the shoulders and even the sides of the hedge.

Now we have to consider what are the most suitable of the many beautiful things that can be grown in such a place. Foremost will come the Cluster Roses of the Ayrshire and Semper-virens and allied groups, and of these probably the best of all are the Garland Rose and Dundee Rambler, both loving a place where they can fling out their long flower-laden branches. Rosa lucida, of more bushy growth, is also a capital bank plant, and Scotch Briars must be planted freely. Both of these pretty things, though they appear at first to make little growth, are feeling their way underground, and within two years they will have forced their strong suckers through the sides of the bank; and while their running roots help to bind it together, their pretty heads will hang out and adorn the space almost to the ground level with a surprising quantity of bloom. These are planted so as to join in with some of the White thorn groups, so that in winter they shall all show a delightfully related mass of comfortable colouring of warm pinkish-purple and rosy-brown, merging into a top and shoulder planting of Berberis Aquifolium. This also will in time grow through the sides of the bank. As brilliant incidents in this region will come some Forsythia suspensa throwing out their long flower-laden sprays over and among the stiffer branches of the dark Barberry. Then will come a group of Pyrus japonica and a good stretch of Japan Honeysuckle and Clematis Flammula, two plants that grow through and into another in the happiest fashion. Two Brambles will be conspicuous ornaments in our hedge: the Parsley-leaved with its bountiful crop of fruit, and the double-flowered, both pink and white.

These will want quite a long stretch of space. Then in order to break what might be a monotony of trailing growths we must have something of bushy and upright habit. So then we get Gorses and Brooms. One side of the bank faces south-east, and for the greater part of the day is in full sun. Here we must not forget the beautiful Rosa Wichuriana, probably

the best of the sun-loving trailers among Roses, delighting in a warm place where it can hang over and make a living curtain of neat glossy leaf and clear-looking white bloom. A Guelder Rose or two will be fine in the bank, and if a good length of it has the common Traveller's Joy (*Clematis Vitalba*) running over the Thorns and billowing about on its own account, it could scarcely be clothed in any more becoming garments.

The bushes and plants named will be quite enough, when well grown, for a length of bank of 300 yards or 400 yards. Many more plants could be named, but in such a planting a certain restriction in the number of kinds will give much better plant-pictures. Some other kinds of plants would be added, such as a few of the bolder of the hardy Ferns, at the foot or lower parts of the cool sides, and successional sowings of Foxgloves and the best Mulleins, also on the shady side, and Belle-

bores, Columbines and Primroses, while at the bank's sunny foot Acanthuses would be happy and most of the Flag-leaved Irises.

Such bank gardens should be more often made and planted, for there is no end to the beautiful pictures that may be designed and enjoyed, to say nothing of having all the delightful things within easy range of sight and scent, and of presenting the added interest of flitting of butterfly and nesting of bird, also at the most comfortable and convenient of observation levels.

In addition to a judicious planting of double and single Gorse and Broom, common Gorse seed and that of the wild yellow Broom and the white one from Portugal should be sown. In three years' time these sown plants, having thrust in their deep roots without the check of transplantation, will probably catch up and even overtake the planted ones of the same kind.

Clerodendron trichotomum. I should say that those who complain of this plant for not flowering, lack patience. It will not flower till well established, but it flowers and fruits delightfully in Bath, and so it does here. H. ELLACOMBE, *Bilton Vicarage, Bristol.*

NEW AND RARE PLANTS.

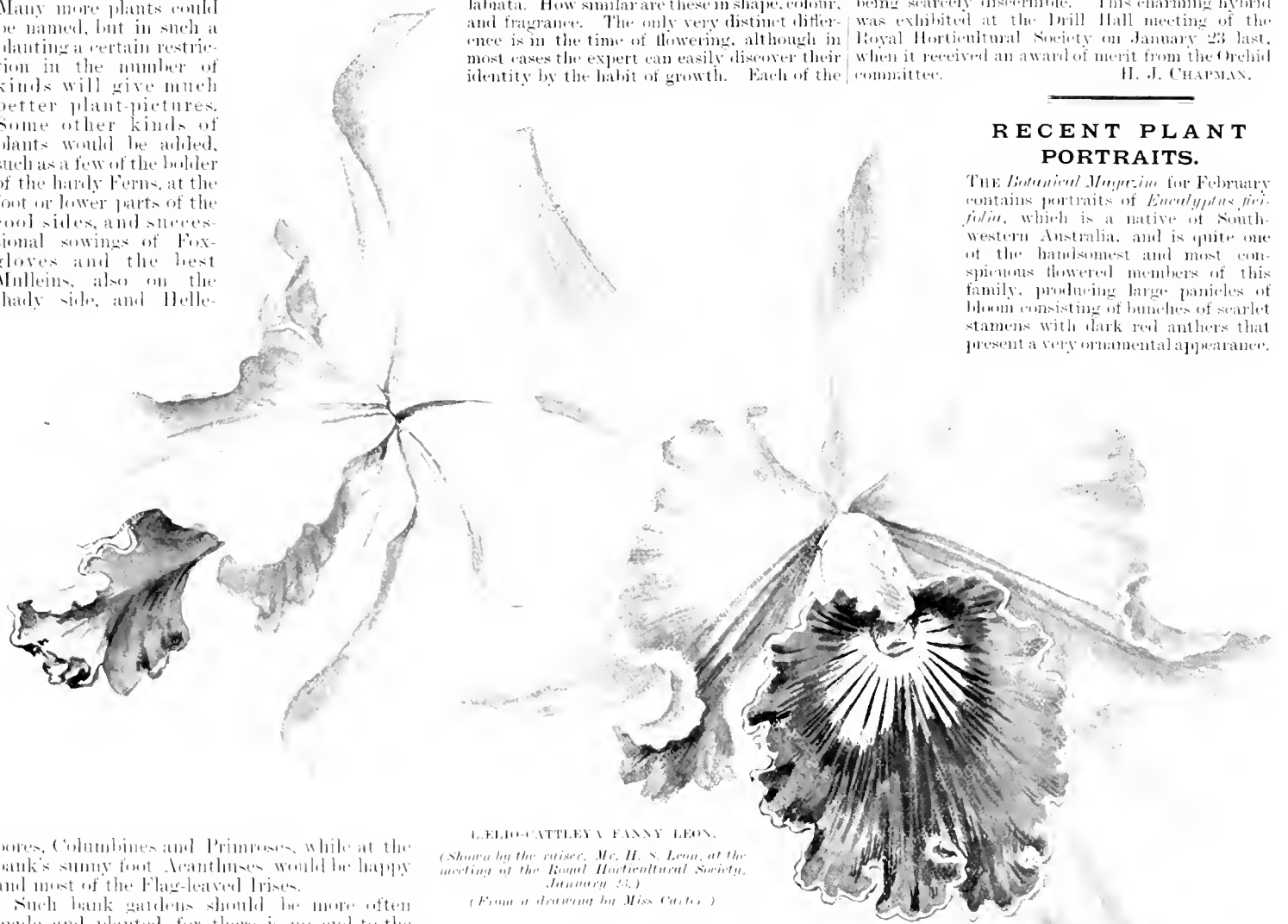
LÆLIO-CATTLEYA FANNY LEON.

IT is not surprising that certain hybrid Cattleyas and Lælio-Cattleyas resemble each other. There is a very fine dividing line between many of the species belonging to the *C. labiata* section, and these are all fertilised with one particular variety of another section. Take for example *Cattleya labiata* Warnerii, *C. l. Gaskelliana*, and the old autumn-flowering *C. labiata*. How similar are these in shape, colour, and fragrance. The only very distinct difference is in the time of flowering, although in most cases the expert can easily discover their identity by the habit of growth. Each of the

The dorsal and lower sepals are each about 3 inches long, upwards of 1 inch broad, deep rosy lilac, becoming lighter at the base. The petals are as long as the sepals and 2 inches broad, somewhat crisped on the margins, and deep rosy lilac. The finely-shaped lip, 2 inches across, is wholly of deep crimson-purple, with darker crimson veenings, and having an almost white-crested margin on the front lobe. The side lobes are similar to the front lobe, shading to white at the base. Through the base of the throat there is a suffusion of deep orange, which is prominently lined with bright purple. The habit of growth shows largely the characteristics of *Cattleya labiata*, the influence of the other parent being scarcely discernible. This charming hybrid was exhibited at the Drill Hall meeting of the Royal Horticultural Society on January 23 last, when it received an award of merit from the Orchid committee. H. J. CHAPMAN.

RECENT PLANT PORTRAITS.

The *Botanical Magazine* for February contains portraits of *Eucalyptus ficifolia*, which is a native of South-western Australia, and is quite one of the handsomest and most conspicuous flowered members of this family, producing large panicles of bloom consisting of bunches of scarlet stamens with dark red anthers that present a very ornamental appearance.



LÆLIO-CATTLEYA FANNY LEON.
(Shown by the artist, Mr. H. S. Leon, at the meeting of the Royal Horticultural Society, January 23.)
(From a drawing by Miss Carter.)

above-mentioned Orchids has been used with *Lælia purpurata* in the production of the three following hybrids, viz.: *L. C. eximia*, *L. C. Violetta*, and *L. C. Bella*. It would be exceedingly difficult indeed for the most enlightened of our Orchid experts to distinguish either of these with any degree of certainty. These remarks also apply to the closely allied hybrids that have been procured through the influence of *Lælia crispata*. I should not have gone into this detail had it not been for the fact that many good judges doubted the parentage which Mr. Hislop gave at the time he exhibited the subject of the accompanying illustration, *Lælio-Cattleya Fanny Leon*. It was raised in the gardens of Mr. H. S. Leon at Bletchley Park from the intercrossing of *Lælio-Cattleya exoniensis* and *Cattleya labiata* autumnalis. It is, therefore, a secondary hybrid, and there is no doubt that it bears a considerable likeness to some of the above hybrids derived from the *C. labiata* group. *L. C. Fanny Leon* is a handsome hybrid, flowering in the depth of winter,

Lomatia longifolia is a native of South-western Australia. This is also known under the synonyms of *Embothrium myricoides*, *E. longifolium*, and *Tricondylus myricetobus*. It is an evergreen shrub or small tree, producing bunches of white flowers with narrow reflexed petals and a golden tip to each. It flowers annually in the temperate house at Kew in July.

Platanus lanceifolia is a native of Asia Minor, and is also known as *P. imbricata*; it is an exceedingly handsome Sage with large and conspicuous golden yellow flowers.

Arisaema flavum is a native of the Western Himalayas, and is also known under the synonyms of *A. abbreviatum*, *Dochata flava*, and *Arum*

flavum. It is described as a remarkably variable plant, but its flowers are small and inconspicuous and of merely botanical interest.

Iris obtusifolia is a native of Persia, and is an extremely handsome new species nearly allied to *I. lutescens*. It has large pale yellow flowers with a deep gold beard on the inner half of the fall. It bloomed for the first time in the bulb house at Kew in 1899.

The *Revue Horticole* for February contains a portrait of a well-flowered bunch of the lovely little gentian-blue Chilean Crocus named *Tecophyton cyanococcineus*, which, owing to its culture and requirements being but imperfectly understood, is as too seldom seen in our gardens.

The February number of *Revue de l'Horticulture Belge* contains a portrait of *Eulophia Lubbersiana*, a curious little Orchid with small and inconspicuous flowers of merely botanical interest, but handsomely variegated foliage, which may commend it to some growers who admire distinctly variegated leaves.

W. E. GUMBLETON.

NOTES OF THE WEEK.

Hyacinthus azureus.—How is it that one so seldom sees a word of praise bestowed on this charming little Hyacinth? There are in my opinion very few indeed of the hardy winter-flowering plants that surpass it for simple beauty. I have now a small clump of it with about sixty heads of bloom and in its way it is very hard to beat. Here in a city garden it is of easy cultivation, flowering year after year without being disturbed, and in fact seems to delight in being left alone. The only care it seems to need is protection from snails when it is first pushing through the soil.—W. S. TILLET, *St. Giles Street, Norwich.*

Hybrid Rhododendrons.—An instance of the attractiveness of some of the javanico-jasminiflorum hybrids of the Rhododendron has been afforded by studs of bloom-trusses exhibited by Messrs. Veitch & Sons, of Chelsea, at the later Drill Hall exhibitions of the Royal Horticultural Society. Of the varieties shown the following were especially effective: *Souvenir de J. H. Mangles*, large truss of reddish-pink blossoms, very striking in colour; *Multicolor Neptune*, crimson; *Multicolor Triton*, pale pink with yellow eye; *luteo-roseum*, faint pink suffused with yellow, large flowers; *Princess Beatrice*, creamy flesh; *debeatum*, shell-pink; *Aphrodite*, flesh-white; *Princess Alexandra* and *Multicolor Mrs. Heal*, two pure whites; *Minerva*, orange; *Exquisite*, canary; *Thetis*, pale orange-buff with reddish centre; and *Ariel*, sulphur-yellow. With the exception of the last-named variety, in which the anthers were of similar colour to the flowers, the whites, pale pinks, and yellows possessed anthers of a much deeper tint than the petals, that, by the contrast they afforded, added considerably to the attractiveness of the flower-trusses.—S. W. F.

Iris reticulata in pots.—Charming as this little Iris is when braving outside the cold winds of early spring, it is also very beautiful when brought on under glass, thus anticipating its usual season of blooming. For general decorative purposes it is most useful when six or seven bulbs are put in a pot 5 inches in diameter. They should be potted in the autumn and placed out of doors, covered with ashes or cocoa-nut refuse, just the same as Tulips are treated, in order to encourage the formation of roots, for without good roots bulbs of all kinds, but especially those needed for forcing, will turn out a comparative failure. As the young growth pushes through the soil the plants should be taken into the greenhouse, where in a good light position their blossoms will develop without any check, and form an uncommon, yet much admired, feature. Forcing in considerable heat, as is often done in the case of Hyacinths and Tulips, will with this Iris end in failure.—H. P.

Correa cardinalis. This, sometimes referred to as the Australian Fuchsia, produces its showy blossoms during the first three months of the year, and was at one time a very popular greenhouse plant, but of late years it has

been less frequently seen, probably owing to the fact that great care is needed for its successful culture. The most suitable compost is good fibrous peat, with a liberal admixture of rough silver sand, and it should be given the same treatment as Cape Heaths. Excesses of moisture or drought must be especially guarded against. The pendulous tubular blossoms of this *Correa* are scarlet, tipped with greenish white, and a good specimen in full flower is a charming object. There are several other species, some much more vigorous than this, but the blossoms are not nearly so attractive. One (*C. alba*) is sometimes used as a stock on which to graft its more showy, but weaker relative.—H. P.

Winter flowering of Yuccas. A note on the above subject appeared lately in these pages. The winter production of flower-spires by the Yuccas, especially by *Y. gloriosa*, is by no means an uncommon occurrence in the south-west. During each of the past seven winters I have remarked instances in South Devon where spikes have been thrown up, though, naturally, the blossoms have not been perfected, in mid-winter. Such cases are, however, rare enough to form exceptions to the general rule, while in the instance cited by your Isle of Wight correspondent, a whole colony appears to have hazarded a similar untimely endeavour. In a cold district in mid-Somerset I have seen Yuccas bearing partially developed bloom-spikes at Christmas.—S. W. F.

Eriostemon cuspidatus.—The *Eriostemon*s are all natives of Australia, and in the days when hard-wooded plants were popular they used to be generally grown. Now, however, they are seldom met with, being obtainable in good condition from very few nurseries. Throughout the entire genus the different members are marked by a strong family likeness, forming effective bushy specimens clothed with deep green leaves, and bearing either white or pale pink blossoms. That with which this note deals (*E. cuspidatus*) is one of the best, the pure white blossoms, nearly an inch across, being borne in great profusion, while a succession is kept up for a considerable time. The cultural requirements are much the same as that needed by the general run of hard-wooded plants, namely, a compost principally consisting of fibrous peat and sand, with thorough drainage. It needs to be kept fairly moist at all seasons, but anything approaching stagnation at the roots will be fatal to its well-doing. Where specimens are planted out in a greenhouse border this is one that can be recommended for that purpose.—T.

Crocus ancyrensis.—This pretty little Crocus has been among the first of the genus to give us its flowers this season. Very welcome have been their bright cones of orange-yellow, which only lack of sun has prevented from expanding to show the interior of the flower, with its orange anthers and scarlet stigmata, some days before January had run its course. This Angora Crocus is small in size, and in this respect may be less prized by some than the larger flowers of an early form of *C. aureus*, which is in bloom at the same time. It is, however, so neat and cheery-looking in a dull time, that it adds much to the interest of a garden even to those who take no special interest in the Crocus apart from the brilliant effect of the large-flowered species or the Dutch forms. Such flowers as *Crocus ancyrensis* form a link between the fine Crocus speciosus, which was figured in THE GARDEN the other day, and the others which come in spring and give so much beauty to the garden.—S. ARNOTT, *Carslown, by Dumfries, N. B.*

Cyclamen coum. I think very few persons will be likely to question the attractiveness of this early alpine flower and its hybrid variety *Atkinsii*, raised by Mr. Atkins, of Painswick. This attractiveness arises from its own intrinsic beauty of flower and foliage, its dwarf and neat habit, its perfect hardiness, and the early period at which it blooms. Before the Snowdrops, Crocuses, and Aconites it gladdens us with its bright blossoms, and although its early blooms are sometimes covered some inches deep with snow, it does not seem in the least degree to suffer, for when the snow melts its blossoms come out as fresh as ever. As some people experience a difficulty in growing it, it may

be interesting if I give my own experience. I had for some years tried it in various parts of my garden, but with scant success, when an article in some gardening paper induced me to alter my mode of culture. I have a narrow border by the side of the drive up to my house which is somewhat overshadowed by trees and has a small shrubbery at the back, but nothing seemed to succeed in it, as it is very hot and dry, facing south. After reading the paper I thought that this seemed a likely place for the plant to succeed, so I took up a few of the bulbs that I had in other parts of the garden and planted them there. There was very little depth of soil, and I doubted very much whether the plan was likely to answer; however, it did so to perfection; the bulbs increased in size and seedlings sprang up all over the border. The seed vessels, as is well known, are in the form of a spiral twisted cord, and the seeds when ripe are shot out in various directions. In my case not only have the bulbs sprung up over the border, but the seeds have been carried into the shrubbery behind, and I am constantly digging up combs to give to my friends. I conclude, therefore, that a dry sunny border with a background of trees is what the bulbs really require; it may, of course, be that other growers have succeeded with it in places of a different character, but I only record my own experience.—H. B. D.

Escallonia scilloniense.—Unfortunately, the *Escallonias* are not really hardy in inland districts, a fact that is to be deplored, for they are usually free-growing shrubs, displaying a wealth of beautiful flowers and handsome deep green glossy evergreen leaves. Few shrubs have a more dense habit combined with freedom of growth. *E. macrantha* and its varieties are probably the best known and handsomest of the family, but an excellent companion is the rather new variety named above in which, though the general habit is similar to that of *E. macrantha*, the leafage is smaller and the flowers of an extremely delicate blush-white. Probably this is not in commerce, but flowers and sprays have been sent to us from Cornwall together with the information that the variety said to be a hybrid was obtained under the above name from the Scilly Isles and that it is a beautiful shrub, as one may imagine from the specimens sent. Where *Escallonias* will grow this should be grown. Other but little-known species are *E. montevidensis* (syn., *E. floribunda*) and *E. Philippiana*, both with white flowers and very attractive. *E. montevidensis* is rather difficult to propagate, and to strike cuttings one must lift a plant from the open ground and bring it under glass, encouraging the growth of weakly shoots, which may then be struck in gentle heat.—J. C. TALLACK.

WEATHER IN WEST HERTS.

A VERY cold and sunless week. The days were all cold, but the night temperatures in no way unusual. Indeed, on the coldest night the exposed thermometer showed only 9° of frost. The temperatures below ground have very gradually declined during the week, so that at the present time the reading at 2 feet deep is about 1° colder and at 1 foot deep about 3° colder than is seasonable. During the night of the 2nd inst. there occurred an exceptionally heavy fall of snow, which on the following morning covered the ground to the average depth of 10 inches. This is the deepest snowfall experienced here since January, 1887, or for thirteen years. When melted, the snow yielded nearly 1 inch of snow-water—equivalent to about 4 gallons on each square yard of surface—in my garden. At the time of writing the snow is still nearly 4 inches deep. A thermometer placed beneath the snow on the morning of the 3rd inst. has not varied 2° since it was placed there, the average temperature being about 1° below the freezing-point. During the last four days the atmosphere has remained very calm, and the direction of these light airs some point between north and north-east. The total record of sunshine for the whole week amounted to only a quarter of an hour.

E. M.
Beckhamsted, February 6.

WALL GARDENS. I.

I HAVE read with the greatest interest what is said in *Wood and Garden*, page 116, on the subject of wall cultures: "One of the best and simplest ways of growing rock plants is in a loose wall," &c.

Since my earliest youth I have had great admiration for old walls covered with plants. I remember when only ten years old my enthusiasm for the old retaining walls supporting the terraced vineyards in the Canton de Vaud near the Lake of Neuchâtel. These walls were then clothed with flowers and greenery, while the delicate fronds of *Cistopteris fragilis* and *Polypodium calcareum* formed a charming setting to the graceful bloom of *Corydalis*, *Campanula*, and *Linaria*. I say "were," for since those days the plasterers trowel has destroyed all this living beauty. Alas! what acts of vandalism are committed by orderly and practical people who think it their duty to repair and whitewash their walls at regular intervals! Unmindful of the picturesque, they sacrifice beauty to supposed utility, to the infinite regret of the artist and lover of Nature! How I loved these old plant-frequented walls, above all those of the old Château d'Yverdon, and the ancient ramparts of this little old Vaudois town! They might well be called a botanical sanctuary, for there alone, out of all Switzerland, was the one home of a rare *Hieracium*, *H. ligusticum*.

Alas, with the removal of the old ramparts this plant has disappeared, and for ever lost is also the pictorial *putina* which had gathered through the ages upon the castle walls. There have been works of demolition, of whitewashing and of putting-to-rights, and civilisation has done to death this graceful little Ligurian, whose pretty head was wont to dance to the northern winds.

Near Neuchâtel, in the walls that skirt the roads and footways and ridge the vine-clad hills, there lives and flourishes a rocky flora of the highest interest. The pretty Fern, *Ceterach officinarum*, spreads its thick crenated fronds around the rich tufts of the golden *Corydalis* (*C. lutea*) and the brilliant heads of *Hieracium lanatum*; but the mania for plastering goes on apace, and one after another the plants disappear.

On the shore of the blue Lake Lemán, at the foot of the vineyards of Lavaux, there are many great retaining-walls whose surface is almost hidden by flowers and foliage. Travelling by the railway-train that speeds along these shores, how often have I heard foreigners admire this sight, and ask how it was that this world of floral beauty could have been planted. Sometimes it is even difficult to persuade them to believe that nothing whatever has been planted, and that old Dame Nature herself has alone insisted on the placing of it all, in opposition to the will of man, who, on his part, vainly endeavours to struggle against her beneficent encroachment.

These walls, being kept continually cool by the moisture of the soil that they hold up, are the best possible receptacles for the rock-loving plants, whose whole effect presents a remarkable picture of plant beauty from May to September.

For there one sees, displayed against the grey stony background, and framed by the delicious greenery of trailing vine-branches, a whole scale of colour-tones, ranging from the clearest of whites to the most sombre of purples, and from purest blue to brightest yellow. And it is all hung about in a kind of pictorial haphazard on to the crest of the walling and into its minutest chinks and crevices: it hangs in wreaths and garlands,

seeming to pause at all the stony prominences; then springing one knows not how out of the very heart of the wall, spreading and flattening itself upon its surface, creeping downward and then clambering up—one knows not why—then, perhaps, laying hold of some other plant, when each will struggle almost fiercely in the fight to maintain its own dominion.

In one spot it will be the rosy *Saponaria*

cases of a blue that is nearly pure, and their lavish abundance ennobles the scene with a note of poetry. Then there are the Wall-flowers (*Cheiranthus Cheiri*), the ancient plant of the old castle walls, and one of the earliest that our ancestors brought into cultivation on their terraces, from whence centuries ago this sweetly-scented plant has been distributed. The Silver Basket (*Arabis albidá*), a plant of



A WALL IN THE JARDIN D'ACCLIMATATION, GENÈVE: VILLA SPINOSA, ERINUS HIRSUTUS, CAMPANULA MIRABILIS, SAXIFRAGA LONGIFOLIA, DIANTHUS NEGLECTUS, &c.

(Photographed by Miss Willmott.)

(*S. oeymoides*), whose large tufts spread into wide masses of bright carmine, that in some cases form the main mass of the vegetation. Close by are the bright yellow flowers of *Erysimum ocheolentum*, or those of the Golden Basket (*Alyssum saxatile*) escaped from some garden. Then come softer colourings—the rosy purple of *Erinus alpinus*, a plant of the high mountains that has come down from its native altitudes to bask in the warm sunlight of the Lake of Geneva. The *Veronicas* show a wealth of their fine lilac-blue bloom, in some

Caucasian origin that we have long had in cultivation, establishes itself on the crest of the wall, which it smothers with its myriad flowers of dazzling white. Here and there the Snapdragon (*Antirrhinum majus*) strikes a warmer note, with its spikes of bloom of crimson, or bright red, or orange-yellow. This, again, is a handsome foreigner escaped from gardens.

The blue Iris (*I. germanica*) is at home on the tops of walls, on terrace edges, and rocky eminences; its flowers, sceptre-like, are borne erect, and, with a queenly air, dominate the

plants around. It is the ancient Lily of the arms of France, the Fleur-de-llys of St. Louis and of the Royal House. It grows plentifully among the rocks, and it is a striking sight to see associated with its handsome blue-violet bloom the innumerable flowers of the yellow *Corydalis* (*C. lutea*), another southern plant that has made itself at home with us, and whose long season of bloom gives our walls so bright and lively a note of colour.

Several kinds of Pinks, and foremost the sweetly-scented *Dianthus plumarius*, often fully double (for the single-flowered type is rare in our gardens), have found a home in these old walls that border the wearisome iron road. The yellow-flowered Hawkweeds (*Hieracium*), the aromatic Thymes, Germander (*Tenacium Chamædris*), many kinds of Saxifrage, and, above all, the Stonecrops (*Sedum*) of various forms, the charming *Campanulas*, with their

blood. How wonderful and beautiful it all is! Then in cool and shady places and in northward facing slopes, the face of the wall is hidden by a thick clothing of Toadflax (*Linaria Cymbalaria*), whose long slender growths trail about in all directions, closely set with innumerable flowers like tiny Snaydragons of a modest and yet cheerful blue colour, whose effect is brightened by a spot of orange and white upon the upper lip. This is also a naturalised plant of southern origin. The bright and graceful frondage of a number of Ferns springs up on every side amid a setting of lovely Mosses.

And all this little world of green life, so varied in kind and shape, seems to be well and happily placed, though apparently nourished only by what it may borrow from the air and the weather, and from the dampness of the rock.

It is indeed a picture full of charm that, be-

the Great Artist sounding the glad note upon the mute instrument, and thereby pouring into the human heart the welcome flood of poetry!

How sad a sight would be the gloomy rock of Monaco were it not for the fragrant many-coloured plants that give it life! How dull would be the rocky Ligurian mountain walls if Lavender and Cistus, Hyssop and Fig Marigold were not there to flash out their resplendent flame and waft abroad their intoxicating perfume.

Geneva.

H. CORREVOX.

COLD WEATHER NOTES.

TEA ROSES AND WALLFLOWERS.

Frost has returned, not 22 of it, as I was assured there was three weeks ago, a fact about which, not having put out a registering thermometer myself, I feel some scepticism, still quite enough to need watching. The dwarf Tea Roses, both the younger and the older ones, are all safely tiled in under a comfortable quilt of earth up to their chins, and over that again bracken, tied into long bundles, and laid one on either side of the Roses, a plan that makes it cling closer and scatter less than when merely littered. I think they are safe, though the cutting winds of last week following the previous frost are trying, especially to the late comers. Every year I am astonished afresh at the hardiness of Tea Roses, hybrids, dwarfs and climbers alike. Examining some of the former on a mild day this week, I found that the little pink buds

leaf buds of course, not flower buds had grown perceptibly since I last looked at them, though anything less like Rose-growing weather than the interval had been could hardly be imagined. Up to the second week of December there were flowers to be picked on many. Dr. Grill and Princesse de Sagan being perhaps the kindest in that respect, if it is not discourteous to pick out where nearly all were kind.

Most of the beds in our little Dutch garden are now filled with dwarf Teas, overgrown in the usual way with *Saponarias*, *Sedums*, *Saxifrages*, and *Pansies*, and, for a winter garnish, *Wallflowers*, which, being pulled up in the spring, do the Roses, as far as I can observe, no harm. I wonder if most people grow those two genuinely unmistakable winter-flowering *Wallflowers*, Ear-

liest of All and Early Parisian? As a question of colour I myself prefer Blood-red or Harbinger, but the other two begin in October and go on till late March, and there is hardly a day during all that time but a fair handful cannot be gathered. Harbinger, despite its name, cannot be counted on here till the beginning of March. Blood-red and the most of the yellows are still later. At this moment we have four or five big vases filled with *Wallflowers*, and if gathered in bud and plunged deep they come out very well. If gathered after very hard frost has made their heads droop, they rarely, I think, recover; but a moderate amount of frost they seem to take little heed of, and two or three-year-old plants do quite as well as the younger ones, though too lanky and dishevelled to be of much use in beds.

Genuine winter flowers are so very near to all of our hearts, and the list of them is, alas! so exceedingly short, that it is a comfort to have something that one can absolutely depend on besides



CAMPANULA ISOPHYLLA ALBA IN A ROCK WALL.

dainty little blue bells, the yellow Rock Roses, so pleasant to see, the Knapweeds, the yellow Foxglove—all these abound, and mingle to the weaving of a strangely beautiful, many-coloured flowery carpet. But dominating the whole of this incomparable picture, by the importance of their colour-value, are the large vermilion panicles of the Red Valerian, or Jupiter's Beard (*Centranthus ruber*), another plant escaped from gardens, and whose home is in the south of Europe. A never-dying flame seems to play among its upright branches, while an intensity of vitality, a feast of colour, a busy movement of brilliancy pervade the bright bloom throughout its long flowering season; and while the heights above are whitening under the sheets of the fragrant Poet's *Narcissus*, as under a mantle of snow, a thousand feet below, along the blue lake shore, the rocks are as if red with

the time of the year what it may, ever presents itself in some new aspect and conveys some new impression of delight.

It is not only our walls of Lavaux that present these charming pictures, enriched as they are by some of the plants of important aspect, originally "escapes" from neighbouring gardens, but that have been established in them for centuries. Wherever these retaining walls occur we find them specially belovèd, and deserving of the close attention of the poet, the painter and the naturalist.

Along that wonderful coast that men call the Coast of Azure; along the luminous sunlit shores of the Mediterranean, the rock walls are the haunt of many a brilliant and dainty flower, sweet of scent and admirable in form. These bright living things grip hold of the dull, dead wall, endowing it with life and beauty; it is

Christmas Roses, Chimonanthus, Munstead Primroses, and the ever-faithful yellow Jasmine. Snowdrops, it is true, are just beginning to prick out (I gathered quite a large bunch yesterday). Winter Aconites are well above ground, and Scillas are promising to follow. Nevertheless, the frost fiend still hovers suddenly; the air has an edge cutting as spite or hate. By night the stars wink derisively, and winter is still at the very top of his strength.

EMILY LAWLESS.

Hazlatch, Gomshall.

WOODLAND AND FOREST.

TIMBER: A CROP THAT PAID.

I THINK it was the present honorary secretary of the R.S.A.S. that stated not long since that the difficulty hitherto in satisfying owners of land when advised to plant was that it had not been possible hitherto to point to examples of crops reaped and sold, and suppositions estimates were distrusted. That is, indeed, our difficulty at the present time. It is quite an easy matter to go into any wood and count and value the trees standing for what they are actually worth at current prices, but no wary advocate of planting would like to put forward a valuation of that kind as an encouragement to planters, because the honest figure is usually on the wrong side, and very seldom a correct record has been kept of previous thinnings. We know but few woods in which the standing crop would realise even a small margin of profit.

I have one example, however, to relate that I would like to give for what it is worth, and although I am not going to attempt to go through the orthodox process of comparing the value received for the crop with the original outlay invested at 4 per cent, I shall furnish planters with particulars that can be vouched for and which tell their own tale. Everything connected with the valuation and sale passed through my hands not long since, and the age of the wood I also know, the nature of the ground, and its value. I knew the owner of the land, who planted the wood just about sixty-five years ago from now. I knew the nurseryman who planted the trees, and I sold the crop for the planter's son, who is not yet an old man. The case is unique because the plantation was never thinned.

On one of the spurs of the Pennine range in Yorkshire, some 1300 feet above the sea and close to a famous grouse moor, the owner of a small farm had 40 acres of bad land on the higher portion of his ground. So poor was the soil that the tract was locally known as "Hunger Hills," the soil being thin, with here and there a tuft of Heather or wiry grass, and worthless for crops or pasture. Larch planting was then popular, and as the owner of the moors adjoining was planting extensively, the farmer resolved to plant his 40 acres also, and did so, putting the trees in about 4 feet apart. He divided the 40 acres into two lots of 20 acres each by a row of posts set up between them, and when he died he left one lot to each of his two sons, telling them, so the son told me, that each lot of 20 acres ought to be worth £1000 to them some day. One son sold his lot bit by bit at different times, but the other son kept his almost intact till the day it was sold for £950 nett, the money being paid in one cheque before the trees were felled. The present owner of the wood told me that he did not remember the trees being actually planted, but he remembered well going into the plantation to cut

whip stocks when the trees were about as high as himself, and when sold the plantation would be about sixty-three years of age, and I have known the plantation for half that period.

It is held by advocates of planting that the value of poor and waste lands may be raised by planting, and this is a case in point. The land before it was planted was so poor and exposed, that the owner could not have let it for pasture unless he had thrown some of his better land to it, and then, perhaps, it might have been worth perhaps 1s. per acre rent. The

be added to that, making the amount £1000. Omitting fractions, this comes to about £50 per acre for the sixty-three years, or 16s. per acre annually, while under the Larch, or thereabout, and the difference between 16s. and the rent of the land for agricultural purposes, before given, represents the increase in value by planting. I say nothing about rates and taxes or fences, as the former would have had to be paid in any case, and the fences were there before—one side belonging to the grouse moor and the other to the wood—dry walls, and only



PLANTS ON A WALL IN THE JARDIN ALPIN D'ACCLIMATATION, GENEVA: ANTIRRHINUM GLUTINOSUM, SAXIFRAGA LONGIFOLIA, AQUILEGIA JUCUNDA, ERINUS DIDISCTUS, &c.

present owner wanted to sell the land with the timber, and I tried to sell it for him, but neither the purchaser of the timber nor the adjoining owner thought it was worth the cost of conveyance, and it is still unsold. Now, taking this piece of land, 20 acres, worth about 20s. rent per annum, the total income from it for sixty-three years, the time it was occupied by the Larch, would have been £63. The Larch was sold for £950, and as the farmer had had all his fencing materials out of the plantation during part of the time, at least £50 may

have been chargeable to the latter. The crop of Larch I call a poor one, but that was due to the elevation, exposure, and poor soil. The largest tree in the wood contained 23 cubic feet, and the average was about 6 feet.

As to the cost of planting originally, I should say that it did not exceed £20, and that was the sole and only money ever spent on the plantation by either the planter or his son. This example has been extremely interesting to me, because the plantation was the only one I have ever known in this country that was

never thinned; the only one I was sure of the age of, and that was "clear cut" at the end and sold for a certain sum. I have stated the facts within the mark, and I would just like anyone to see the ground and situation where the trees grew—probably the worst that anybody would think of planting. The reason the wood was cut down was that the trees had reached maturity. They were becoming stunted, many were dying, and the annual increment was not equal in value to what the owner could secure by investing the price of the crop elsewhere, which was done, and now fetches him 6 per cent. in cottage property. I have suggested sowing the ground with Birch, and I have no doubt but that a crop equal in value to the Larch could be had in the same time.

When I say the trees were never thinned, I except the rails and poles taken out for fencing purposes now and then, but these were not many, and they were not removed on any thinning principle, but just from here and there—perhaps the worst or dead trees. When the lot was sold the wood resembled a continental Pine forest very much, the trees being of very unequal girth but tall and clean. The wood was about four miles from a station and the timber not easily got away, or the price given would have been higher.

One instructive fact that I have drawn attention to before in your pages I must mention. A gully or ravine ran through the wood, and here the main value was found, as the trees were taller, averaging about 12½ cubic feet each, while at the margin on the most exposed side the average was much less than half that figure and the annual rings thread-like by comparison.

J. SIMPSON.

ORCHIDS.

LYCASTE SKINNERII.

THE Rev. Francis D. Horner, of Greta House, Burton-in-Lonsdale, sends me to-day the finest bloom I ever saw of the pure white form of *L. Skinnerii*. He says that it was bought as *L. Skinnerii alba gigantea*.

Not only are the blooms of the very largest size, but the sepals and petals are also broad, well formed, and of great substance. The flower measured 6 inches across, while the white is very pure. The pure white form is always greatly valued by Orchid fanciers, and there are many varieties of this form of various degrees of excellence, but there must be one best of all, and I fancy it is in the Greta House collection.

Messrs. J. Veitch & Sons in their excellent "Manual of Orchidaceous Plants" observe, under the heading of *Lycaste*, that "*L. Skinnerii* is one of the easiest Orchids to cultivate, requiring only a temperature that does not sink below 40° C. (50° Fahr.)." Like a good many Orchids, it is very easily grown for half a dozen years or so after being imported, but the latent vitality stored up in the native pseudo-bulbs seems gradually to decline after a time, although there are many instances of cultivators succeeding in prolonging the vigour of the plants for a considerable number of years.

The infinite variety of colour and form to be found in this handsome species of *Lycaste* is admirable. Besides the pure white varieties there are others nearly white. A very distinct form is *L. armeniana*; it has a tinge of yellow in the sepals and the lip, the petals being white. Others have the petals and sepals white, with a pink or rose flush. Many have rose and rose-carmine sepals and petals, with a

crimson-maroon lip. Numerous names are given in the various works dealing with this Orchid since the large batch of plants was sent over from Guatemala by Mr. George Ure-Skimmer in 1841, but probably few of them are now in existence, all that is left of them being a pleasant memory.

One of the most successful cultivators of *Lycaste Skinnerii* some twenty years ago was Mr. Henry Little, of Baronsholt, The Barons, Twickenham. He used to exhibit splendid specimens with a score of flowers or more on each of them. Mr. Little is still a keen cultivator of orchidaceous plants, and could reveal something of the details of culture of this fine plant. One gardener used to grow it well in a mixture of leaf-mould and fibrous peat, the plants being placed at the cool end of a *Cattleya* house. This, I believe, is the best position for them, as they do not like a high temperature, but the cool house does not seem to answer in winter, although they would do well there during the summer and early autumn. I grow the plants at the cool end of the *Cattleya* house, where the temperature would be from 50 to 55 as a minimum in winter. Keep the leaves clean by sponging occasionally, and do not over-rest the plants in the resting period. The bulbs ought not to shrink from lack of moisture. In the growing season the supply of water should be liberal. The flowers last a long time in good condition, but, like all Orchids the sepals and petals of which are of a fleshy nature, they are apt to become marked with decay spots in a low temperature and a damp-laden atmosphere.

A very handsome variety is figured in the *Botanical Magazine*, t. 1445, which is thus described: "Sepals white, tinged blush; petals white, more tinged with blush than the sepals." Mr. Bateman described it as early as 1810 under the name of *Maxillaria Skinnerii* in the "Botanical Register," mis. 101. He says: "This is the finest *Maxillaria* I ever saw. It has a gentle odour, but the lip is magnificently purple white, with centre figured in deep rose colour. Flowers in December and January, and even in April have I seen it." The flower he describes was 1½ inches across. The formation of the flowers of *L. Skinnerii*, their infinite variety of colour, and their substantial and rounded form place them nearer to florists' flowers than any other Orchids known to me. Mr. Horner, referring to his best white variety, says: "I never saw such an upstanding, bold, and shapely form—quite a florist's type. It has huge bulbs and shapely foliage; the leading blooms were larger than the one sent." At Lowfields, as at Greta House, Mr. Horner has proved himself as great an adept at cultivating Orchids as Tulips and Auriculas. His greatest feat at Lowfields was obtaining a lot of worn-out plants of *Cattleya citrina*, and restoring them under his careful management into their pristine vigour.

The culture of Orchids must be a labour of love; they cannot thrive under the care of a gardener who is not deeply interested in them, as they require careful watching morning, noon, and night; but this applies to all classes of plants, from Pumpkins to Pine-apples and from Sedums to Orchids. The enthusiast succeeds.

J. DOUGLAS.

CYPRIPEDIUMS.

SEASONABLE NOTES.

THE winter-flowering section of species and hybrids that have recently passed out of flower may be examined to ascertain the condition of the potting compost, and where necessary

REPOTTING.

may be proceeded with. The kinds that have

recently passed out of flower include such well-known species as *C. venustum*, *C. callosum*, and the many varied and beautiful forms of the montanum section of *C. insigne*. The older known, or salyense form, which flowers later and is still in perfection, should not be disturbed until the flowers are removed. Such hybrids as have been derived from the intercrossing of the above species, and the *C. Spicerianum* hybrids, which include *C. Leeanum*, *C. Ceres*, *C. Hera*, *C. Allamianum*, and numerous other varieties, may also be included. A plant should not be repotted unless the compost has become sour and decayed or the plants have become too large for the pot. Where the soil has got into bad condition, turn the plants out of the pots, carefully removing all the decomposing material, and cut away all decayed matter. Wash the roots by dipping them in a pail of warm water, thus cleansing them from decayed matter. In cases where the plants have outgrown the pots and the roots have become matted and adhere to the sides of the pots, break the pots, and so liberate the imprisoned roots. It is difficult to attempt to turn plants out of the pots when in this condition without injury to the roots. Breaking the pot, therefore, is the only means by which this may be avoided. In repotting, the pots used should be sufficiently large to contain the plants comfortably. These should be cleaned and drained to two-thirds their depth with clean broken potsherds. Then place the plant in position, and work in a few more crocks about the roots, and fill up the remaining portion with the potting compost, making the whole moderately firm about the base of the plants.

THE POTTING COMPOST.

The material required for the neighbourhood of London and in smoky districts should consist of good fibrous peat and living *Sphagnum Moss*, two parts of the former to one of the latter. To this may be added a liberal sprinkling of rough sand or finely-broken crocks. In brighter and more favourable atmospheric conditions, a liberal portion of good fibrous loam may be added with advantage for such species as *C. insigne* and its allied sections of the green-foliaged varieties. Unless the surrounding conditions are favourable, it is not advisable to include loam.

TO INCREASE THE STOCK.

With regard to rare and valuable plants, it is not always an advantage to rely on a single specimen longer than is absolutely necessary. *Cypripediums*, like other plants, are prone to disease and death. It is, therefore, advisable to procure a second plant as early as possible. Large plants are more difficult to accommodate than smaller ones, and they are not generally so useful when required for decoration. In the case of special varieties, a plant may be divided that has three successive growths on a rhizome, making the division intermediate between the second and third growth back by cutting the rhizome asunder. The best time to effect this is when the new roots are being emitted from the base of the last or newly-made growth. When in this condition they quickly get hold of the new material and become re-established. After the rhizome has been cut, remove the portion desired with as much root and as little injury as possible, and without disturbing the back growth, but fill in any space made with potting compost, and in due time new growth will appear. The breaking up of large specimens is best done at the potting season and the divisions potted up in the usual way. Repotted plants should be thoroughly watered, using rain water, administered through a moderately coarse rose on the water-can.

H. J. CHAPMAN.

ORIGIN & HISTORY OF SOME OLD GARDEN FLOWERS.

LARKSPURS (*Delphinium Consolida*, L., and *D. Ajacis*, the Rocket Larkspur) have been grown about 300 years in England; but only the former is wild, being common in cornfields about Cambridge, and in Sussex, near Steyning, in 1800. White, pink and blue-flowered varieties abounded. *Consolida* was the name given to

certain plants, including our two Daisies and the Comfrey, in the Middle Ages, as "consolidating" broken bones; but the word was not applied to the Larkspur until the 16th century. Ajacis is derived from Ai Ai, as these letters are said to be stamped on the petals. The story runs that Hyacinthus, a Spartan youth, was accidentally killed by a quoit; from his blood sprang the flower marked with the exclamation Ai! Ai!

ACONITE (*Aconitum Napellus*, L.) is pretty freely distributed over Europe and a native of England in a few counties. As a cultivated plant it appears to have been introduced in the 16th century, when it was called *Napellus serotinus* or *Aconitum flore cœruleo*. This is our most deadly poisonous plant, and many families have been the victims; since it has long been a favourite in cottage gardens, whence the root has been eaten for Horse-radish. *Napellus* is the diminutive of *Napus*, as the root resembles that of the Rape.

PEONY (*Pœonia officinalis*, L.)—This is the source of the common and numerous single and double sorts. It is a native of Southern Europe, and grows in rocky places in Italy, &c. Those varieties with broader leaves and larger flowers were called "male," and others of a more starved condition with smaller flowers and narrower leaf-segments were considered "female." The Peony was used in medicine in the 14th century. A variety called *P. corallina* was established on the island "Steep-holmes," and regarded as introduced; but since several Mediterranean plants found their way to Normandy, thence to the Channel Islands, and to the south-west of England and south-east of Ireland, the Peony might well be one of that little flock.

POPPY (*Papaver somniferum*, L.)—The Opium Poppy is with but little doubt the cultivated form of *P. setigerum* of South European cornfields. A medicinal plant through the Middle Ages, it might have been introduced by the Romans, to whom it and opium were well known. The juice of the Poppy, Hemlock, Bryony, Lettuce and Henbane mixed with vinegar was an anæsthetic drug called "dwale," for surgical operations; after which, the patient was awakened by rubbing his temples with salt and vinegar. It is the "Gall" of Scripture.

SCARLET POPPY (*Papaver Rhœas*, L.)—This was cultivated in Pliny's time. Varieties of various shades as well as double ones have probably been long in cultivation, but we owe it to the skill of the Rev. W. Wilks to have established the new race of Shirley Poppies, raised from one flower in which the red petals were slightly margined with white. From this, by selection, all the numerous existing sorts were derived. An other step was to eliminate the black anthers. This was done and the race established.

CLOVE PINK (*Dianthus Caryophyllus*, L.) is a native of the Mediterranean region, and illustrates the wonderful varieties of form and colour produced by various soils, &c., under cultivation. It was formerly called Gilloflower, a corruption of *Caryophyllus*. It is occasionally found wild on old walls like the Wallflower, and, therefore, was probably grown in monastery gardens of the Middle Ages, as many varieties existed in the 16th century. An interesting hint at a possible cross-fertilisation in Nature occurs in "The Winter's Tale," where it is said of streaked Gilloflowers, "Some call Nature's bastards." So, too, Shakespeare speaks of "pale Primroses that die unmarried."

THE CABBAGE AND PROVENCE ROSES (*Rosa centifolia*). This is the Rose of the classics and the source of attar or oil of Roses. It appears to have been brought from the East at



FRAME COVERED.

an early period, and has been long cultivated in Europe. Lindley says it is indigenous in the eastern parts of the Caucasus. The Greek writers from Homer downwards speak of it. Herodotus writes of the Roses of the garden of Midas having more than sixty petals. The same Rose probably was grown in the *Rosaria* of Pæstum.

ASPHODEL (*Asphodelus ramosus*, L.)—This was called by Turner (A.D. 1548) *Albuscus*, *Hastula regia* or *Duche Affodil*; it was known in the 11th century as "clausing gresse." The word "Affodil" gave rise to *d'Affodil*, but it is not clear why the latter name became applied to the *Narcissus*. Prof. Skeat says, "perhaps derived from the French, *Fleur d'Affrodille*." Since the name is derived from the Latin, it, perhaps, was introduced by the Romans. Quantities grow on rocky hilly ground in Malta.

WHITE LILY (*Lilium candidum*, L.)—Well known to the ancients, and cultivated in gardens in Egypt and Persia, &c., the names *Shushan* and *Susan* meaning Lily. It appears to have



FRAME WITHOUT COVER

been a native of South Europe, but probably exterminated from fields to be grown in gardens. This was the case in Malta, where it is now occasionally found by peasants' houses. It was called *Argentea*, *Argentea* or *Lilie* in a list of plants of the 13th century. Post records it as still growing wild on Mount Lebanon.

G. HENSLOW.

COOPS FOR WINTER PROTECTION.

PERHAPS the most useful flower in the hardy plant garden at this season is the Christmas Rose. We have a place at Wisley which suits both the Winter and Lent Hellebores. We got our supply from Mr. Ware, of Bath, who had a good strain and some good varieties. Ours are planted in a bank at the side of a ditch facing north, shaded by a high hedge at the south side of the ditch. The soil is light loam, and in ordinary years rather moist. Some good authorities advocate planting in full sun; our experiments have gone the other way. Perhaps it is a question of stiffness of soil. As the flowers when out have often hard frosts and heavy rain to contend with, glazed lights are frequently recommended to protect them. My object in this note is to recommend coops, as being much lighter and as covering larger plants. We began by using common wicker hen-coops covered with green scrim, but after a time the wood got out of shape and decayed, so iron wire was substituted for the skeleton. If these coops are put by in the summer, if not in use, in a dry place, they will last for many years. After the Hellebores are over they are useful for *Anemone fulgens*.

GEORGE F. WILSON.

Heathcote, Weybridge Heath.

Erica barbata.—Though less showy than many of the more popular Heaths, this species is very pretty, and merits notice from the fact that its flowering period extends throughout the winter months. It forms a dense growing specimen with tiny leaves, while the little white blossoms are borne in great profusion. The individual flowers retain their freshness a considerable time, and a succession is kept up from the same shoot or cluster. The entire plant is more or less hairy. This species was introduced a century ago, but it is rarely seen, though during the present winter I have met with it in good condition in two or three nurseries where hard-wooded plants are still grown. H. P.

Rubus biflorus.—The great beauty of many deciduous trees and shrubs during the winter months has been referred to in recent numbers of THE GARDEN, the white-stemmed Brambles among the number coming in for their share of recognition. During a recent visit to Kew I thought the brightest outdoor feature of a dull winter's day was furnished by the clump of *Rubus biflorus* near the flagstaff, their peculiarly whitened stems causing them to stand out conspicuously from the sombre surroundings. The plants at Kew have the old wood cut out freely, and this is undoubtedly the way to treat this Bramble, as young vigorous shoots are most effective in their colouring. It has been grown at Kew for many years, but is not easily obtainable from nurseries. There are several species with the stems more or less whitened, but this is the best. Though the popular name Bramble does not suggest choice subjects of high ornamental value, yet there are many such in the genus *Rubus*. Besides this we have the nearly allied *R. leucodermis*, with bluish white stems; the Rocky Mountain *R. deliciosus*, whose pure white blossoms, like single Roses, are so freely borne in spring; and the double pink Bramble that flowers in such profusion, even in hot sandy soils, during July. To these must be added the cut-leaved Bramble and that curious antipodean species, *R. australis*, which forms a tangled mass of wiry stems and midribs, the blade of the leaf being almost, if not quite, suppressed. This is plentifully furnished with small, but sharp hooked spines. T

AN ARTIST'S NOTE-BOOK.

IRIS ALATA.

THIS is a charming winter-flowering Iris of the bulbous group, and in mild winters is in bloom long before January. These winter Irises, however, deserve protection against the weather. Storms of rain destroy their beauty, soil splashes over the petals and spoils their delicate colouring, and for this reason when a little colony is in bloom on some sunny border or in a nook in the rock garden, a hand-glass should be placed over it for protection. I have a delightful panful of this Iris in flower in a cold frame; it is interesting to see the variety of colours, one flower as white almost as a snowdrift, others shaded with blue, some deep, others pale, delicate tints melting into each other, relieved with spots and splashes of rich yellow. The foliage is so much like that of the Leek in colour and form that Iris alata is sometimes called the Leek Iris; it is, perhaps, the most distinct in growth of the entire race. It flowers readily in a warm border of light soil, and plant the bulbs in a carpet of mossy Saxifrage, Stonecrop, *Hemiparia*, or similar low-growing plant to protect the flowers from soil splashes. T. E.

THE TREE WYCH
HAZEL.

(HAMAMELIS ARBOREA.)

THE next illustration shows a flowering shoot of the Tree Wych or Witch Hazel (*Hamamelis arborea*), the brightest flowering shrub of winter, and rarely disappoints. Year after year the tree will bear its golden burden of blossom, a quaint twisted, starry kind of flower of golden yellow, softened by its crimson calyx setting. The shoot represented was kindly sent to Mr. Moon by Messrs. J. Veitch and Sons, who showed a small tree in full flower at the last meeting of the Royal Horticultural Society. Even in the murky light of the Drill Hall its golden flowers thickly placed on the leafless shoots made a bright patch of colour, undimmed by the more flaunting beauty of the Orchids heard by. The Tree Wych Hazel has been often written of, so much so that it is hardly necessary to refer to its hardiness and vigour. But it is a rare shrub still, though venturing to gild January with gold and open its flowers in the winter sunshine ere the Snowdrop has dared to brave snow and rain and searching wind. The way to realise the quiet beauty of the *Hamamelis* is to group it. A group of six small trees will make some effect, and as we saw once, we believe, in the Royal Gardens, Kew, the surface of the bed may be covered with the little tufted

crimson-berried *Gaultheria procumbens*. Before planting the group remember the Wych Hazel flowers in winter; it delights in sunshine, shelter without shade, a good well-drained soil, and to be left alone. There are other species of *Hamamelis*, viz., *H. japonica*, its variety *Zuccarimiana*, and *H. virginica*, but *arborea* is the most beautiful and the most satisfactory in all ways.

THE INDOOR GARDEN.

GLOXINIAS.

GLOXINIAS are the most beautiful of all indoor flowering plants, and when grown under favourable conditions they may be used for house decoration or as window plants. They are often grown in a much higher temperature than is necessary, with the result that both foliage and flowers are too tender to be removed from where they are grown without suffering. When grown

under cool treatment and well exposed to the light they make thick fleshy leaves and flowers of good substance, with short, sturdy flower-stalks. For early flowering the dormant corms should now be started without delay. Seeds may also be sown, and with good treatment will make good flowering plants the same season, and will come in well to succeed those grown from corms. It is important that the compost used for sowing the seeds in should be as free from weed seeds as possible, also that it does not contain anything likely to favour fungoid germs. In sowing the seed it is better to err on the side of sowing too thinly than otherwise. The seed pots should be placed where they get as much light as possible without the direct rays of the sun coming on them. A piece of glass may be laid over the pots, but no shading. If the soil is well moistened when the seed is sown, no more surface water will be required, but if there is any appearance of dryness, the pots may be dipped, but not soaked or plunged deep enough for the water to flow over the rim of the pot.

The glass should be removed for a short time every morning, and as soon as the seeds begin to germinate it may be taken away altogether. Few subjects require more care, and a little neglect may prove fatal to the young seedlings. They may be pricked off as soon as they can be handled and potted singly as soon as they are well established. From the start onwards they should have all the light possible, and will require little or no shading until they are in flower, when a little shading will ensure the flowers lasting longer. In starting the corms they may be placed on any moist material and remain until they begin to start growing, when they may be potted. *Gloxinias* will grow in almost any ordinary compost. I prefer good fibrous loam enriched with stable manure, or if the loam is heavy, leaf-mould and peat may be added. Good drainage should be given, and in potting, the soil should be pressed only moderately firm. After potting, the best position will be on a shelf close to the glass, and very little water should be given until they have made a good start.

After the buds begin to form, manure may be used freely, but if any of the artificial fertilisers are applied, care should be taken not to put them on the leaf stalks. In the earlier stages a little extra warmth may be beneficial, and if well exposed to the light they will keep short and sturdy. It is after they are well advanced that the cool treatment is so beneficial. Such good varieties may now be had from seedlings, that it is quite unnecessary to trouble about named sorts. One-year-old corms make the best plants, and by raising seedlings annually the best can be selected for the following season; and it will be found that these are not so liable to disease or insect pests as old corms, or those propagated from the old named varieties.

By raising seedlings annually a selection of the best can be made for early flowering the following season, and a number of plants may be grown without taking up much space when only required for selecting the best types. For this purpose planting out in a frame on a spent hotbed may be recommended. A. HEMSLEY.

CARNATIONS IN POTS.

THERE is a way of growing Carnations in pots differing in some respects from that followed by florists, and, as I think, better suited to the wants of the many gardeners and amateurs, who are by no means particular whether a petal is rose-leaved or saddle-backed provided the flower of which it forms a part is possessed of good all-round qualities. The system, too, is spreading, as I noticed in a few gardens last year plants grown on this simple principle.

My own method of culture is something as follows, though the Carnation is so accommodating a plant, provided it is subjected to no coddling treatment, that less care than that recommended



IRIS ALATA AND THE WHITE VARIETY.
(From a drawing by H. G. Moon.)

may produce results equally satisfactory:—Strong layers, well rooted, are selected in September, as early in the month as possible, and are potted into 4-inch or 5-inch pots, and when they progress in a favourable manner, require repotting into larger ones towards the end of October. If, however, the season is adverse and a shift uncalled for in autumn, then they are repotted as early as convenient in February. A 7-inch pot is sufficiently large for a strong-growing variety, and a 6-inch for the less robust, a smaller size than that invariably yielding less good results. An important period in the life of the plants is that which comprises the three months of winter, during which time the application of water is all but stayed, and the pit in which the plants are preserved kept cool and perfectly dry. Under these conditions it might be supposed that the plants would remain in an absolutely dormant condition. As a fact, however, there is a slow and, as the weeks pass, a perceptible thickening of the stem which does not terminate till the return of spring starts the growth, when the value of this period of enforced rest becomes apparent in the increase of the number of flower-stems that are produced. In some instances flowers are produced so profusely, that it is difficult to secure stock. One variety, still standing in its pot in the state it was set aside after flowering in order to provide stock in spring, had, I notice, no less than thirteen flowering stems and only one shoot to layer. Dryness also contributes largely to the diminution of "spot" contracted in damp autumns.

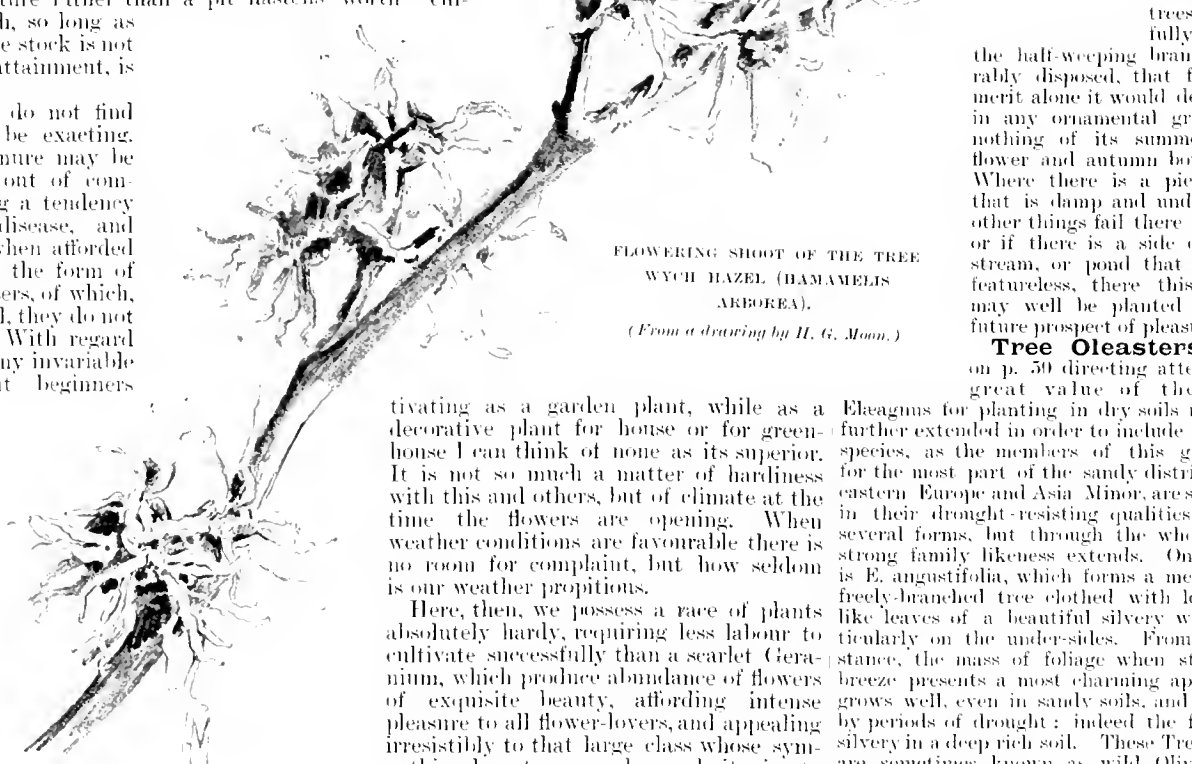
To ensure an early summer bloom, it is of course essential that the plants be grown entirely under glass, and in my experience a large airy structure rather than a pit hastens flowering, which, so long as the health of the stock is not lowered in its attainment, is most desirable.

As to soil, I do not find Carnations to be exacting. As a rule, manure may be altogether left out of composts, as having a tendency to engender disease, and manurial aids when afforded applied only in the form of artificial fertilisers, of which, it may be added, they do not require much. With regard to water, it is my invariable experience that beginners err in over-watering, especially early in the season, when careful watering is of paramount importance.

A judicious thinning of buds is decidedly helpful in not only increasing the size of those left to expand, but also in improving the colour of the blooms. Also for these reasons the plants require shading from hot sun while the flowers are opening as well as afterwards. It is impossible to secure delicate and refined colouring of such sorts as Persens, Zingari, and Brodrick, as well as of the soft peachy shades occurring

in kinds of which Seagull may serve as a type, in any other way. A thick shading material exerts, too, a pronounced influence in lowering the temperature, or rather in preventing the temperature from increasing to a degree prejudicial to good colour. One notices in the deeper colouring of Malmaisons at this time of year, when not excited by fire-heat, the value of a low temperature as a deepener of colour in Carnations.

All kinds of Carnations are amenable to pot culture, and the sorts to be preferred are undoubtedly those possessed of a floriferous and upright habit of growth, of which Hampton, Germania, and Mephisto may be named as notable examples. These require the minimum of support, and when in good condition and full of bloom are invaluable for decorative purposes. But, apart from sorts that may very well find a place in the summer pleasure garden, there are dozens of lovely varieties that it would hardly be wise to flower in the open which by their beauty well repay the little trouble incident to their cultivation as greenhouse plants. Of all Carnations, the one that is the most attractive to most people is Hidalgo, distributed this season for the first time. I shall be greatly mistaken if this variety will ever be worth en-



FLOWERING SHOOT OF THE TREE
WYCH HAZEL (*HAMAMELIS*
ARBOREA).
(From a drawing by H. G. Moon.)

tivating as a garden plant, while as a decorative plant for house or for greenhouse I can think of none as its superior. It is not so much a matter of hardiness with this and others, but of climate at the time the flowers are opening. When weather conditions are favourable there is no room for complaint, but how seldom is our weather propitious.

Here, then, we possess a race of plants absolutely hardy, requiring less labour to cultivate successfully than a scarlet Geranium, which produce abundance of flowers of exquisite beauty, affording intense pleasure to all flower-lovers, and appealing irresistibly to that large class whose sympathies do not run so deep. Is it wise to neglect them?

It is unfortunate that the rigid rules that bind florists have debarred visitors to shows, such as that at the Crystal Palace, from seeing the Carnation at its best as a pot plant, but we might as well condemn the Chrysanthemum—because, cultivated for show purposes, it is unsightly—as the Carnation, because its appearance is so devoid of decorative effect. R. PACE.

The Quince.

The *Gardener's Chronicle* of Jan. 27 has an extremely pleasant and highly instructive article on the Quince. It makes one think how undeservedly this beautiful small tree, with its graceful habit of growth, charming flower, and handsome and useful fruit, is neglected. Few small trees are more beautiful in winter than the older kind of Quince, with the smooth, roundish fruits; the little trees are so gracefully poised, and

the half-weeping branches so admirably disposed, that for its winter merit alone it would deserve a place in any ornamental ground, to say nothing of its summer beauty of flower and autumn bounty of fruit. Where there is a piece of ground that is damp and undrained, where other things fail there it will thrive, or if there is a side of a ditch, or stream, or pond that is blank and featureless, there this pretty tree may well be planted with a sure future prospect of pleasure and profit.

Tree Oleasters. The note on p. 50 directing attention to the great value of the evergreen

Elaeagnus for planting in dry soils might be still further extended in order to include the deciduous species, as the members of this group, natives for the most part of the sandy districts of South-eastern Europe and Asia Minor, are second to none in their drought-resisting qualities. There are several forms, but through the whole of them a strong family likeness extends. One of the best is *E. angustifolia*, which forms a medium-growing freely-branched tree clothed with long, Willow-like leaves of a beautiful silvery whiteness, particularly on the under-sides. From this circumstance, the mass of foliage when stirred by the breeze presents a most charming appearance. It grows well, even in sandy soils, and is unaffected by periods of drought; indeed the foliage is less silvery in a deep rich soil. These Tree *Elaeagnuses* are sometimes known as wild Olives, from the general aspect of the tree as well as the fact that their fruits are something like those of the Olive; and being rich in saccharine matter they are sold in the markets of Constantinople. According to London, *E. hortensis*, of which he considers *E. angustifolia* a variety, was introduced in 1633. In the Kew Hand-list *E. angustifolia* is assigned specific rank. The Oleasters should be far more grown and not confined to a few gardens. I hope they will be more planted.—T.

GARDENING OF THE WEEK.

KITCHEN GARDEN.

EARLY PEAS ON SOUTH BORDERS.

WHEN the soil is sufficiently dry and in a workable condition in the warmer parts of the kingdom, it is well to sow some early dwarf Peas, as though growth will be slow at the start, this sowing, if made on a warm border, will turn in at the end of May or early in June. Such kinds as germinate freely are best, and in heavy soils Marrows are not so suitable for early sowing, but there need be no fear if such varieties as Chelsea Gem, Bonitiful or Daisy are sown; the two first-named are the earliest, but the latter crops well. In unsuitable land it well repays the cultivator to assist germination by adding such materials the soil needs, as in wet or badly-drained land by using soils that lighten there is a considerable gain in earliness. As regards sowing the seeds, sow thicker than some weeks later; on the other hand, there is no gain whatever in sowing Peas like Mustard and Cress, each plant robbing the other, and in the end all being too weak to crop freely. In a measure the same success that has been obtained of late years with the Sweet Peas, by giving more room and better cultivation, applies equally here, as with ample room to develop there are fewer enemies to contend with, the haulm being so much better able to ward off attacks. In the northern parts of the country it may be well to defer sowing for a fortnight, but the same advice holds good as regards varieties and soil.

EARLY LEEKS.

Of late years Leeks have become more popular, and they are deserving of good cultivation, as, being of a milder flavour than the Onion, are more enjoyed by many persons. A few words will describe their cultivation for early supplies. I am not a great lover of this vegetable as grown for exhibition—I mean roots nearly 1 yard long and much labour spent on their production. On the other hand, the thick roots with stems sufficiently blanched for cooking without much cutting up are more useful. Now is a good time to sow seed for autumn supplies, and in cold or exposed gardens I would also advise sowing under glass, such as in cold frames, for the main crop, as if the sashes can be removed later a much stronger plant is secured. Glass not being available, a box of seed will produce a quantity of seedlings if the latter are pricked out when large enough and finally planted out in June in good soil. Leeks are more valuable in severe winters than many other vegetables, as they are very hardy and will keep sound well into April; indeed the Musselburgh keeps good much later. For early supplies I find the Lyon one of the best, and its compact habit is advantageous for general use. The reason I advise sowing Leeks under glass (heat is not necessary) is to gain time, as the seed sown in the open in the spring is a considerable time germinating. G. WYTHES.

INDOOR GARDEN.

FORCING PLANTS.

ALL kinds of forcing plants will come away freely now if introduced into a genial temperature and humid atmosphere kept right by frequent syringings. Spiræas, Azaleas, Lilacs, Deutzias, Guelder Roses, Staphyleas, Lily of the Valley, and bulbs of all kinds must be brought on in batches equal to the demand. Lily of the Valley (natural crowns) enjoys a strong bottom-heat and frequent supplies of tepid water. To lengthen the spikes the plunged pots should be covered with a box in which they can be kept dark, and remain so until the lower bells begin to open, after which they must be gradually inured to the light, and finally removed to a lower temperature. The same thing applies (except as to the free supply of water) to all bulbous plants, except Narcissi, in the early stages if great length of stem is a desideratum. Lilacs, too, if wanted white must be forced in the dark, and for these a warm Mushroom house—too

warm, by-the-by, for good Mushroom growing will suit. Successional batches of all the above may be brought into Peach houses, Fig houses, or any other such place at work. Here they will come on more naturally than in the higher temperature of the forcing house and the flowers will last better.

LILIUM HARRISII.

Forward batches of this Lily showing roots round the base of the stems should be top-dressed at once with good rich soil. Later batches may be brought on as required, and I find that they do well in the same house with the Arums, and as they also are susceptible to constant attacks from aphides, the frequent vaporisings are of benefit to both.

ROSES.

Hybrid Perpetual Roses which have been prepared for forcing and pruned a week or two back will, if brought into a suitable house and gently forced, give nice flowers about the middle of April; and Peas, which are more quickly responsive to heat, will be earlier still. A nice gentle hotbed of leaves and manure is a great help in Rose forcing, and this should be built high enough to bring the plants as nearly as possible up to the glass, which should be clean. Stand the plants on the bed without plunging them. Damp down the stages and floor occasionally and keep the surface of the bed moist by syringing, but do not syringe overhead for the present. A night temperature not exceeding 50° will be sufficient for the present, and the house may be kept closed, or nearly so, except on warm and mild days, for draught is a great danger to Roses, bringing mildew in its train.

SHOW PŒLARGONIUMS.

It is rather late now to advise the final potting of these plants, as this should have been done in December, but there is still time for the plants to make roots before flowering, and it is better to pot them on than to leave them in the small pots to which they were reduced after being cut back. Pot firmly in good fibrous loam, adding about one-sixth each of sand and well-seasoned horse droppings. Avoid leaf-mould, as this frequently produces spot in the leaves and general ill-health. After potting, stand the plants in a light position in a cool, airy house, and water charily until the roots are running freely in the new soil.

J. C. TALLACK.

Livermere Park, Burg St. Edmunds.

CHRYSANTHEMUMS.

ASSUMING all has gone well with the cuttings under propagation, these will now have become rooted and will require to be quickly transferred into 3½-inch pots, as a check at this period means a serious misfortune.

The pots and crocks should be thoroughly washed and allowed to become perfectly dry before using. Good drainage is of vital importance in all stages of their growth, and this cannot be too much impressed on the beginner, for unless the water given can pass away freely, owing to imperfect drainage the soil quickly becomes sour, and instead of the plants presenting a robust and healthy appearance, small sickly leaves and growth will be the result.

One large crock covering three parts of the bottom of the pot should be placed over the hole, the hollow side downwards, and gradually building these up to the required height, in various sizes of course, placing the larger at the bottom with a layer of quite fine ones, free from dust, on the top. On this should be placed a small quantity of tough fibre taken from the loam heap, carefully sifting out every particle of soil with a ½-inch mesh sieve, and taking care that no worms are allowed to find a home in the compost. The drainage should be as perfect when turned out for the next potting as the day it was placed therein.

The compost for this potting should consist of three parts good fibrous loam broken up finely, one part well decayed leaf-soil, one part old spent Mushroom-bed manure, both of which should be passed through a ½-inch mesh sieve, a liberal supply of coarse silver sand and a small quantity of finely

broken charcoal and bone-meal. The whole should be thoroughly well mixed together and used in a moderately dry condition, so that when potting it can be made firm.

The most suitable place for a time after this potting is a heated pit, where just sufficient heat can be turned on to counteract frost. Arrange as near the glass as possible on a bed of finely sifted coal ashes, do not water for about three days, but damp overhead morning and afternoon with the syringe, using tepid water, which should keep them in a fresh condition till watered. When watering, thoroughly soak every particle of soil. The young plants should be aired sparingly until they have recovered from the check they have received. Air should gradually be increased as they become established to ensure strong, sturdy growth.

Dust the points frequently with tobacco powder to prevent and dislodge green aphids. Keep a sharp look-out for any trace of rust, and any plants which have any suspicion of this now prevalent disease should be excluded from the general stock, and all affected leaves removed and burnt. This must never be allowed to obtain a firm hold, or disastrous results will follow.

Specimen plants of any section may be grown on in a slight heat. Choose strong, vigorous-looking plants, and after they have made about 6 inches of clear stem, the points should be picked out; these should be grown on with all speed as early in the season as possible. The most suitable place for these is a shelf in an intermediate house quite near the glass. E. BECKETT.

Abraham House Gardens, Elstree.

FRUIT GARDEN.

HARDY FRUIT TREES.

CONTINUE energetically with the winter work, so as to complete it before the trees start into growth. Old Apple, Pear and Plum trees standing in the open that have become weak, and produce small fruit through poorness of the ground, may be much improved by top-dressing with loam, farmyard manure, bone-meal, and lime rubble, well mixed together, whether the ground they are on be covered with turf or not. Put turf at a distance of 3 yards, more or less, all round from the trunk, dig out the soil down to the roots without damaging them, and put in a layer of the above mixture, as much as can be afforded, making good any deficiency while putting in the new soil. Tread it firmly throughout. Surplus soil may be disposed of by placing it between the trees. It would be much better for the well-being of the trees if the turf be not relaid, and so keep the enriched space free of weeds with an occasional hoeing in the season. This is demonstrated at Woburn experimental fruit farm. Trees on ground with turf are not a quarter the size of trees on ground without turf. If the turf is not relaid, it may with advantage be made use of by chopping and mixing it with the soil.

PROTECTING FRUIT TREE FLOWERS.

There are two ways of doing this; one may be termed fixed, *i.e.*, a kind of thin covering placed over the trees when the flowers begin to expand, and so to remain until the fruit is set, and the other movable, which is put over the trees when there are signs of frost before dusk, and removed in the morning when the temperature rises above freezing point. The last-named system is the one I recommend.

Covering material should be of sufficient thickness to protect the flowers against severe frost. A good kind of material for covering is hothouse shading, fixed some distance from the trees, in conjunction with covering. A coping board 9 inches or 10 inches wide is necessary for throwing off water as well as helping to keep away frost, also strips of deal placed slantingly every 3 feet or 4 feet along the wall, with one end in the ground and the other fixed to the coping board. Fasten the top edge of the covering to the coping board, and the lower edge to the strips of deal near the ground.

A fixed covering is worse than no covering at all, whether it be fish-net of one or two thicknesses or

branches of trees. Frost does more damage to flowers when damp than when dry. Fixed coverings encourage damp by keeping from the flowers the drying effects of spring breezes and warmth from the sun. I had a practical lesson twenty years ago. I had two gardens not quite a mile apart with Peach trees in both. In one garden they had on a fixed cover of fish nets, and in the other no cover. The best crop of Peaches came from the trees without cover.

G. NORMAN.

The Gardens, Hatfield House.

THE PAPYRUS IN SICILY.

Of all the Sedges known in the world the most stately, distinct, and beautiful is the Nile reed on which the Egyptian scribes wrote their records 3000 or 4000 years ago. It is now very rare in Egypt, having vanished from the delta whence the ancient supply used for paper-making was derived, though still existent in one or two places on the Upper Nile. The plant may still be seen growing in all its native luxuriance and beauty, however, in Sicily, near Syracuse, on the banks of the Cyane, as also lower down in the tawny floods of the Anapo. According to W. A. Paton in his book "Picturesque Sicily," p. 326, "the Cyane is a wayward watercourse which meanders to and fro, lingering long among meadows and orchards. Its banks are beautified by masses of Papyrus, 'the plant of the Nile,' where only, along the margin of this stream and by the fountain of Arethusa in Ortygia, it is still found anywhere in Europe growing in its natural beauty." Again he says on the same page: "The banks of the Cyane are most picturesque and finely coloured: the green Papyrus stalks, covered with golden tassels, show against a background of yellow cane. Almond trees fill the air with the sweetness of their blossoms, and the green turf is covered with a snow of petals. Everywhere there are flowers, especially such as flourish by sweet waters and love the borders of clear flowing streams."

The Cyane is wonderfully clear and transparent "the deepest pools reflecting heaven shone with the blue of the alpine Gentian." "The great charm of the river, however, is the Papyrus, the sight of which carried our thoughts back to the days of King Hieron II., the ally of Rome, the friend of the Egyptian Ptolemies, who to please his dearly beloved wife Philistis (whose beautiful profile is to be seen on old Syracusan coins, brought the parent plant from the river Nile, or, as is not improbable, received them as a gift from one of the Ptolemies to embellish a garden for his queen on the banks of the Cyane. The Papyrus was in place so dense that a tow-line could not be used, and the boat was propelled by the boatmen and passengers dragging it forward by means of the tough Papyrus stalks."

The Papyrus is easily grown in a pot or tub, or planted out in good loam on the floor of a warm greenhouse. It may be seen in the fountain basins or tanks of gardens on the Riviera, and throughout Southern France and Italy it is grown in the open air at least, during the hottest period of the year. It is, of course, found in all botanical gardens under glass, but it could, no doubt, be grown in tubs in a moderately warm greenhouse, and might then be plunged in open-air pond or lake margins in the south of England during June, July, and August, or even later in hot seasons. In hothouses it attains a height of 12 feet to 18 feet, but even hard-grown plants 4 feet to 6 feet in height would look very distinct and effective outside in sheltered spots during summer.

Professor Parlatore formerly thought that

there were two species of Papyrus, and that the Sicilian plant differed from the Egyptian one, but that they are one and the same is now generally conceded. The Papyrus and the blue Lotus, or *Nymphaea stellata*, are often figured on Papyrus rolls, as may be seen in the library of Trinity College, Dublin, in the British Museum, and elsewhere, and it is curious to observe that Egyptian scribes and artists or sculptors generally figure the half-expanded heads, when they are shaped something like a paint-brush or carpet broom, rather than the fully-developed heads which droop all round in a globular

Syria: for instance, on the edges of the Sea of Galilee and lake Merom, in Palestine. In Europe it is confined to South-eastern Sicily, where it grows not only on the Anapus (modern Anapo) and Cyane (modern Pisma) near Syracuse, but also at San Cosimano, near Melilli, at Spaccaforno, and on the Cantara near Calatabiano. This wider distribution in that part of the island makes its ancient introduction from Egypt by the kings of Syracuse less certain. It might be a true native: on the other hand, its absence from similar waters in the south of Spain, Greece, and elsewhere in Sicily



CYPERUS PAPYRUS ON THE BANKS OF THE ANAPO, SICILY.

(From a photograph by Signor Crupi, Taormina.)

manner, and it may have been this fact that in part led Professor Parlatore to think there were really two distinct kinds as species.

F. W. BURBIDGE.

ALTHOUGH almost extinct in Egypt—its classical home—the Papyrus grows in great abundance on the rivers of Nubia, Abyssinia, and tropical Africa. It is reported that the "sudd," which is so serious an obstacle to the navigation of the Upper White Nile and of the Bahrel-Ghazal, is chiefly composed of Papyrus. Out of Africa it is found in sluggish waters in

strengthens the theory of its introduction by the hand of man. The river Anapus, which issues in the port of Syracuse, is a sluggish and somewhat muddy stream which runs almost dry in the summer months. It has, for Sicily, a longish course. At a short distance from the sea it receives a clear tributary stream from the right, which issues only a few hundred yards distant from the brilliant and deep circular spring known to the ancients as Cyane, from its bright blue reflection, and called Pisma by modern Syracusans. This spring is more perennial than the Anapo, and does not fail so much in

summer. The Papyrus grows in both waters. Formerly it grew in a small stream called Papireto, which traversed the city of Palermo. This stream was drained in 1591 because it gave rise to malaria in the town, but there is still a small square there known as Piazza Papireto, which marks the old home of the Sedge. In the fountain of Arethusa in the town of Syracuse, which is situated on an island known to the ancients as Ortygia, the Papyrus is grown and carefully looked after by the municipal authorities. C. C. LAUATA.

[In the first of these two accounts there is some confusion between the river Anapus and the pool Cyane; the distinction is, however, made quite clear in the second.—EDS.]

CORRESPONDENCE.

(The Editors are not responsible for the opinions expressed by their correspondents.)

DWARFING PERENNIALS.

[TO THE EDITOR OF "THE GARDEN."]

SIR. Because this method of reducing the height of some perennials may with impunity be adapted to suit certain gardens, localities, or other requirements, it is not likely to meet with success in all instances alike. For instance, the herbaceous Phloxes, while freely submitting to the treatment and flowering freely, though later than plants not cut down, are not in my opinion increased in value thereby. This is because they lose their chief head of bloom, for which several smaller heads are substituted. The Phloxes, however, are generally later for the cutting down, and where this is an advantage the larger panicle of bloom will, of course, be forfeited the more readily. Better results in these things may be secured by putting in good cuttings in May in a frame and growing the plants well to the flowering stage. Chimney Campanulas would be the last things I would cut down, as I think all their beauty would be lost. Any system, however, that will prolong the flowering of the Peach-leaved Bellflower (*Campanula persicifolia*) will be welcomed by many, for there is room for such things at all times. Seedlings, of course, give later and more varied seasons of flowering, but the flowers are not usually of the finest. A greater number of useful plants is found among the composite family, and, of course, among the tallest of its members. In the composite group, while there is no loss in the size of the flower-heads individually, we have a decided increase of numbers. This is most conspicuous in the Michaelmas Daisy and in *Pyrethrum uliginosum*, and is, of course, quite opposed to what one would expect in such cases; but the facts may be proved by anyone who so desires. The latter plant, indeed, breaks away so freely and quickly that it requires no check. In the harder-wooded *Aster Novae-Angliae* the breaks are longer issuing from the stems, and the amount of delay in this represents the deferred flowering later on. The softer stems of the *A. Novi-Belgii* type take less time in emitting the new shoots. Usually, however, both in the *Aster* and *Pyrethrum* some thinning of the new shoots is necessary; indeed, so crowded and so numerous were they, that much reduced flower-heads must have resulted had all been left to grow unheeded. Taken all in all, the subject is one that must ever have limited scope, whether it be of gardens or of plants. E. JENKINS.

Hampton Hill.

THE WISDOM OF ROOT-PRUNING.

[TO THE EDITOR OF "THE GARDEN."]

SIR. "An Old Practitioner" takes me to task on p. 67, and doubtless rightly so, the article he quotes having appeared in *The Garden* of December 30. Now doubtless my critic will think I must have been wandering to advocate root-pruning on December 30. Such was not my intention, and if "An Old Practitioner" is a regular writer to the Press, he will be aware that at times an article

appears weeks after being written. Other matters often crowd out cultural notes, and it is so in this case. My note was written early in October, and I note that, or the beginning of November, is the time "An Old Practitioner" advises the root-pruning, so I was not so far wrong after all. But I am not sure that "An Old Practitioner's" practice is believed in by everyone. How does the usual transplanting that trees receive in our large nurseries, say in March or even April, coincide with the above views, as it is well known many make up their fruit quarters at that period, and with great success? GEO. WYTHES.

NARCISSUS PALLIDUS PRÆCOX.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—One is pleased to see that this lovely early Daffodil has an admirer in the person of "F. H. C." (page 49). Although the writer does not usually grow this Pyrenean Daffodil under glass but in the open, it is as great a favourite with him as it appears to be with your correspondent in the issue of *THE GARDEN* of January 20. It is one of the earliest to flower here, and everyone is pleased to see again its soft-coloured flowers decorating the rock garden. It is variable, as your correspondent remarks, and this variability consists, not only in its colour and form, but also in its time of blooming. The latest form I have here is also the prettiest. It is not only purer, but is of more beautiful form than the majority of the flowers in the other clumps.

One thinks that an exchange of experience on the question of the cultivation of this Daffodil in the open might serve a useful object. In my garden, as I have previously said in *THE GARDEN*, it is one of the most satisfactory out of upwards of 100 species and varieties of the *Narcissus*. It has now been here long enough to show both its good and its bad qualities. One can, however, say that the former are many, but the latter are difficult to discover. I am well aware that many cannot grow *N. pallidus præcox* in their gardens. The light, sandy soil seems to suit it, but it appears to like still better to be on the rockeries, where it can receive sufficient moisture with free drainage. Summer watering does not seem to do it any harm, nor do the drier rockeries, too far from the water to get more than a limited a very limited supply in summer, make it less successful. One is thankful to be able to speak thus cheerfully of this Pyrenean Daffodil, and I hope that others with whom it may be equally at home will help to persuade some of those who have not tried it to experiment a little by trying whether or not it will grow in their gardens. I am aware that some of our leading private growers of Daffodils hold very pessimistic views about the establishment of *Narcissus pallidus præcox*. Here, at any rate, it never fails, and this in either sun or shade. There must be many other gardens in which it is equally satisfactory. If some others will tell where and how it flourishes they will do a service to some who care for one of the loveliest of the flowers of spring. S. ARNOTT.

Carsthorpe, by Dunfries, N.B.

FALSE IDEALS.

[TO THE EDITOR OF "THE GARDEN."]

SIR. I should like with your permission to add a few more words upon this important subject.

In the present day, when the value of natural beauty in the garden has been recognised to a considerable extent, the inartistic process of clipping to which evergreen and other shrubs are subjected still remains largely in vogue. Throughout the length and breadth of the land public and private gardens are to be seen whose beauty is marred by the prim and monotonous contours of the shrubs and evergreen trees with which they are planted, that exhibit a weary uniformity of outline in place of the natural and individual grace of expression which is their birthright, appearing from a little distance like gigantic green mole-hills rather than objects each of which possesses the potentiality of distinctive structural attraction. Where it is deemed needful that shrubs should retain the same dimensions for many years, the result is naturally most easily obtained by annual sheerings, that reduce them to squat, dome-shaped

masses of greenery utterly devoid of all beauty of form. If repression is absolutely necessary, it may be effected by a careful cutting out of the most prominent branches without unduly interfering with the characteristic expression of the subject, but it is invariably preferable, where shrubs have become crowded, to entirely remove the less decorative and to allow the remainder to assume their natural proportions. Of the examples of misapplied ingenuity to which the designation of "topiary work" is applied, if any place can be benefited by their presence, it is the precincts of the mechanical museum, but not the garden.

The "shrubbery" is too often an instance of "false ideals." It is in numberless cases a heterogeneous jumble of many beautiful things which exist, rather than live, under conditions that render liberty of expression impossible. Each individual specimen should be allowed sufficient space to display to the full its distinctive attributes of loveliness, and should, where possible, be surrounded by examples of the same or allied genera in order that a broader effect may be produced. The same careful study of artistic effect should be bestowed upon the laying-out of the garden as is given by our painters to the composition of their pictures, for, to be beautiful, the garden must be a picture in which no jarring elements of colour or form obtrude themselves upon the eye.

The value of broad colour-effects is ever instilled into our consciousness by Nature in the azure expanse of sky and sea, the blue-green of the Scotch Firs flanking the mountain slopes, the scarlet of the popped field that glows afar from the steep hillside, the saffron carpet of hosts of Daffodils in the orchard-mead. The author of "Bethia Hardacre's Year-Book" was so enamoured with the fascination of pure colour, that she contemplated the production of a volume some of the pages of which were to consist merely of one exquisite tint.

Beautiful as are breadths, gradations, and occasional contrasts of colour, a meaningless medley of bright hues is irritating to the senses and intelligence. Let it be for a moment imagined possible that a canvas, consisting solely of concentric circles, triangles, stars, and other geometrical figures in brilliant colours, could be exhibited at the Royal Academy. What a storm of derision and disapprobation would arise at the audacity of such a production being called a picture! Yet our garden-pictures are still in many cases allowed to be disfigured by similar atrocities.

Perhaps one of the chief reasons for the continuance of the carpet-bedding mania is the apathy evinced by numerous owners of gardens as to the style pursued in their own domains. The writer of "Cold Weather Notes" (p. 58) hints at a dim future when the two schools, namely, that which takes the teachings of Nature for a guide and that which is nothing if not artificial, shall combine into one harmonious whole; but surely incongruity rather than harmony would be the result of a combination of the meretriciously gaudy carpet-bed and the refined beauty of an artistically arranged herbaceous border. In the same article the terms "disorder" and "negligence" are used as applying to the effects obtained by those who aspire to follow the suggestions of Nature rather than to practise the devices of artifice, and, together with the term "confused muddle," by which the same method has before now been described, are applicable only to instances where infelicitous disposition of the plants employed has obscured the inherent merits of the system.

An idea has gained wide credence that the objectors to pattern-beds are equally intolerant of the plants employed in their composition. This, however, is in the case of true gardeners an entire misapprehension. It is the abuse and not the use of these subjects that is condemned. Tuberous Begonias, zonal Pelargoniums, annuals, and other bedding plants are often of extreme value in the garden, and in like manner the attractions of the hardy plant border may be considerably enhanced by the use of many plants that require annual lifting and protection during the winter months, such as Dahlias, Camas, *Salvia patens*, *Lobelia fulgens* in many cases, and others.

S. W. FITZHERBERT.

DWARF POINSETTIAS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—As the author of the notes referred to by Mr. Crawford, I may state that my experience of their culture extends over thirty years. I quite agree with Mr. Crawford that the stock plants should be retarded as far as possible, but unless they are cared for when they would naturally start into growth, it would be useless to expect good results. I have tried the experiment of keeping plants back, with the result that only weak growths can be had; and though these may be propagated easily, they never make sufficiently strong growth to produce good heads of bracts. If strong, healthy plants are topped at the time I suggested, they may be cut down to within 6 inches of the soil, and if carefully treated these will make two or three breaks, and if potted on these will make fine heads of bracts. The one great advantage of propagating early is that the first growths are stronger, and the old stock plants, which are apt to get infested with insect pests, besides taking up more room than the young ones, may be discarded. When necessary to make the most of stock, the old plants must be potted on and given every encouragement to make strong growth; the tops will then be as good as those taken from the young plants. I have grown plants propagated from old stock late side by side with those taken from strong young plants, and the former have always failed, while the latter have invariably proved a success. With proper accommodation, the labour and trouble entailed are far less than in keeping old plants about. The Poinsettias make such a bright display at a season when there is little else of the same colour, and when flowers are most appreciated, that I think they should be much more extensively grown than they are. I now have one head of bracts which was cut on Christmas Day, and though now past its best, it is still bright.

A. HEMSLEY.

P.S. Has Mr. Crawford succeeded under the system he suggests?

ARALIA (FATSIA) JAPONICA IN THE OPEN.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—"A. L. L." draws attention (p. 28) to the decorative properties of this Aralia, and writes feelingly of the exquisite effects produced by large specimens thickly studded with their pale flower-clusters in the dim mid-winter days. It is, however, only in certain climatically favoured districts of our islands that this subject flourishes in the open air. In such spots specimens attain huge proportions, one fine example that I know of having a circumference of 50 feet. Although it is at the time when our gardens are well-nigh destitute of floral attractions, that the charms of this Aralia are most insistent, the noble form of its deep-erect, bright green leafage, on whose glossy surface the sunbeams glint, renders it ever a graceful vision. Since the lilies belong to the order Araliaceae, the formation of the inflorescence of the subject of this note naturally bears a striking resemblance to that of the lily.

W.

CLERODENDRON TRICHOTOMUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—The notes that appeared on page 66 of the present volume and pages 367 and 506, vol. lvi., were, I think, primarily suggested by a reference of mine to the decorative effect produced by this handsome subject in South Devon gardens. The climatic conditions enjoyed by the south-western sea-board, along which the flagging tide of the Gulf Stream slowly glides, are especially favourable to the culture of interesting shrubs and trees of doubtful hardiness. Indeed, if the dwellers in that exceptionally favoured locality were restricted to the practice of one phase of gardening alone, that of the growth of the tenderer flowering shrubs would undoubtedly afford the greatest measure of variety and charm. Fine specimens of the subject of this note when in full bloom are objects of great beauty, the plentiful display of flower clusters with their white, red-calyced blossoms being

remarkably effective, while the sweet perfume of the flowers floods the surrounding air with fragrance. One of the most striking specimens that has come under my notice was growing in Lord Hechester's garden at Abbotsbury Castle, Dorsetshire. It was about 8 feet in height, with a spreading head of about the same diameter, and at the close of August was covered with bloom. An illustration of the plant in question appeared on page 320, vol. li. *C. Bungei*, or *fetidum*, alluded to in one of the above-mentioned notes, is distinctly inferior to *C. trichotomum* in its ornamental qualities, the tightly-packed flower-corymbs being of a rather unpleasing shade of pink, while its stiff, upright growth is deficient in grace, though the large heart-shaped leaves impart a certain nobility of form. The unpleasant odour emitted from its bruised foliage is responsible for its specific title of *fetidum*; but in this respect it is not singular, the subject of this note possessing the same characteristic, though in a less degree.

S. W. F.

SWEET BRIAR ROSES FOR EXPOSED POSITIONS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Would you kindly let me know in your valued paper which kind of Sweet Briar is most suitable for growing close to Birmingham in a cold and rather exposed position, and also what class of soil, manure, and treatment is most suitable to make its growth a success? E. J. RAINSFORD.

[If you desire these to form a hedge, the common Sweet Briar would perhaps be the best kind to select. It is very hardy, and as the plants are raised from seed there is no trouble from wild suckers such as one experiences now and then with budded plants of Lord Penzance's hybrid Sweet Briars. These latter make delightful hedges, their blossom, although fugacious, being very effective whilst it lasts. The best and most brilliant crimson kind is *Anne of Gierstein*. Other good sorts are *Amy Robart* (pink) and *Lady Penzance* (coppery yellow). This latter is not quite so free as the two former, but it is perfectly hardy, as they all are. All have fragrant foliage and produce gorgeous fruit in autumn. The Sweet Briar revels in a good deep loamy soil rather inclined to clay, but before planting have the ground trenched, incorporating with the soil some well-decayed farmyard manure and a little old mortar and burnt garden refuse, if procurable. Sweet Briars may be planted any time between October and April, but if planted now, see that the roots are not allowed to get dry, but rather dip them in a bucket of thin mud beforehand. In the case of the common Sweet Briar we do not care to plant bushes too large. Those from 2 feet to 3 feet in height are strong enough. If a thick hedge is desired, plant a double row, allowing five plants to the yard. One year after planting cut down within 12 inches or 15 inches of the ground. The subsequent treatment would consist of removing dead and crowded growths in autumn and a rather severe pruning every three or four years, which would induce a plentiful supply of new growths. A good watering now and then during the summer with diluted stable or cow-yard drainings is an excellent stimulant for these and other Roses employed as hedge plants. —EHS.]

THE NEW ZEALAND FORGET-ME-NOT.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Your Dunedin correspondent, Mr. A. Bathgate, in his interesting note on the New Zealand Forget-me-not (*Myosotidium nobile*) expresses a wish to know if the specimen figured in THE GARDEN (page 150, vol. l.) grew near the sea. Though doubtless not so far removed from the sea as to be entirely unaffected by the Channel breezes, the locality in question is by no means on the coast, being roughly speaking some ten miles distant from the shore. In South Devon this handsome plant also flourishes and blooms well six miles from the sea. A friend who had met with the plant in its native habitat fully confirmed Mr. Bathgate's statement as to its growing within reach of the salt spray, but I imagine that vigour depends upon the rooting medium rather than upon

salt-water sprinklings. Certainly the Devonshire example above alluded to owes nothing of its robustness to the latter treatment, which I should be inclined to consider waste of time and labour. The compost in which it is planted should, however, consist largely of sea-sand. In the case of the South Devon specimen the latter ingredient forms one-half of the soil in which the plant is growing, the remainder being composed of loam and leaf-mould with which a certain proportion of road-grit had been incorporated, while, according to the note accompanying the illustration referred to by your correspondent, sea-sand had also been largely used. In cases where failure has attended the culture of this plant in the neighbourhood of the south-western coast-line, non-success may be attributed in a great measure to the omission of sea-sand from the compost.

I remark that in his note Mr. Bathgate states that the local New Zealand name for *Myosotidium nobile* is Chatham Island Lily. This title has also been bestowed, possibly incorrectly, on *Iris (Morea)* *Robinsoniana*, a handsome plant, whose white blossoms certainly have a better claim to the title "Lily" than have the many-flowered trusses of the *Myosotidium*. This *Iris*, also known as the Wedding Flower, was discovered at Lord Howe's Island, off the east coast of Australia, and its successful open-air culture is attended by even greater difficulties than encompass that of the New Zealand Forget-me-not, the only scene of its flowering in the open in this country, as far as I know, being the Isles of Scilly, although the fine specimen in the succulent house at the Royal Gardens, Kew, I understand, blooms yearly.

SOUTH DEVON.

THE SWEET PEA CONFERENCE.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—While to all appearance the promoters of the Sweet Pea bicentenary celebrations have secured sufficient support to induce them to proceed with their proposal, it is gratifying to see that it has been deprecated so ably in the columns of THE GARDEN. That the conference will be well organised seems certain from the names which have appeared in connection with it, but I think it is more than doubtful if the gardening public will support it by attending in any number. The question of classification and that of "too-much-alike" varieties appear to bulk largely in the minds of the promoters. One is curious to know how the specialists think of dealing with the former, and equally curious to see how they will settle the latter. I take it that it is impossible to settle the latter by comparison of cut blooms alone. A trial of the varieties in growth would be required in addition. Even if this followed, is it probable that the decisions of the conference or its committees would be accepted by the raisers of Sweet Peas? In a year or two the flood of new varieties is likely to be greater than before, and there is not the most remote chance that their raisers will submit to the judgment of any conference on the point of similarity to those already named. The Royal Horticultural Society was the proper body to approach when such a proposal was mooted. It could have taken it up, not only with more authority, but also with proper facilities for bringing it to a successful issue. At the same time, I do not admit that the movement is either necessary or likely to do any good to one of our most beautiful annual flowers.

ALPHA No. 2.

[We agree with our correspondent, "Alpha No. 2," and others also who hold that this is a matter that might have been as well or better dealt with at any sitting of the Royal Horticultural Society's floral committee. He has drawn attention to two important points, namely, that all such plants should be judged as they grow rather than from gathered bunches, and that in all probability no amount of conferences will deter raisers from the future production of an equally large number of varieties. At the same time we do not wish to actually discourage any undertaking that has for its object the bettering of any class of popular garden flowers, and with this letter we desire to close our columns to any further expression of

want of sympathy with the excellent horticulturists who have initiated the movement. We trust, however, that they will impress upon raisers that the Sweet Pea is, above all things, a climbing plant, and that the dwarfing now going on is a distinct debasement of its dignity. Also that this charming flower in its best form should have the upper wings well shaped and widespread, not half-folded a fault that spoils many varieties, among them the otherwise handsome Saidee Burpee. Eds.]

THE STRIPED HELENIUM.

[To the Editor of "The Garden."]

SIR, - I regret to find I have unwittingly misled your readers. The plant I described on page 55 as *Rudbeckia* should be *Helianthus*. Mr. Simpson's



ARCHES OF CLIMBING PLANTS IN THE GARDENS OF SWANMORE HOUSE, BISHOP'S WALTHAM.

request for a plant led to my looking up my catalogues, with the above result. Now my attention is drawn to it, I can recollect that the stems have the peculiar square winged appearance I have noticed in other *Helianthus*, but the flowers were so like, except in colour, those of *Rudbeckia* Newmanii, that I quite accepted the description of the nurseryman from whom I got my plant.

Woodside Park,

T. J. W.

THE KITCHEN GARDEN.

DEEP CULTIVATION.

THIS subject has lately been touched upon by some of THE GARDEN'S correspondents, and it is to be hoped that its very great importance may lead to more being written upon it. Perhaps the most

practically useful contribution to the discussion would be the actual experience of good gardeners up and down the kingdom, for soils and the treatment best for them vary almost to infinity. A fallacy too commonly met with in horticultural writings is the proponing of one's own successful management of a soil or a plant as though it were an infallible prescription for the whole planet. It was my privilege to occupy the chair at the first technical education lecture on horticulture in my country-side, when the lecturer, an otherwise able man, devoted his first hour exclusively to methods of drainage, the soil of the district being on dry chalk, with the nearest water 100 feet below the surface. A far more harmful mistake is made by those who make deep cultivation to mean trenching, and recommend it as a general panacea. Gardeners might with great advantage learn more from the scientific farmer than they usually

will have to be answered. First, that of shallow or deep cultivation - is this ground to be dug one spit deep or more? Nearly everywhere the answer will be "more." And then the second and critical question arises does this mean trenching or bastard-trenching, *i.e.*, must the lower spit be brought to the surface or only broken up *in situ*? The wise gardener will make inquiry, or, still better, a careful personal study of the practice and the results of the best farms and gardens of his own locality. But he should not be ignorant or forgetful of the general principles upon which the entire consideration hangs. A very little thought will show that to trench regardless of the character of a soil is to violate those principles, and, indeed, common sense. The upper spit of his ground is the gardener's most precious possession, created by things which he cannot have on demand, whatever his wealth, namely, weather and time. The very

do; but in this matter I think there has been a "corrupt following" of Mr. Meech, of Tiptree, whose zealous advocacy, many years ago, of deep tillage was often wrongly and injuriously interpreted. The right treatment of the soil in this respect is even more important to the gardener than to the farmer. The farmer has but few crops which remain on the ground for more than half the year, and therefore has frequent opportunities of mending an ill-treated field by re-working and following. But in the kitchen garden the Strawberry plot will not be dug for, say, three years, and the Raspberry quarter for at least six, while the ground under the fruit trees may stay undisturbed for a generation or more. In the flower garden, if a new herbaceous border is to be made, it must be made with the knowledge that the soil cannot be dealt with *en bloc* for several seasons. It is therefore all-important that it should be treated not only thoroughly, but safely. Two questions

school children can now tell him, in chemical terms of gas and acid, how sun and air, rain and frost, have crumbled the rocks into soil, and how the countless generations of plants have helped on the manufacture of the "top spit" by their life and death. Some of us find a real pleasure in handling the mellow, kindly upper soil; the breath of life has been breathed into it, and it has become almost as much a friend as the flowers it bears. It seems murder, and it usually is murder, to bury it beneath 1 foot of crude, dead subsoil. Apart from fancies, it is certain that many a field and garden have been ruined for years by this reckless trenching. The common argument in its favour runs thus: that by bringing the bottom spit to the surface we create a new top spit, while the buried top spit becomes a rich, deep root-run for the crops. But the surface soil, when buried and sealed up from the influences of sun and air, is no longer the wholesome, vivifying material that it

was, while the new surface must be submitted to a long cycle of such atmospheric influences before it can acquire the virtues of the old.

My own neighbourhood, in the north-west corner of Hampshire, may afford an illustration. The average soil is a flinty clay of moderate stiffness, running from 6 inches to 1 foot in depth. Beneath this is a streak of tenacious brick-clay, and then the chalk rock, of a dry, porous quality. Deep cultivation was tried on some of the farms at the time when its universal benefits were being enforced by the doctrinaires. The tillage was carried down to the chalk, and the three layers were more or less churned up together. The unanimous testimony of the most intelligent farmers is that the experiment was a failure, causing long-continued infertility, and they have reverted to a shallow ploughing of 4 inches or 5 inches. As to horticulture in the same district, I have under my eyes a large piece of new vegetable ground, broken up out of old pasture land by a neighbour about eight years ago as an adjunct to his kitchen garden. Contrary to my advice, he trenched it, burying the excellent thick sod beneath the clay underspit. The produce of that ground is to-day entirely inferior in quality and quantity to that of some new allotment strips made out of the same pasture by simply breaking it up to one spade's depth.

A far safer method is that of bastard-trenching or double digging, by which both spits are broken up, but the lower is kept in its original position. On many soils this is immediately beneficial, but it is not invariably so. Nearly the whole area of my own small garden has received this treatment, piecemeal, during many years without such general advantage to all crops as I had reason to anticipate.

The behaviour of a plantation of Raspberries in particular caused me to reconsider the matter. The quarter for these was somewhat laboriously prepared by double digging, both spits being well manured. Excellent canes were planted, but in spite of every attention in the way of mulching and so forth, their growth and yield of fruit have never been satisfactory. They have evidently suffered from want of moisture, the Raspberry's main requisite. On the other hand, a few canes in a much hotter corner of the garden, on ground which has never been dug to any depth, grow and bear much more freely. Here, then, is a useful object-lesson, and I interpret it thus: The layer of stiff clay which constitutes my bottom spit is necessarily broken, in the process of double digging, into rough lumps, too coarse to allow of a full capillary attraction of moisture from below upwards, while they offer a too ready passage for the rainfall to run away into the chalk. The failure of these Raspberries has been of great service in leading me to a more rational and fruitful handling of my soil. I do not now ever make any permanent plantation upon ground freshly double-dug, but plant it once, or even twice if feasible, with Potatoes or some transient crop, which admits of a brief fallow and a second or even third pulverisation of the lower spit. This is not so tedious as appears if foresight is used and the garden routine planned two seasons in advance. On many other soils of course such a lengthy procedure is not necessary; I have mistaken my own as a proof that no one general law of treatment can be laid down for all places.

The very expression "deep cultivation" is apt to set beginners in gardening on a wrong track. It is common to read such advice as "dig deeply, and then your plants can send their roots right down for food and out of the drought." Now there are deep-rooting plants, but there are vastly more which love to keep their roots within the warmed and aerated surface layer of soil. A spade pushed along horizontally 6 inches or 7 inches below the surface of a mixed border will remove the bulk of the plants unharmed. Or throw an inch or two of sweet soil on such a border, or within reach of a fruit tree, and see how the feeding rootlets rush up into it. Even our great forest trees feed in the same way. My stores of turf, leaf-mould, &c., are stacked a few yards from the stem of a huge Horse-Chestnut; if not moved for a few weeks they

become like door-mats of its fine fibres. It is well ascertained that the unfruitful condition of so large a proportion of our older orchards is chiefly owing to their over-deep planting. We seem to have only recently learned how to plant fruit trees. A curious instance of the discomfort of plants at an unaccustomed depth has come in my way. I flower a good many Narcissi annually under glass; the pots are plunged in ashes during the winter. Two or three times it has happened that an over-thick covering of ashes has been thrown over them, with the result that the long white roots come straight up out of the pots, like the antennae of some lost creature groping upwards to the light. We are always being told to trench manure in deeply, but the deep burying of manure is either wasteful or injurious; either it is below the reach of the plants, or it entices their roots to an unwholesome depth. It sounds paradoxical to say that deep cultivation, from the feeding point of view, should be done upwards as well as downwards, but I believe it to be true. Garden refuse, for instance, should not be trenched in deeply, as is too often advised, but rotted in heaps with lime, or burned, and spread little by little on the surface, where it can be worked in by the hoe. A surprising fertility can be maintained by these slight films constantly repeated. How generally the elementary truth is ignored that plants, like babies, can take their nutriment only as liquid, and therefore want all solid food put within grasp of the rain, and not below it! Undoubtedly as we advance in our knowledge of artificial manuring, which as yet is in little more than the empirical stage, we shall more and more feed our plants by small potable doses administered from the surface.

The foregoing must not be read as a blank negation of the value of deep cultivation. Deep cultivation is immensely beneficial if its object is understood, and if it is accordingly carried out in a purposeful way. That object is, in a word, *the opening up of communication*, primarily with regard to the water supply. Water is a plant's first requisite; it can grow to some extent without light, it can grow without soil witness the Hyacinth in its glass—but it cannot grow without water. The perfection of our crops of flowers, fruit, and vegetables varies very much in the same ratio as that of the water supply. We have not yet learned to call down rain from the sky, nor even to be ashamed of and to remedy our gross waste of that which falls. But by maintaining our soils in the fittest possible texture we can do much to secure to our crops the whole available supply of moisture from both above and below. In the first place, there must be a free passage of the rainfall downwards, "not rudely fast nor obstinately slow," carrying the food solutions gently, as it passes, to the little mouths of the rootlets. In farm work it may happen that the constant sliding of the plough and tread of the horses at the same level compresses a dense clay into an impervious "pan," and this must occasionally be broken by a deeper ploughing if the soil is not to be water-logged. To make a garden on certain formations, a pan of rock or lime incrustation may have to be broken up by double digging. But this work has a far more common usefulness in leading the water upwards. If we can effect a finer granulation of the second spit, we multiply and deepen the slender capillary tubes which continually pass the moisture up to the layer of soil where the fine roots are ranging. Although it may sometimes be to drain a wet soil that we dig so deep, nevertheless the aim is still the same—to supply moisture. It is only after a residence of stagnant wet that this healthy capillary action can be set up. As the right movement downwards of the rain from above and upwards of the moisture from below depends upon the granulation of the soil, so its warmth, aeration, and other desirable conditions depend in turn upon this movement. But this granulation, this ideal spacing of the soil particles, is not necessarily obtained by the simple putting topsy-turvy of the two spits, nor even in all soils by double-digging once and for all. If we break the under spit into hard lumps with cracks between them, we do not assist, but interrupt the capillary action.

There may be soils in which, by some geological vagary, the under spit is of better mechanical and chemical constitution than the upper. And there are river deposits of uniform alluvium 12 feet in depth—I have seen one such on the Norfolk coast being trenched four spades deep. But such soils are very rare, and even then a long exposure to the atmosphere is necessary to quicken material which has lain so long cold and inert. The general conclusion seems to be that trenching proper is rarely advisable, while bastard-trenching is usually beneficial, but should in many soils be repeated once, if not oftener, before the establishment on the ground of a permanent plantation. If this cannot be done, then, contrary to the prevalent doctrine, such soils will be more productive if never dug more than one spade deep, but gradually deepened by surface applications.

G. H. ENGLEMEYER.

I HAVE read with interest your correspondent's remarks in the issue for January 20 (p. 46) respecting my article on the above in THE GARDEN for the previous week. I am not in the least surprised to find that some exceptions are taken to what I there said, for, as stated then, I know few people agree with me on this subject. Mr. Hall considers my advice much too brief, and he thinks there must be some mistake. He questions how the hungry subsoil brought to the surface can be brought into a fit state for seed-sowing, &c. Now, I am quite sure Mr. Hall, as a practical man, will agree that the influence of the weather, light, and air does a very great deal towards perfecting (it matters not what the nature of the soil be) the surface for this operation, equally as much as when trenching is performed in the ordinary way. Nevertheless, I do not pretend to say but that some little difficulty may be experienced for the first season, especially should the weather be unfavourable and on land that is of a stiff, retentive nature. But surely this is easily overcome by drawing deep drills and introducing a little fine porous soil for the finer seeds. I need not say anything about the sandy soil for sowing, as I think none will question that little difficulty will be experienced in sowing in this, even if it be pure sand. If Mr. Hall will take the trouble to read my article again, he will observe I advocate working in plenty of manure, garden refuse, &c., which in time will of course help to improve the nature of the soil and make it in a workable condition. Mr. Hall also says he knows it will take nearly a lifetime to bring clay into anything like a suitable surface for general garden crops. Here I respectfully beg to differ, for I can prove—and indeed it can be substantiated by scores of people—that land treated as I have advised eight years ago is now in a splendid workable condition, and will grow successfully almost any kind of vegetable.

My remarks applied solely to the kitchen garden. Now in making a kitchen garden it is generally supposed it will have to do duty for many years, possibly for generations; therefore surely it should be the aim of those in charge to have the greatest depth of workable soil possible, and how can this be accomplished unless a thorough system of trenching is carried out? It will be patent to everyone that if this is done, the first top spit buried at the bottom will eventually be brought to the surface again to do duty; consequently the whole of the soil to the depth of 3 feet becomes changed. And I assure my readers good soil buried at a great depth is not lost, for in dry weather especially many of our deep-rooted subjects will find it out and benefit by it considerably. I carefully noted last autumn, when taking up one of our principal Onion beds, that the roots had penetrated fully 3 feet. It is the duty of everyone to produce the greatest bulk from a given space, and I am thoroughly convinced that fully double the quantity of vegetables can be obtained by deep cultivation on the same sized piece of ground than from that treated in the ordinary way. This is an important subject upon which I shall have something further to say in the future. Deep cultivation means better and more profitable crops.

E. BAKER.

Abraham House Gardens, Elstree.

FRUIT GARDEN.

VINES IN THE OPEN AIR.

IN complying with our secretary's desire that I should write a note on the cultivation of open-air Vines, I must premise that, although this subject is my hobby, I cannot claim to be a scientific instructor in this branch of fruit growing, but only to have studied the matter, collecting and comparing facts, and growing as many varieties as possible, but with only odds and ends of time to devote to this most interesting subject.

I first took notice of open-air Vines in the London district in the hot summer of 1868, and the two following years gave me opportunities of further observing that in country districts as well as in the metropolis open-air Grapes could be ripened, and thoroughly good and handsome bunches produced.

On changing houses in 1872 I selected one with the back almost due south, and instructed a gardener to plant two Vines there, preparing the border specially for them, as the soil was clay. These Vines were Black Hamburg and Buckland Sweetwater. They grew apace, and I took some good black Grapes off the Black Hamburg in 1874. A friend advised me to procure Clement Hoare's work on the growth of Vines on open walls, and soon I knew all that writer's rules by heart, and

fit for it. I saw the two small casks in the fermenting stage.

At this point I must refer to the flowering of open-air Vines in October, 1878. I saw it in several counties, and I saw Castel Coch on November 9. The Vines were all in flower, and many had passed that stage and had well-formed Grapes. The explanation of this phenomenon is that with a long warm summer we had a warm and abnormally wet August, succeeded by a fine warm September. And this precocity or special fruiting was followed by the only year that in twenty-seven years of Vine growing I can call really bad. 1879 was bad. The year 1888 came, I think, next nearest to a failure of any of these other years as far as my observation has extended; July, 1888, was cold and wet following on a cold June, and August only improved on the 58 average temperature for July by 1.2, including the hottest day of the year, the 10th of the month, the maximum being 87.7.

To those who never tire of depreciating our climate, and who say that we cannot ripen Grapes in England, I beg to reply by calling their attention to a simple fact. I cut my Grapes in 1888 about October 10, and immediately went to France, and about forty-eight hours after cutting my own I went into the market at Rheims and closely

is, the Vines were crippled. Both the fruiting canes and the new ones should have been pruned right out and a "Sabbatical" year's recuperation allowed them. If this had been done there would have been none of the Vine diseases which were rampant in 1894, and the great expense of chemically cleansing and stimulating the Vines to produce a vintage which when produced was in my opinion, in the first place, not wanted, and, in the second place, very inferior, would have been saved. Without the wines of that year those of 1893 would have fetched as they deserved better prices, and the wines of the following year, though generally good, would have been far better, more abundant, and more remunerative to the growers.

I should very much like my readers to consider this matter fairly and without prejudice. Whatever may be done under glass in the management of Vines, I claim for them in the open every reasonable consideration. If the quality of Grapes and the wine made from Grapes off old Vines is better than that from young plants, then this is a special reason for respecting the strength and health of the Vine. I also submit that strong manures, or those of a suddenly quick and stimulating action, like blood, should be forbidden. It should always be remembered that the best wines grow in poor soil, calcareous, chalky, gravelly, slaty schist, &c. If it be true, as Clement Hoare says, that the Vine outlives every other "tree," surely that is a natural instruction to us how to treat it. If, as it advances in age, a large part of its roots rise towards the surface, should not the spade and the plough be rigorously excluded from their neighbourhood, and only the hoe and the fork admitted?

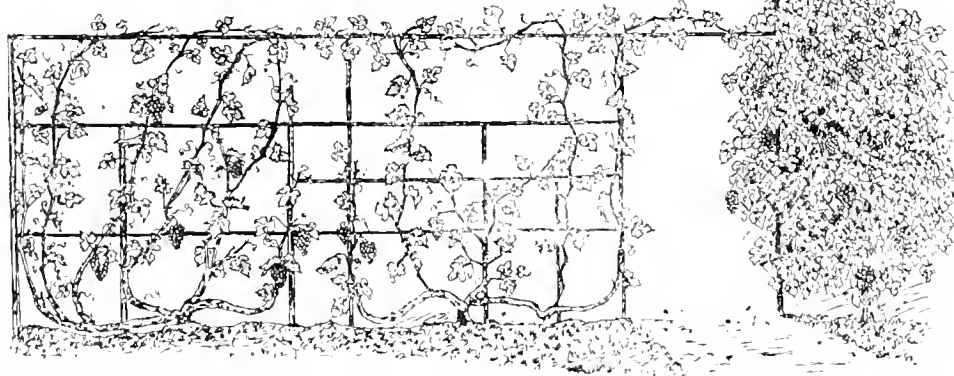
There is also a serious objection to the use of chemical applications to cure diseases, which are, to at least some extent, the result of a greedy system of cultivation. It was not greedy for the viticulturist to take all that Nature provided so richly in 1893, but he ought to have guessed (if he did not know) that then his Vines needed rest. Only seven years had passed since the disappearance of mildew in an epidemic form, and the renovation of the vineyards by grafting French varieties on American roots had almost entirely got rid of the damage done by *Phylloxera vastatrix*. An enormous increase took place in the quantity of wine grown—50 per cent. did not cover the increase in the production of some of the best-known claret vineyards. Commercially the mildew years did very serious harm to the claret trade. If 1886 had been eliminated, it would have been better for everybody concerned. If it had been a "Sabbatical" year, then 1887 would have had the immense advantage of being not only a very good, but also a very abundant year—cheaper no doubt, but far more profitable.

It may here be usefully remarked that the application not of one for that seldom succeeds—but of repeated washings of the bouillie bordelaise is risky, as was shown in one of Messrs W. and A. Gilbey's circulars. A vineyard in the Médoc was named by them, in which the effect of counteracting the mildew in this way had an undesired and untoward effect. The Vines were so stimulated by these dressings that they made an unhealthy and precocious autumnal growth, did not shed their leaves as a rule, but were caught and, to a very serious extent, destroyed by severe frost in November.

The mention of this circumstance brings me naturally to the question of when Vines should be pruned. Unhesitatingly I say prune in October.

Along with the question of how to prune, which I shall go into separately, it is primarily a consideration of what is best for the plant both presently and in the long run. The growth of a healthy Vine is so great that it both invites and demands suitable management and control, and we must adopt the plan that will best preserve its health and strength in other words, its fruit-bearing powers. Autumn pruning causes the least shock to its system and the least loss of sap, which we call bleeding indeed, generally there is none at all in October, and the wounds caused by pruning dry naturally before the advent of frost severe enough to hurt the plants.

On the other hand, the alternative of spring



Sauvign, 13 years old

Trebbiano, 10 years old

Bouill, standard 9 feet high

FIG. 55. CLEMENT HOARE'S LONG ROD TRAINING.

found I had made a bad beginning by allowing Vines on walls to fruit before their fifth year, although by this time the Black Hamburg had attained to the necessary 2½ inches in circumference.

In 1877 I had the first opportunity of observing Vines in different parts of France, and very soon formed the opinion that we could grow as good in England in some seasons, and at all times nearly as good. I also exchanged English Vines for French ones, with friends in the celebrated wine-growing departments; and so for some years I had Pineau Noir from Champagne and the Clos de Vougeot, Carbinet Sauvignon from Chateau Lafite, and sundry others.

I had good Grapes in 1878 on my Black Hamburg and Buckland Sweetwater, and according to Hoare's rule I pruned these two Vines in October. Had I not done so I have no doubt they would have flowered and tried to fruit a second time that year, as many others did, as I will notice later on.

Early in 1876 I heard of Lord Bute's new vineyard in South Wales, and went to see it, taking good note of everything about it, and described it in a letter published in the *Vines*. The slope of this vineyard on the south face of the hill of Castel Coch is very beautiful, sheltered by plenty of timber above the odd castle, and by other hills all round, except due south, where the view extends to the Bristol Channel, five or six miles off. Lord Bute made the same mistake as I had done; he made his first wine in 1878, before the Vines were

examined those on sale there. They were no better, scarcely so good as mine. No doubt the Rheims market Grapes were taken for the most part either from vineyards or gardens in which the Vines were grown as bushes or espaliers, with a few from cottage walls, and my Grapes were grown on a south wall in a suburb of London. But whatever disadvantage the Rheims Grapes laboured under by being grown in the open was, I think, not unfairly matched by my Grapes at that time not getting the sun until after 12 o'clock. I may here remark that in such years as 1879 and 1888, besides the low temperature and absence of sunshine, there is excessive moisture and also a more smoky atmosphere, house fires being maintained almost continuously throughout the season.

If the clerk of the weather would only predict the main characteristics of the weather of such years, we might make good use of them by making them "Sabbatical" years. The idea of a "Sabbatical" year has very much to recommend it, especially in the case of Vines. I include it in the calculations I have made with regard to the cost of planting and management of vineyards when consulted about whether they will pay in this country.

Leaving the theory on one side, let anyone, whether connected with the wine trade or not, consider this: The great 1893 vintage in France severely taxed the Vines, which not only during the 110 days that it takes to make a vintage, but for a month besides, had no more than half an inch of rain, and in some places none at all. The truth

pruning causes certain loss of strength by bleeding, and this often continues to a serious extent. I am at this moment thinking both of French and English Vines. Admitting for a moment that the recuperative power of the French Vines, with more sunshine than ours have, is greater than ours, they also have more risks to encounter, e.g., their earlier bud-pushing and flowering exposes them (two years out of three) to dangerous spring frosts that ours escape. In either case the Vine wants its whole strength, uncrippled by bleeding, to go on and accomplish its annual task. To my mind there is something more than adopting an opinion and practising a system in this matter, for, unless I am greatly mistaken, it will be difficult, if not impossible, to name any other plant the equal of the Vine in the open air in repaying intelligent care bestowed liberally and regularly upon it.

Judging from my own garden and from others, I think this must be called a good Grape year. The best row of Vines in the middle of my garden is the subject of a sketch I made in the middle of this month of September, just as the standard Brandt with over forty small black bunches (seen on the right of fig. 55) attained maturity. This Vine is nine years old, very strong and wild; it resents control, and is the earliest ripener within my knowledge. Its foliage is rapidly assuming splendid scarlet and purple tints. I mean to graft some more valuable variety upon it. The Brandt is about 9 feet high, and the top rail of the supports reaching to it is about 7 feet from the ground. The middle plant is Trebbiano, sixteen years old, with only half a dozen small bunches. This also I intend to graft with better open-air varieties. The Vine on the left is a Syrian, thirteen years old, with very strong stout wood. It has three bunches of its own, only one of which is of the usual immense size. The fate of these is to go under pie-crust, as if they were Gooseberries. One year I put them in with all the others to make wine. There is a graft on the right arm of this Vine with six bunches of red Grapes, but these have got mildew this year. I am not sorry for having tried

on the south gable of Mr. Will Taylor's house at Hampton. It is higher on the wall than I should grow it, and involves considerable ladder work to train and develop it (fig. 56). Most possessors of such a Vine would get little or nothing from it. It is the common neglect or mismanagement of wall Vines that keeps back the general and profitable cultivation of them. This one of Mr. Taylor's is a great advance on ordinary methods, and the result is most encouraging. Mr. Taylor received this Vine from Germany under the name of Reine Olga. - Reprinted by permission from the *Journal of the Royal Horticultural Society*, 1899.

KITCHEN GARDEN.

AUBERGINES.

THESE are vegetables finding little favour in this country, but on the Continent they are seen regularly in all the large markets, and command a ready sale. At the same time, the Egg Plant, as it is commonly called, is not at all a bad plant from a decorative point of view. I admit the large kinds are a little stiff, but the smaller and well-coloured fruits give variety. There are several kinds, but for use as a vegetable I prefer the black-fruited variety. It is useless to grow these plants in any quantity unless special care is taken in the cooking, as if cooked carelessly, much in the same way as our Vegetable Marrows, I would prefer the latter, which may be grown by anyone. These plants do well trained to a warm wall or covering a trellis, and during the past two summers I have seen them growing in the open merely supported by stakes. Anyone who succeeds in growing the large-fruited varieties of Capsicums would not fail with the Aubergines. Those who have not the best of soil or sheltered positions, or lack a warm wall, would do well to grow them under glass, a cold frame being suitable.

the form of top-dressing or liquid manure during growth. Unlike Tomatoes, they need little checking, as the fruit ceases to swell freely if the growth is unduly interfered with. For trellis-work the round Aubergine is specially suitable; also for frame culture, as it is not so heavy as the black variety; at the same time, I do not think the quality is so good. Another, and one of the best, is the New York Purple, the largest oval variety grown, and a very handsome fruit also. The Early Purple is somewhat similar, but earlier and smaller. There is also a reddish-coloured fruit called the Early Scarlet, but this is not so good as the black. The white bears a creamy-white, egg-shaped fruit, and is good for pot culture. There are other kinds with different coloured fruits, and some of the smaller ones are most ornamental grown as pot plants for house decoration.

Their culture is simple. Seed may be sown in pots or pans in a warm house in March or April, and when the seedlings are large enough they should be potted off into small pots singly or in boxes, the seedlings in this case being 3 inches apart. Later on they should be planted out in frames. If for planting at the foot of a wall, I would advise pot culture from the start and the use of a rich soil. A 6-inch pot will grow good-sized plants, and if large fruits are needed the fruit should be thinned when set, leaving three to five fruits on each plant. Liberal supplies of food should be given when the plants are growing freely, and ample moisture in the way of syringing all portions of the plants. Red spider is their worst enemy, and this should be kept down by frequent fumigation. The plants thrive well if well damped over in the evening after a hot day. My note does not concern the cooking, which is an important detail; but this portion I will describe on a future occasion should the editors of THE GARDEN think it would interest their readers. G. WYTHES.

BOOKS.

Home and Garden: Notes and Thoughts, Practical and Critical, of a Worker in both. By GERTRUDE JEKYLL. (London: Longmans). — It has been written, not inappropriately, of Miss Jekyll's new book that it is the "least commonplace of commonplace books." Much of it—perhaps the greater part does not come strictly within the purview of THE GARDEN, for the home is a gem set in the garden and a part of the harmony, and we hear much of the building of the home and of the manner in which it grew out of Miss Jekyll's ideas, hammered into shape by a clever and appreciative architect. Moreover, enough is shown of the home in the numerous illustrations, which are from photographs by Miss Jekyll herself, to leave the impression of a house unostentatious, but beautiful in no common measure. But it is not—or, at any rate, it does not aim to be—a show house, and it is evident from a gentle remonstrance in the preface that Miss Jekyll has suffered not a little from "kind and numerous, though frequently unknown, friends." Their visits have taken away from the time which she would have preferred to devote to the work which she loves, and the popularity of her book has clearly been a grievous hindrance to her in daily occupations. Personally, I know to my cost what this means. In the course of the day perhaps twenty persons call on me. Individually, each visit is a pleasure; collectively, they make work impossible.

Premising that all of this book which relates to the building of the house and to folk-lore concerning the names of plants, and to the grace of craftsmanship in him who uses common tools, is entirely delightful, let me go on to say that when it comes to a matter of gardening, the field covered by this book is necessarily narrow. Miss Jekyll has her general principles, which are applicable to all gardens, and she is not only a wonderfully keen observer, but also accurate and expressive, even rhythmical on occasion, in describing that which she sees and hears and smells, for her senses are very acute. But practical advice she will by no

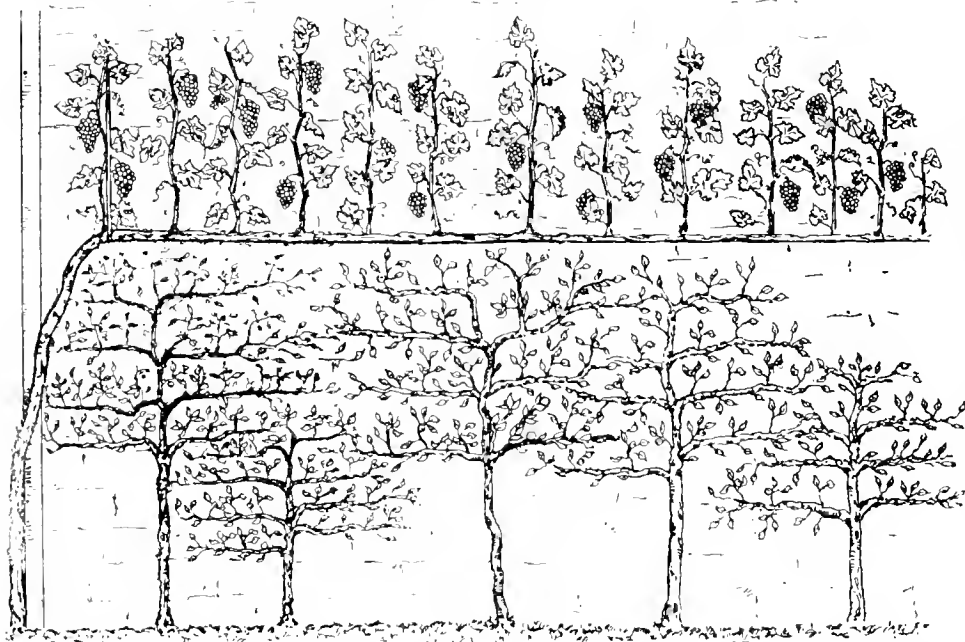


FIG. 56. GABLE OF MR. WILL TAYLOR'S HOUSE, SHOWING CHASSELAS VINE, SOUTHERN EXPOSURE.

and studied the Syrian. I have four of them, but shall clear them out in favour of Moore's Early, Chasselas Rose, and some others more suitable to our climate.

The shape of these two Vines I take to be the best either on a wall or in vineyard rows. It is Clement Hoare's long-rod system produced according to his rules.

Another sketch shows the best open-air Grapes I have seen this year. The Vine is a Chasselas Rose,

VARIETIES.

I have already mentioned the value of the black-fruited kind, known as Black Pekin, the fruits being nearly black and long, not unlike a small long Marrow. The leaves are violet coloured, and even when not grown for its fruit the plant is most ornamental. This variety is one of the best for general culture on account of its free growth and cropping, but both this and several others of free growth need much food, which is best given in

means give save upon matters which he absolutely within her knowledge and her experience. Now her experience has been gained on what she calls "a poor soil," and it is true that on such a soil as she describes, grass-feeding plants—the better classes of H.P. Roses, for example—would certainly never grow to perfection. But the sunny hillside in Surrey, sandy although it be, is not a desperately poor soil. Birch and Pine and Heather and Bracken flourish on it in its natural state; also, there is a good sprinkling of peat in the sand, and there are many gardeners struggling with heavy clay who would be glad to have half Miss Jekyll's complaint. Still, it is rather poor stuff, and therefore the best soil in the world upon which to learn the two great secrets of successful cultivation. They are, firstly, to plant those things which are naturally best suited to the soil, and, of course, to plant them thoughtfully; and secondly, to feed them well and to make the fullest preparation for them. A dwindling, half-starved plant struggling against difficulties is no pleasure to anybody; careful selection among suitable varieties will give infinitely the best results. For tillers of poorish soils there is no better guide to be found than Miss Jekyll, but her list of plants for them is far from being long. Cisti of many kinds, Helianthemum, Lavender and Rosemary, Brooms, Spanish Gorse, Jerusalem Sage, Tree Lupines, American thornless Brambles, Rhododendrons and Azaleas (with careful preparation), Kalmias, auratum Lilies, Sea Hollies, Heaths, the blue-leaved Lyme Grass, Southernwood, Acanthus, Alstroemerias, the Mexican Orange Flower, Asphodels, Milleins, Cat-mint, Hyssop, Oriental Poppies (with deep working), Stobea purpurea, Gaultheria Shallon, Corchorus japonicus, the Tea Tree, Burnet-leaved Roses and Briars, Cluster Roses, and a few smaller plants are almost the whole tale; in fact, the struggle against Nature is severe, but the eternal principles of grouping remain the same always. I must not part from the volume without an expression of cordial admiration upon the eminently practical chapter on "Gardening for short tenancies," with special reference to Aldershot. This, even if it were published alone, would be invaluable to dwellers in that sandy desert.—J. E. V.

The Kew Bulletin. The last issue contains a list of books added to the library during 1898. A glance at this catalogue shows the comprehensive character of the library, embracing books as widely different as the "British Pharmacopœia" and Edith Jackson's "Annals of Eating from the Twelfth Century to the Present Time." Published by Eyre and Spottiswoode, East Harding Street, Fleet Street, E.C. Price 1d.

The Vicar's Wife, or the Great City. By EDWIN THOMAS. Wm. E. Richardson, Great Queen Street, W.C. A sad story in rhyme of the ruin of a widow and her two children through their betrayal by the tempting financial liveryment of a rich speculator. There is a feeling throughout of evangelical piety and tenderness.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

The next meeting of the Royal Horticultural Society will take place in the Drill Hall, James Street, Westminster, on Tuesday, February 13. The various committees will assemble at noon as usual, and at 3 o'clock the annual general meeting of the society will be held at the society's offices, 117, Victoria Street, Westminster S.W. The Council of the Royal Horticultural Society at its last meeting unanimously requested the president, Sir Trevor Lawrence, Bart, to allow himself to be appointed to the vacant Victoria medal of honour.

RICHMOND HORTICULTURAL SOCIETY AND THE LATE DUKE OF TECK.

At a meeting duly held on Thursday, the 1st inst. Mr. Thomas Skewes-Cox, M.P., chairman, in the chair, the following resolution was proposed by him, seconded by Sir Edward Hertford, K.C.B., and unanimously adopted:—That the Richmond Horticultural Society hereby places on record its deep regret at the loss which has befallen horticulture by the death of His Highness the Duke of Teck, G.C.B., G.C.V.O., a prince who for no less than 26 years past had been the president and valued friend and supporter of this society, and begs to tender sincere and respectful sympathy to their Royal Highnesses the Duke and Duchess of York and the other members of the late president's family in their heavy bereavement.

LINNEAN SOCIETY OF LONDON.

THERE will be an evening meeting on Thursday, February 13, at 8 p.m., when the following papers will be read:—"Photography of British Plants," by Mr. J. C. Shenstone;—"A New Land Planarian from the Pyrenees," by Dr. R. F. Schardt, F.Z.S.

MIDLAND CABINATION AND PICOTEE SOCIETY.

WE have received the ninth annual report of the above society. It contains the list of awards, the list of subscribers, and the balance-sheet for 1899, together with the schedule of prizes and rules for 1900. There is also a list of some of the leading flowers in each class suitable for exhibition. The last annual exhibition, held at the Botanic Gardens, Edgbaston, was again a great success; the Midland Counties' challenge cup was won by Mr. Robert Sydenham. The book contains an article on Carnation culture by the same eminent grower. The honorary secretary of the society is Mr. Herbert Smith, 22, Tenby Street North, Birmingham.

THE ROYAL GARDENERS' ORPHAN FUND.

THE executive committee met at the Horticultural Club on Friday, the 26th ult., Mr. William Marshall presiding. The secretary reported the receipt of the sum of £12 5s. from Mr. H. J. Jones, Lewisham, the proceeds of boxes in his Chrysanthemum houses, and it was also stated that it was the intention of the Richmond Horticultural Society, at their forthcoming show, to set apart a tent for the sale of flowers on behalf of the fund, a practice which may be heartily commended to the notice of other horticultural societies. It was announced that Lord Batterssea would preside at the annual festival of the fund, to take place at the Café Monaco on Tuesday, May 8. Messrs. P. E. Kay and T. W. Swales were elected to the vacancies on the committee caused by the death of Mr. A. Outram and the resignation of Mr. Thomas Peck. A financial statement of a generally satisfactory character was produced, showing that there is an increase of £74 1s. 6d. over the receipts of 1898, and a draft report of the committee was also submitted, both of which were approved for presentation at the annual general meeting on Friday, February 10, at the Essex Hall, Essex Street, Strand.

NATIONAL CHRYSANTHEMUM SOCIETY. ANNUAL MEETING.

THE annual meeting of the above society was held on Monday last at Carr's Restaurant, Strand, when Mr. Percy Waterer occupied the chair. The attendance was large, and the proceedings excited considerable interest. After the minutes of the previous annual meeting had been read and confirmed, the chairman moved the adoption of the report and annual balance sheet, with which he entirely concurred, excepting that he thought a special reference should be made to the generosity of Lord Rosbery in allowing the members to have their annual outing at Mentmore, an outing which he thought was one of the most interesting and enjoyable that they had ever had.

From the report we gather that the committee congratulate the society on the satisfactory condition of affairs. The shows for the past year appear to have maintained their high quality, the relations with provincial and foreign societies are as wide and firm as in the past, and the financial position is decidedly encouraging. Mention is made in the report of the success of the vase glass, which made an imposing display at the November Show, and also to the competition for the National trophy and the Holmes Memorial cups. The report also contains references to the proposed modifications in the privileges granted to affiliated societies, and to the deputation that visited the French N.C.S. show at Lyons.

The financial statement shows on the receipt side that £206 18s. 6d. was received for members' subscriptions, £151 6s. for donations and special prizes, £375 from the Royal Aquarium and various other items, bringing up the total to the year from all sources to £1093 0s. 5d. On the payment side it appears that the sum expended for prize money at the three shows amounted to £208 13s., medal account £112 5s. 2d., secretary's salary £100. Most of the other items are similar to those of previous years, and a balance of £76 18s. 6d. is shown to the credit of the society. This will enable the reserve fund to be increased.

After some discussion, in which Messrs. Simpson, Newell, Moorman, Dean, and others took part, the motion was carried. Then followed a vote of thanks to the auditors for their services in auditing the accounts. Mr. Cholmley and Mr. Beridge responded.

The election of officers for the present year then took place, with the following results:—President, Sir Edwin Saunders; chairman of executive committee, Mr. Percy Waterer; vice-chairman, Mr. Thos. Bevan; treasurer, Mr. C. E. Wilkins; foreign-corresponding secretary, Mr. Haman Payne. When the election of the general secretary was proposed, Mr. T. Bevan moved that it be postponed, and that advertisements be inserted in the gardening press for a secretary at a salary of £100 a year. This motion naturally caused a lively discussion, and in the end Mr. Richard Dean was again elected secretary by an overwhelming majority.

The next item on the agenda was the election of one-third of the executive committee, who retire annually according to rule. A large number of nominations was received, and the following gentlemen acted as scrutineers of the ballot, viz., Messrs. W. Seward, Crane, J. W. Wilkinson, and J. Burn. The successful members were Messrs. Witty, J. W. Moorman, Ingamells, Lyne, Newell, Sturrock, Cutbush, Cholmley, Holmes, Keene, Swales, Brooks, McLeod, Foster, and Dove.

Following this came the consideration of the report of the committee appointed to consider the relations of the affiliated societies with the parent society, and the secretary announced the names of several societies which had withdrawn in consequence. This seems to us rather premature

action on their part, as they could not possibly foresee whether the report would be carried in its entirety or not; and, as a matter of fact, the meeting was not in the humour to accept certain portions of that report. On the question of privilege I, as set forth in the printed copy of the proposed amendments, there was a strong consensus of opinion against the proposed alteration, and it was the subject of several amendments. In its final form it now stands as follows:—"To appoint one of its bona-fide subscribers as a delegate to the executive committee of the National Chrysanthemum Society, with power to speak and vote on any subject except finance."

The other proposed amendments passed without much opposition, and after a very busy evening the proceedings closed with a vote of thanks to the chairman for presiding.

ANSWERS TO CORRESPONDENTS.

Spawn on Water Lilies (E. W.). The only thing if ducks and sea-gulls are hatched, is to have plenty of fish in the water—golden and brown carp or perch. We do not suffer here, though we have lots of Bulini or water snails. The eadlis-worm does a little harm sometimes.

Quick growing climber (G. S.). The quickest growing climber of a permanent character is the Virginia Creeper, which makes rapid headway. Of evergreens there is nothing better than one of the strongest growing Ivies, such as Hedera dentata. Climbing Roses, Honeysuckles, and Clematis may be recommended if flowering plants are needed, while the more vigorous Tropæolums will, when raised from seed, soon clothe an arch. H. P.

Pot soil (JANE). If you wish to grow good plants in pots you must not mind taking trouble to get proper soil. The very best material for pot plants generally consists of two-thirds fairly decayed turf loam from a pasture, broken to pieces but not too fine, the other third being composed of well-decayed leaf soil and old hothed manure, all well mixed, and added to it a fair proportion of sharp white sand to help keep the compost open and porous. A very little guano or even soot sprinkled in with the soil helps to improve it. Generally the final potting of plants should be quite firm.

Syringing plants in greenhouse (F. KEEP). There can be no correct temperature given concerning the syringing of plants. You may damp down one day with safety if the weather be warm; whereas the next may be wet, dull, or foggy, and no moisture whatever is needed in the way of syringing. You must use judgment. In our variable climate, especially from November to March, syringing or damping down must be governed by the weather. In wet weather little or no moisture is needed in a greenhouse—by which we mean a house at 15° to 50° or lower at night. On the other hand, in fine weather with increased temperature one may damp down more freely. So much depends also upon the house, its aspect, the plants grown, whether flowering plants or Ferns. The latter need more moisture at this time. Very little overhead syringing is needed, none in damp weather, or say when the thermometer is under 45° to 50°, but in a house with few pipes, or not sufficiently heated, use more moisture on the floor to counteract overheating of the small heating surface. In all cases where plants are damped over they should be dry before dusk.

Double digging and trenching of soil (F. KEEP). Double digging is much the same as trenching. When the land is trenched, a wide trench is taken out and the soil wheeled to the portion of the quarter where the work finishes; at the same time the land is thrown into ridges. Of course, it may also be thrown up very roughly for the weather to sweeten; that is the reason trenching is done in autumn and the early winter. In trenching, the depth varies according to the nature of the subsoil; if the latter be poor, it is best left below, but may be dug or loosened. If a trench 3 feet wide and 2 feet deep be started, the soil is wheeled away at the start as advised above, the next space of 3 feet in width is marked off, and this is then dug in sections and 2 feet deep and turned over on the land from whence the soil was wheeled away. This goes on until the work is complete and the last 2 feet space is filled in with the first soil taken out, and in the digging of trenching one may either place in ridges say one, two, or more in the 3-foot space, or turn up as roughly as possible. Some good cultivators advocate removal of the bottom soil even when poor, and if this be of a friable nature, doubtless it is a good plan, but poor, inert soil means much labour and tool to bring it into good condition.

TRADE NOTES.

MR. HARBOURTY WEBB and MR. FRANK WEBB, sons of Colonel William G. Webb, of Wordsley, Stourbridge, who, after holding commissions in the 1st South Staffordshire Volunteer Battalion, recently joined the Imperial Yeomanry, embarked for South Africa on Saturday. Their many friends in the Stourbridge district abound in good wishes for them, and in the hope for their safe and early return.

CATALOGUES RECEIVED.

Garden Seeds, John Russell, Richmond, Surrey.
Garden Seeds, John Sharpe & Sons, Borelney, Lincoln.
Fruit Trees, W. Horne, Peary Hill, Chffe, near Rochester.
Seeds, H. Corvean, Jurdia, Apia & Ascotatation, Georgia.
Begonias, Foliage Plants, Ac. Louis eta Houthe, Ghent, Belgium.
Florists' Flowers and Hardy Border Plants, John Forbes, Hawick, A. B.
Garden Seeds, Benjamin Sudda, 25, Watfworth Road London, S.E.

THE GARDEN.

No. 1471.—Vol. LVII.]

[FEBRUARY 17, 1900.

A GARDEN CITY.

IT is commonly the fashion to greet any scheme of an utopian nature, if not with open derision, with at least a thinly-veiled expression of something nearly akin to it.

But those who will take the trouble to think for themselves cannot but perceive how immensely the embodiment of such a scheme as the one proposed by the Garden City Association would be to the benefit of numberless dwellers in our terribly crowded London, who might thereby escape its many dangers.

Every human organisation has somewhere a limit of possible expansion, and it is plain to see that in the undue growth of a densely populated area so vast as that of this immense city, many of its related groups of inhabitants swell into unmanageable masses that have lost all useful proportion to one another. Thus many of its units, to say nothing of its whole groups, are a hindrance instead of a help to the community, and, as a machine whose parts are not well balanced and fitted, there arises first friction, then breakage, and finally collapse, so in the over-grown and ill-balanced human aggregation will surely come in their appointed sequence poverty, misery, and vicious and criminal waste of life.

To get the people back upon the land, to enable them to lead lives that shall be clean and wholesome, profitable, and enjoyable, surely a scheme with such an intention deserves approval and encouragement: the more so that its initiators bring it forward, not in a spirit of sentiment only, but as one that must necessarily be worked out upon a sound financial basis. Their aim is thus set forth in their circular:—

"Much may be done to stop the depopulation of our agricultural districts by providing for the countryman the same opportunities of improvement as are so bounteously provided for his city comrade, by relieving to some extent the monotony of country life, and by providing better markets for his produce, and consequently rendering his labour more profitable. But can this be done? Let us see. Consideration of the remedy advocated by the Garden City Association for the complementary problem of overcrowding, which confronts our municipal authorities, may help us somewhat. This association recognises that there are many thousands of men and women who would gladly leave the noise and smoke of London if they could get work and congenial surroundings in the country, and suggests that when improve-

ment schemes and clearances of insanitary areas are being carried into effect, it would be in the highest interests of the city and of the country if, instead of rebuilding within the city, accommodation were provided for these people on estates, scientifically planned in the form of new cities at some distance away in the country where population is so much needed. If these proposals are carried into effect, the result would be the introduction of organised communities into sparsely populated districts, where countrymen would be brought into close touch with the life and vivacity of the city without severing their connection with the soil, and new markets would be opened up at their very doors. But have we any reason for believing such a proposal feasible? When we consider how cities have sprung up where special attractions have been provided by Nature or the enterprise of man, we need not, I think, despair of building one or more garden cities, considering that the attractions to be provided are comfortable homes, plentiful supplies of wholesome food, and opportunities for enjoying fresh air, the green fields, and running brooks. Now, how would such an estate affect the agricultural industry in the neighbourhood? Clearly, the prices for produce and the demand for labour would increase, and since the citizens would, many of them, bring their own employments, and would not enter into competition with those already on the land, a decided filip would be given to the condition of agriculturists, and a strong encouragement would be given them to remain in the country."

In a part of the prospectus is a diagram showing a portion of a proposed city plan of circular figure, with a large central space of public park or garden. From this some main streets radiate, cutting wider circumferences of habitable zones. This may be only intended as a slight preliminary idea, and we hope it may be so, as for many reasons a rectangular figure in laying out buildings is better. Nothing is so puzzling or bewildering as continued zonal progression, whereas a town that has at least its greater features laid out on a rectangular plan has its form and aspects presented in the simplest manner, instead of the most complicated; for by some such simple device as four main streets named North, East, West and South, approximately leading towards the cardinal points, a kind of key to the plan of the whole town is given, and the veriest stranger may at once know where he is. We also think it a grave error to surround any

town, as shown in the diagram, with a girdle of manufactories, for with such an arrangement the smoke of some of them must always be carried into the city.

Among many other advantages the deliberate planning of such a town would give an opportunity of providing the inhabitants with a very great, and in England unusual, advantage, namely, that of a daily market for perishable articles of food, thereby enabling the consumer to buy direct from the producer, and of buying the food materials in the freshest possible condition.

The thought of such a garden city makes one dream of all sorts of delightful possibilities, especially if the site might be partly of already matured woodland, so that the public park should be of well-grown trees to begin with, and so that in other portions of the city groups or groves of mature forest trees might be retained and worked into the plan.

THE ROYAL HORTICULTURAL SOCIETY.

THE excellent report of the society which was presented to the Fellows at the annual meeting on Tuesday last has already received attention in *THE GARDEN*, and it is needless, therefore, to enter at length into its special features. But we must congratulate the president, council, and secretary upon the great advance the society has made of late years, and the promise of even greater development in the future. No one present at the meeting on Tuesday could help thinking of the gatherings on other occasions when the society was emerging from its slough of despond, and throwing off the trammellings of a foolish and unfortunate policy. All that is past now, and the speech of Sir Trevor Lawrence, with remarks made by other speakers, show that henceforth the society will realise its power in the land for accomplishing great work for practical and scientific horticulture.

Allusion was made to several interesting developments of the future—one to a school of horticulture, and another the new experimental garden. A right note was struck when Sir Trevor Lawrence said that the Royal Horticultural Society should be the means of educating young men in horticulture, and considered that the County Councils might co-operate in the same good work. Chiswick has become a school of practical gardening, and the examinations held yearly under the auspices of the society have proved an unbounded success. The council in the future intend to foster every development which tends to elevate the calling of gardening. Of the new garden, which we are pleased to know is to be freehold property, more will be written in the future. Arrange-

ments are still in progress, and therefore little is known at present.

Many other interesting remarks were made concerning the society's future, which seems as hopeful as one could wish, and our account of the annual meeting will give details of the business conducted on this occasion. We have expressed before our hearty good wishes for the welfare of the society, now sailing into smooth waters, and whilst we thus express ourselves we are echoing, we feel assured, the desire of all who have horticulture at heart in this land.

RIVIERA NOTES.

THERE is a well-marked winter-flowering form of *Iris germanica* on the Riviera. It comes into bloom in December, and is a very great delight to northern eyes, recalling as it does in the shortest days the purple iris glory of May. I really do not know any flower that so cheats one into the belief it is full spring-tide just when the short Riviera winter begins. A good sheaf of these rich purple sprays and a handful of *Marechal Niel* buds from a south wall make, with Carnations, Violets and *Mignonette*, a summer glow in both garden and room, and cheer the wintry air whenever a few chill and dull days do come.

This season has been colder than any of late years, because the cold rains and dull skies prevailed for six weeks quite a trial to gardens and friends, though there has been no severe frost or special storms at Nice. Carnations of the *Mégatière* type are certainly the most hardy and useful. The large and lovely rose-shaded *Princesse Alice de Monaco* is especially a winter-blooming Carnation. Perhaps owing to its being persistently called "*Mahmaison*" by the florists I have never seen it in England. Its summer blooms are quite out of character and useless, so it may not succeed under glass in winter. Certainly give me the good old Tea Rose *Schablikine* as a model winter Rose; it is as hardy as *Safrano* and infinitely better, in my eyes; its fresh deep rose colour is so much clearer than *Papa Gontier*, that I wonder how many folk can grow only the latter.

To find the housemaid sweeping the parquet floors with half-withered, sweet-scented *Geranium* leaves is a luxury appreciated by a sensitive nose, which recalls the stuffy smell of the familiar tea-leaf, so dear to English households, only to enjoy the more this fresh fragrance, especially if the morning sun be as bright as it should be.

How many subtle memories hang around some such sweet odour! To me a bunch of Parma Violets, surrounded by sweet *Geranium* leaves, is the most delightful scent I know, just because I first enjoyed it that sunny February day long ago, when kind old friends welcomed an invalid to these sunny shores, fresh from the fogs of Oxford. E. H. WOODALL.

Orchids were the only plants given certificates or awards of merit at the meeting of the Royal Horticultural Society on Tuesday.

SIR TREVOR LAWRENCE, Bart.

A PORTRAIT of Sir Trevor Lawrence, Bart., will interest our readers at this time, when the Royal Horticultural Society, of which he is president, is forming itself into an organisation stronger and more enterprising than during any period of its history. Sir Trevor is a keen gardener, and in his beautiful garden at Burford, Dorking, nestling at the foot of Box Hill, rare plants of all kinds, and Orchids in particular, are extensively grown. It is unnecessary to write more on this occasion. Sir Trevor Lawrence's name is well known wherever gardening is devotedly followed, and it is satisfactory to know that his name is now enrolled amongst the Victoria medalists.



SIR TREVOR LAWRENCE, BART.

(President of the Royal Horticultural Society.)

NEW AND RARE PLANTS.

LELIO-CATTELEYA BERTHE Fournier var. SLENDIDA.

THIS is a distinct and desirable hybrid, superior to the flowers certificated, from the late Major Mason's interesting collection, in August last. It is derived from the intercrossing of *Laelio-cattleya elegans* and *Cattleya Dowiana aurea*. With regard to the growth and shape of the flowers, it resembles the parents. The sepals and petals are of fine form and substance, the sepals 4 inches long

and deep rosy lilac, whilst the petals are deeper in colour, equal in length to the sepals, and 2 inches across. The finely-shaped lip is 2 inches broad, the whole of the front lobe deep crimson-purple, veined with a darker shade of colour. The side lobes are also crimson-purple, becoming lighter towards the base, where they are thickly covered with prominent yellow lines, as seen in the *C. Dowiana* parent. The plant carried a two-flowered raceme. It was awarded a first-class certificate at the Royal Horticultural Society's meeting, February 13 last. Exhibited and raised by M. Chas. Maron, Brunoy, France.

ODONTOGLOSSUM CRISPUM MUNDAYANUM.

This is one of the finest of the spotted forms of *O. crispum*. The flowers are each about $3\frac{1}{2}$ inches in diameter, with the segments of an even form. The sepals are each about 1 inch wide, white inside, with purple colouring on the exterior, and so reflected through that it gives the appearance of a rose suffusion on the interior. The whole of the central and basal areas are thickly covered with rich purple blotches. The petals are upwards of 1 inch broad, much fringed on the margins, white, suffused, as in the sepals, with rose. There is a large oval-shaped blotch of purple 1 inch long on the basal portions. The lip is upwards of 1 inch broad, white, with a large blotch of brown running down the centre, and numerous smaller brown spottings surrounding and on the yellow disc. A cut raceme of two flowers came from the collection of Mr. N. Cookson, Oakwood, Wylam-on-Tyne.

ROSE GARDEN.

HARDINESS OF TEA ROSES.

ONE mode is to work all our best and most fragrant Roses on the seedling Briar or Dog Rose. Thousands of Rose growers have such faith in the cure for tenderness and sterility of bloom, that they will grow no Roses of any sort, unless it be a few summer or climbing Roses, unless they be mounted on a strong seedling Dog Rose stock. So far, those who hold such views have at least the courage of their convictions, and are growing Tea Roses on an enormous area, and laid out for budding in lines many miles long.

To do the dog "rosarists" justice, it should in fairness be stated that the seedling "briarists" were often at bitter variance with those who preferred Briar cuttings, or suckers, or layers. So far the Dog Rose "argumentists" have the best of the argument and the run of the practice. The only rival stock in the Rose trade to-day that really competes in numbers, &c., are Dog Rose seedlings and the Briar cuttings, the same species, though the stocks are by no means identical.

There are differences in regard to the number, character and place of the roots between seedling and cutting Briar stock. Cuttings produce more and smaller roots and distribute them nearer to the surface than seedlings. The latter have fewer, larger, and more vertical roots than Briar cuttings. Of course these natural diversities may be modified by root pruning or other culture, but on a large scale this is seldom done. And if it were, both the seedling and the cutting Dog Rose develop a

strong tendency to revert to their natural modes of rooting.

EFFECT OF DEEP OR SHALLOW ROOTING AS TO THE HARDINESS OR TENDERNESS OF ROSES.—It is pretty certain that as many Roses are crippled and killed through their roots as through their tops. One more point should be noted here. The relation between the scion and stocks of Roses is not wholly one-sided. Each acts and re-acts on the other. The Dog Rose supplies all the food and blooming wants of the charming Tea Rose mounted on its crown. But in this new mission of nurturing the superior Rose, some, it may be much, of the original vigour of our native wild Dog Rose is tamed down into the moulding of our loveliest garden Roses into new forms, or painting them with richer beauty. If this be so—and it is—it may surely be also possible for Tea and other Roses to be made more hardy as well as stronger for their mount on the Dog Rose. This much is certain, that most of the successful growers of Tea Roses in Scotland grow their Teas on the Dog Rose stock, which may have proved a factor in their growing hardiness. In one rosetry alone, the Dalhousie Nursery, Broughty Ferry, Dundee, some four miles of beds 4 feet wide are annually sown with *Rosa canina* to supply their wants and those of their customers.

OWN-ROOT TEA AND OTHER ROSES.—Whatever weight should be attributed to these views as to seedling stocks of Dog Roses making the Roses grown on them approximate in absolute hardiness to the Dog Rose, the wider and longer one's experience in growing or showing Roses, the more one favours the more natural plan of growing all Roses on their own roots. Once this more rational plan is adopted, there will be found but little waste of time or material involved in the change. It has been said that it takes some five or six Rose buds to make a good cutting. But this objection to own-root Roses ignores the fact that Rose buds may be rooted in damp sand, soil, or Jadoo fibre almost as soon and as surely as in the growing tissues or sap of the Dog Briar Rose. The newly-rooted Briars may lose a day or two for lack of the nurturing sap of the Briar, but by surrounding it with genial conditions and potting in rich fostering soil, or a half-and-half of soil and manure or leaf-mould, the sand or soil-rooted bud may be stimulated to grow almost abreast of the Rose eye budded on the Dog Rose. In the case of the cutting, the gain in size and time of the plants goes far to compensate for the loss in individual buds. But as own-root Roses get more popular, Rose cuttings will become smaller.

SUCKERS.—These will more than compensate growers for any losses, real or imaginary, through the changes of fashion in the propagation of Tea and other Roses. A strong prejudice has sprung up against suckers, for the simple reason that such were in nine cases out of ten the shoots of wilding Briar or Dog Roses. But if every Tea or other Rose sucker is already a rooted Rose plant, the feeling against them would soon die out, and good suckers be gladly welcomed in all Rose beds, borders, groups in grass, in park, home shrubberies, plantations, &c.

OWN-ROOT ROSES OF EQUAL AND THE SAME HARDINESS THROUGHOUT. This is an immense advantage. We have noted the disease and death among Roses in many counties. Three-fourths or more among them have occurred at the point of union between the scion and stock, this through rooting Roses from buds or cuttings directly in the soil, and the main cause of disease and death vanishes with the budding and grafting.

THE DEEPER PLANTING OF OWN-ROOT ROSES AN EASY PLAN OF PROTECTING THEM FROM EXCESSIVE COLD.—There are few protectors so potent as 2 inches or 3 inches of soil round the root-stock or collars of Roses through exceptionally severe weather. Keep the soil over the roots round the collars of the Roses loose through frequent scarification or hoeing, and the layer of loose earth becomes practically impervious to the loss of terrestrial heat.

ALL THINGS POSSIBLE TO A ROSE BUSH OR TREL WITH A SOUND COLLAR AND HEALTHY ROOTS. Such Rose bushes of uniform quality throughout possess all the elements of safety and reproduction

within themselves. Zero frosts may cut them down to the ground level with stern severity, and yet do them little or no injury. Such mischief concentrates rather than exhausts the marvellous resources and capacities of Rose life and growth.

JACK FROST AS A PRUNER OF OUR ROSES.—Dean Hole was one of the first to tell rosarians to put their love into their Roses if they expected to gather perfect blooms. Jack's hand is chilly cold and his sharp frost-bite deep and cruel. When Jack is abroad on sharp, clear nights stealing the heat of our Roses from bank to sky, or flying throughout our Rose gardens on piercing March winds, he is the harshest, hardest Rose pruner in the world. With their collars and roots safe, their recuperative powers are beyond Jack's icy grip. The latter has furnished lessons in pruning for many modern growers. Yes, we prune Roses hard in love as well as in ignorance. By shaving off the tops of own-root Roses close to the ground-line in November or March or a little earlier or later, according to locality, we may augment the vitality and store up the resources of our Roses for a double or continuous harvest of beauty throughout the coming summer and autumn.

THE ROSE AS A HERBACEOUS PLANT.—We all know it as a deciduous or semi-green shrub. Assuming for a moment that last year's flowering stems and branches died down every year like a Delphinium, a herbaceous Peony, a tall Phlox, &c., should our double or manifold harvests of Rose bloom suffer loss or gain in number and beauty in consequence? Many years' experience forces one to the conclusion that such an entire change of habit and constitution among our Rose bushes would give us more and fresher blooms for a longer period.

TREATING THE BLOOMING PORTION OF ROSE WOOD AS ANNUALS.—The first result of hard or close pruning is a forest of shoots coming forth with the breath of spring. Supposing dwarf Tea or other Roses planted from 15 inches to 18 inches square, from three to five shoots would be sufficient to leave on each plant. The thinning of shoots should be done in April or May, after which the shoots will soon show flower. If the Roses are for show, disbud to the best bloom on each shoot, though the Roses look so much better if all the flowers that show are left; disbud the shoot 6 inches or 9 inches below the selected bloom, after cutting the first crops of blooms about 9 inches or 1 foot below the first flowers. The shoots under this concentrated mode of culture speedily break again into a second, or even third, harvest of blossom, as such concentrated culture and fairly liberal feeding and a loose surface flood of Roses with the renewed beauty and vigour of youth every year.

TWO STRINGS TO OUR BOW FOR HASTENING AND HEIGHTENING THE FLORIFEROUSNESS AND HARDINESS OF OUR ROSES. My second string runs in quite the opposite direction. Give Tea Roses their heads, and let them run up trees or scramble over houses, buildings, rocks, and enjoy and gather Roses when you may. The only pruning needed may be removal of exhausted shoots and the training out of killing crushes among the branches. There is plenty of room for these opposite systems of growing Roses in most gardens, and few of us can recall any garden that was over-rosed unless those of a few exhibitors who had strowed them into something like bullock-sheds. D. T. FISH.

TEA ROSES AND THEIR HARDINESS.

WHILE I do not profess any special knowledge of Roses, I may be allowed to remark that the different views expressed on this subject by your correspondents are not incompatible with each other. I have gone rather carefully into the question of the hardiness of the Tea Rose in Scotland, and have formed the opinion that the views taken by Mr. D. T. Fish are practically correct so far as they apply to the greater part of that portion of the kingdom Mr. Fish's knowledge of the Rose and its ways is wide enough to enable him to speak with some confidence upon it so far as regards a great part of England, and I confess to being surprised that Mr. Grahame does not seem to be

acquainted with him, by reputation at least. I have not had the pleasure of meeting Mr. Fish in person, but I know his work in the field of gardening literature.

I entirely agree with what he says regarding the hardiness of the Tea Rose in the east and north-east of Scotland. Those who have seen it in the Aberdeen nurseries cannot but express their concurrence with Mr. Fish in his references to this Rose as grown there. I may add that when I had the pleasure of visiting the Royal Gardens at Balmoral in 1897, Mr. J. M. Tromp, Her Majesty's gardener, told me that he thought the Tea Roses were fully hardier there than the Hybrid Perpetuals. I remember that I asked particularly if the Teas were hardy there. I have a note of some of the Roses, but as I made no inquiry as to which varieties were the hardiest, I will not venture to name any. I think that a Rose which stands the severity of the climate of that part of Deeside can hardly be considered tender in the ordinary sense of the word.

Yet, I think that there are some parts of Scotland where it needs some care. In close, sheltered gardens where there is not a free circulation of air it does not thrive so well, and I know some gardens which, to all appearance, are much more favourably situated and are in the south-west, where many plants are lost. I would not like to commit myself to the bare proposition that the Tea Rose is hardy everywhere in the United Kingdom, but I go the length of saying that it is much hardier than is generally supposed. S. ARNOTT.

Carschoorn, by Dumfriess, N.B.

GARDENING OF THE WEEK.

KITCHEN GARDEN.

GENERAL WORK.

THE heavy fall of snow in the southern part of the country will have put a stop to digging, manuring, and such work; on the other hand, it will have preserved tender growth of such plants as Lettuce, Endive, and the small spring Cabbages, the snow protecting from the cold north-east winds. During such weather other work may be taken in hand that will save time at the busy season. Pea and Bean stakes may be prepared and tied in bundles for use when required; labels may be prepared, also manures turned and soils mixed, and rubbish charred to wheel on the ground when required. Advantage should also be taken to note any defective drainage and remedy the same at an early opportunity.

FORCING DEPARTMENT.

There will now be more demand than formerly. Seakale should be introduced into its forcing quarters in quantities, according to the demand, every three weeks or oftener. The same applies to Rhubarb, as it is of much better quality when not forced too hard at the start. Asparagus will need to be grown near the light to get the growth nicely greened. Roots placed in a frame with a temperature of 60°, with 15° to 20° more at the roots, will give good shoots for cutting for three or four weeks. Fresh material should be placed in heat at least every three weeks to keep up a regular supply. French Beans may now be sown, and with a certainty of a fair return if the grower can give a liberal temperature, say 65° to 70° at night, with a rise by day. Larger pots may now be used

7-inch or 8-inch and the soil should be of fairly light character with ample drainage. I like to fill the pots to within 2 inches of the rim, as I find the top dressings needed are best given in the shape of fertilisers or liquid manure. Avoid overcrowding; five plants are ample in an 8-inch pot and little moisture is needed till the plant shows well above the soil. Cucumbers should now be growing freely. Maintain a genial temperature of at least 65° at night and 40° more by day, and afford ample moisture in all parts of the house, syringing three

or four times daily; also cover the glass at night-tall to avoid having to overheat the hot-water pipes. It is well to fruit sparingly at the start, so that the plants continue to strengthen. As growth increases feed freely and top-dress the roots every fortnight with good loamy soil mixed with a little bone-meal or Thompson's manure.

TOMATOES.

Seed sown early in the year will now be large enough to pot off, and few things need more careful handling. The seedlings are best potted up in the house where they are growing, and a rich but light soil employed at this stage, placing the plants near the light and in a genial temperature till new root growth is made. Plants sown last autumn may now be planted out in their fruiting quarters or potted on. The latter is advised to get early fruit, but the quantity does not equal that borne on those planted out. Seed may now be sown for what is termed the main crop supply from July to September, and also for plants for the open ground, but these latter when once the roots reach the sides of the pots after their first shift—should be grown near the glass in frames to prevent drawing, and, failing frame room, I would defer sowing for three weeks. For open-air fruit our best Tomato last year was Sutton's Earliest of All, and the Conference, though not large, is a splendid cropper grown thus.

FRAME VEGETABLES.

Under this heading must be mentioned such useful roots as Carrots, Turnips, and Radishes. The last need so few cultural directions that I will take them first, and here let me advise giving them a separate space, as I find that when sown to precede Carrots they do that crop much harm. There is no lack of forcing varieties of Radishes, Sutton's Earliest of All will mature in four or five weeks after the seeds have germinated, and having such a very small leaf growth may be grown much closer than others. Crimson and Carmine Forcing are both excellent; also the French Breakfast, one of the best of this type. No matter what variety is grown, it is well to have a little bottom-heat at this season of the year, as growth is then much quicker. We use manure and leaves mixed, but with hot-water pipes as the heating agency beware of dryness of soil. This is fatal to good quality, and the temperature of the pit or frame should not exceed 60° in cold weather, with ample ventilation on all favourable occasions. G. WYTHES.

FRUIT GARDEN.

MELONS.

As soon as plants raised from seed sown during last month have attained a suitable size for planting, let it be done. They are sun and heat-loving plants; therefore the house in which to plant them, if the best results are to be obtained, must receive full benefit from the sun and be well provided with hot-water piping. Bottom heat from hot-water pipes is essential, or well-sweetened hotbed material, such as leaves and stable manure. I always think the fruit is of better flavour when grown over the latter. Suitable soil is heavy loam, cut from pasture land 4 inches to 6 inches in thickness, freshly cut, or which has been previously stacked for a time. I have used both many times, but cannot say which is the more suitable. By using it freshly cut, the labour of carting from the soil heap is saved.

Soil to the depth of 6 inches is sufficient if placed on a hotbed, but if on timber or flat stones over a dry hot-air chamber, 8 inches or 9 inches is more suitable to their requirements. The soil when being made up should be moderately moist, and made as firm as possible. Let two days intervene between getting in the soil and planting, so as to give the bed time to warm. Suitable distances to plant are 3 feet apart and with two rows of plants opposite each other. If the length of latter is 6 feet and upwards, plant on small hillocks, leaving the seed leaves about 1 inch free above. Place a stick to each plant, with one end in the soil and the other tied to the trellis; let there be not less than 1 foot of space between the trellis and glass, whether formed of strained wire, or portable hurdles made of 1 inch flat iron and $\frac{1}{2}$ inch rod iron. The latter

system is convenient when all the head room possible is required for plants after the Melons are ripe. After planting give an application of tepid water and a loose tie of raffia to each plant. Suitable temperatures are from 65° to 70° by night, 75° in the day from fire-heat, with a rise of 10° to 15° from the sun. Maintain a sweet growing atmosphere, not too humid, by damping all surfaces by the syringe early in the afternoon during fine days. In the early stages not much ventilation will be required, and none at all if the temperature is not likely to exceed 90°; as the season advances more will be required, when the first chink may be put on at 80° at the apex of the house.

Sow seeds for a successional crop, and use 5-inch pots filled to within 1 inch of the top with sifted loam. Scatter eight to ten seeds in each, cover with soil to the depth of $\frac{1}{2}$ inch, afford water through a rose, and protect with a piece of glass to keep away mice. A light position in the Melon or Cucumber house is suitable for them. Pot off after the formation of the first natural leaf.

CUCUMBERS.

Plant the earliest seedlings and sow more seed if a further supply be desired. The soil must be light and open and made up of three parts loam to one of old Mushroom bed manure. If the latter is not at command, use horse droppings, sweetened previously by lying in a shed and being occasionally turned. Half a bushel of soil is ample for each plant at the time of planting, to be added to afterwards in small quantities as often as it becomes permeated with roots; water liberally throughout the season from the time the roots have taken hold of the soil, and maintain a moist atmosphere by syringing once or twice daily. The temperatures given for Melons are amenable to Cucumbers.

PROPAGATING VINES.

Put in eyes if not already done of varieties according to requirements. If for forcing, Black Hamburgh is still the best, and Foster's Seedling the most satisfactory. The best eyes are those from the base of side shoot prunings. Prepare them by cutting the wood through 1 inch below the eye and $\frac{1}{2}$ inch above, insert them down to the eye in loam pressed firmly into 3-inch pots, plunge these in bottom-heat in the Melon or Cucumber house, and water as often afterwards as the soil shows signs of dryness. G. NORMAN.

The Gardens, Hatfield House, Herts.

INDOOR GARDEN.

GLOXINIAS AND ACHIMENES.

EARLY batches may now be started, and seeds of the former may be sown, dealing with the seeds in the way recommended in a former note for Streptocarpus and Saintpaulias. Achimenes lend themselves readily to treatment under which they flower in successional batches, so that to cover a long season we may commence now with a portion of the tubers, dealing with the remainder at intervals up to the end of April. It is best to start the tubers, after shaking them free from the old soil, in boxes or pans, in which they may be inserted thickly in light sandy soil, transferring them to the pots or baskets in which they are to be flowered after they have made a couple of inches of growth. Water must be cautiously used to commence with, gradually increasing the supply after growth begins. The soil for final potting should be equal portions of peat, leaf-mould, and sandy loam, adding sand and decayed cow manure freely. From the start until the plants begin to flower they should be grown in a stove temperature; afterwards, cooler and more airy structures suit them very well. Gloxinias, too, may be grown in successional batches, but are never seen in better condition than they reach after being started just about this season, as when the tubers are kept dormant till late they appear to lose something of their vitality, so that it is best to raise seedlings for late work. A compost similar to that for the Achimenes is suitable for these plants, and a heavy sprinkling of silver sand should enclose the tuber, which may be potted with its crown just a little way beneath the surface soil. Use the soil in a fairly moist state, and avoid giving more water until growth begins. Look out sharply from the first

for the tiny thrips which plague these and nearly allied plants, for they mean ruin to any plant on which they are allowed to develop. Keep the house at about 65° at night, and syringe freely with tepid water on the surface and round the pots.

CUTTINGS.

of various stove plants, Crotons, Dracaenas, Panax Victoria, Acalyphas, and the like, may now be put in, as they will strike readily in the propagating boxes, which should at this time of the year be kept filled with young stock to replace leggy and worn-out specimens. Dracaenas of many varieties may be easily raised from "toes" or from stem cuttings, these being made from plants that can be spared. Crotons of strong growth can be best raised by "ringing" the tops and mossing them up till roots form in the moss. This method is especially suited for those varieties with very long leaves, as these are difficult to place in narrow quarters without injury.

REPOTTING PALMS.

Those which require potting had better now be overhauled, but it will be found in many cases unnecessary to give the plants a larger-sized pot, for really good plants may be grown in quite small receptacles if they are well treated in other ways, and they are so much more useful for house work when the pots are small. It is often found that Palms grown in pots larger than their needs demand get into a sickly state from the soil becoming sour. Fibrous peat and fibrous loam in equal proportions and mixed freely with sand form a good compost for most Palms; the pots should be well drained, so that water may be given freely without injury, and the roots should be as little as possible cut or broken in repotting. J. C. TALLACK.

Shipley Hall Gardens, Derby.

PUBLIC PARKS.

ACREAGE OF SOME LONDON PARKS AND RECREATION GROUNDS.

AT a recent meeting of the Ealing Gardeners' Society, Mr. Gingell read a paper upon "Parks and Gardens," and gave the following interesting statistics. Speaking of London, he said: Boston has a common, and Chicago has two fine parks in their centres, but there is no other town on either side of the ocean which can show such a list of public open spaces entirely surrounded with houses, and over ten acres in extent, equal in number and in size to that of the following parks and gardens situated within our own metropolis:

	ACRES.		ACRES.
Battersea Park	198	London Fields	26
Blackheath	267	Meath Gardens	11
Bishops Park	17	Myatt's Gardens	14
Clapham Common	229	Paddington Recreation Ground	25
Clissold Park	53	Peckham Rye and Park	113
Deptford Park	12	Ravenscourt Park	34
Dulwich Park	72	Regent's Park	473
Finchley Park	115	South Hackney Common	29
Greenwich Park	185	Southwark Park	63
Green Park	54	St. James's Park	93
Hackney Downs	41	Thames Embankment Gardens	14
Highbury Park	27	Victoria Park	244
Hilly Fields	43	Waterloo Park	30
Hyde Park	351		
Kensington Park	19		
Kensington Gardens	275		

Those in the following list are partly surrounded by houses:—

	ACRES.		ACRES.
Acton Green	12	Ladywell Recreation Ground	47
Acton Recreation Ground	25	Maryon Park	12
Back Common	12	North Mill Field	23
Barnes Common	100	Petersham Park	111
Bostal Heath and Woods	111	Plumstead Common	190
Brookfield Park	78	Richmond Green	10
Bushy Park	994	Richmond Park	2358
Ealing Common and Green	50	Royal Victoria Gardens	10
Ealing Lammas Lands	25	South Mill Field	26
Eel Brook Common	11	Streatham Common	66
Epping Forest	5348	Sydenham Recreation Ground	17
Hackney Marshes	335	Tooting Beck and Grave-ney Common	207
Hampstead Heath	595	Wandsworth Common	183
Hampton Court Park	752	West Ham Park	80
Highgate Woods	79	Wimbledon Common	1412
Kew Gardens	246	Wormwood Scrubs	193
Kew Green	11		
Kilburn Park	20		

(Approximately 17,000 acres.)

WALL GARDENS. II.

THE beauty that the Divine Artist bestows with so lavish a hand upon the world may, in some lesser measure, be reproduced by man about his own dwelling-place. Instead of naked, blinding walls, why not cultivate rock plants so as to mitigate the displeasing bareness of the stone, and why not, in the many cases where it might be done, do away with the barren look by having flowers and foliage? Architects will tell you that it is prejudicial to the well-being of the walls, a statement which admits of some doubt. But in any case, even admitting this to be a fact, is it not better to put up with a little injury in this direction in order to gain an abundance of wholesome joy of mind and eye?

I remember to this day how deep an impression I received from the sight of an artificial rock wall covered with plants and flowers in M. Edmond Boissier's far-famed botanic garden at Vullyres-sous-Rance (*Suisse Romande*). I was then only ten or twelve years of age, but my mind retains the remembrance of that flowery wall as clearly imaged as on the day when I first saw and admired it, with its large rosettes of *Saxifraga longifolia* more than 10 inches across, and its tufts of *Haberlea* from Mount Rhodope.

It was, and still is, a wonder, for the plants have survived their illustrious collector. And yet how little has the example of this immortal botanist been followed, for, except in the case of some veteran plant growers and of the few people who love what is beautiful and pictorial, there are but a small number who care for old walls enlivened with flowering plants. Alphonse Karr, at St. Raphael, preached in vain by his writings and by his example; there were none to understand his teaching. Still, during the last few years the taste for alpine and rock plants has spread, the ornamentation of rough walls has begun, and the importance of this way of gardening is now acknowledged. We learn from Nature that there is a whole range of species that actually prefer to be placed vertically in rockwork, the better to thrust in their roots, and there are even some that will only live and thrive in such conditions.

One often wonders how these pretty plants can live, that drive their roots deep into the clefts of the barren rocks without an atom of soil or humus for their organic structure to feed upon. To account for this one must learn something about the part that stones have to play in Nature's economy, for it is one of the largest and most important. All stone, hard or soft, or of whatever nature it may be, is porous and absorbs water by capillary attraction. The rock acts exactly as does the lump of sugar when one of its surfaces touches water and it fills itself with the liquid. During the seasons of rain or fog or damp the rocks act as sponges and absorb water by their sides till they are completely saturated; the more porous the rock, the more quickly is the absorption effected. The structure of the stone comprises a quantity, more or less numerous, of minute fissures that mineralogists know as *diachuses*. They are formed imperceptibly under the influence of frost and thaw in the very heart of the hardest stones, producing in them important effects as much from the point of view of the disintegration of mountains as of that of their property of sucking in water, in order to give it out again at the foot of the rocky masses. These *diachuses* constitute so many canals, which conduct and carry off the water which is absorbed by the innumerable pores which compose the internal texture of the stone; they are larger and more numerous in calcareous rocks than in granitic, which accounts

for the fact that limestone vegetation is more interesting and varied than that of granite. Now, these rocks soaked with water are reservoirs of coolness and moisture that Nature uses with due circumspection for watering and irrigation. Copious waters often spout from the heart of the most arid rocks, and it is at the foot of the mountain whose craggy head is wholly barren that the richest springs are found. It is also in the heaps of *Schists*, the barren-looking *lappin*; that the most delicate

Thus we see that in Nature a rock-mass plays the part of a sponge; it absorbs superabundant moisture and gives it off to the atmosphere or to the roots of plants—often, indeed, to the atmosphere through the medium of the rock-loving plants, and just as the need makes itself felt. This is the reason why so many delicate plants succeed perfectly when we grow them in rocky crevices, whereas if we tried to cultivate them otherwise they would be burnt up by the rays of the sun.



WALL PLANTS IN THE JARDIN D'ACCLIMATION, GENEVA. VELLA SPINOSA, SAXIFRAGA LONGIFOLIA, EBENUS, PHYTEUMA COSMOSUM, ETC.

and often the most brilliant flora is displayed. The roots ramble far through the heaped-up pebbles or into the deepest fissures in search of the coolness and life that they communicate to the organs spread out upon the surface. That surface itself gives off a constant vapour which surrounds the tender foliage and the dainty corollas, protecting them with a delicate veil from the sun's scorching rays. It is also this that allows the tender Fern fronds to spread over the rocks in full sunshine, for it is well known how much these plants fear exposure to dry air.

This being so, it shows how much interest is attached to the cultivation of plants in walls, for not only are they delightfully pictorial when so placed, but it also allows us to grow a whole range of delicate plants that are certain to die if they are given a position vertical with their axis (horizontal with their surface), on account of decay, brought about by water stagnating among their crowded branches and favouring harmful parasitical growths. Some walls so covered with flowering plants form true botanical gardens—won-

drons, ever changing pictures that one examines and admires with even more enthusiasm than those of the greatest artists, for they are painted by the Great Artist Himself, the Master whose work is above all others.

Now the means whereby these delightful results may be obtained is within the reach of all. It is only needful to secure that the wall shall be thick enough to allow the moisture to condense within it. The retaining walls are the best, because the soil that is supported by one of their sides stores a constant supply of moisture in immediate contact with them. In such a wall you have only to make a little opening, unless you find one ready, and to introduce the roots of your plant, and to fix it in position with a little Moss or Sphagnum, or a little rather stiff mould; then you make it all firm by means of a few small angular stones that you can even secure with cement if it should seem desirable. Often it does quite well to sow the seeds of such plants as are easily raised from seed, such as *Erimus*, *Linaria alpina*, &c.; these you introduce into the fissures by means of some rather stiff soil with which the seeds have been incorporated. In a very few years you will have a wall so superbly bellflowered, that it will draw enthusiastic expressions of admiration both from yourself and from your friends. In our own case it is a simple greenhouse wall that has been furnished, both inside and out, with an abundant variety of rock plants.

The views of the wall, kindly taken by Miss Willmott, give a good idea of it. We grow in it a number of delicate things: *Androsace imbricata*, *helvetica*, and *pyrenaica*, *Antirrhinum glutinosum* and *sempervirens*, many *Primulas* from the Tyrol, *Edraianthus*, *Jankaea Hel-dreichi*, *Haberlea*, *Vella spinosa*, *Campyloclatone excisa*, *clatinoides*, *car-niola*, *Ra'neri*, *ceusis*, *Zoysi*, *mirabilis*, *serotina*; *Scelopendrium Hemionitis*, &c. It is a delightful manner of making use of old walls, and the only way of cultivating a certain number of difficult plants.

Geneva. H. CORREVOX.

COLD WEATHER NOTES.

FIRES IN THE FROST.

It is always satisfactory when one has to light a fire in order to get rid of those aggregations of dead roots and rubbish which seem for ever accumulating in all gardens. It is an excuse for a bonfire, for which I retain the most childish affection, and which never seems to wear a more familiarly endearing aspect than upon the afternoon of a winter's day. The sharp smell of burning stuff; the red eye of flame in the heap; the smoke rolling slowly and heavily away; the sudden crackling of a dry stick resounding in the frosty air—all these bring with them trains of association, which have been accumulating much longer, I suspect, than the course of any one single lifetime. Reminiscence, who can tell, of that remote day when the human hearth was for the most part not an indoor, but an outdoor one.

A friend of mine has improved upon such casual burnings by having what may be called a permanent bonfire in her grounds, and I wonder more people, who love their gardens, and spend whole winters in the country, do not adopt the plan. That in one respect it is an inferior bonfire I am free to admit, for its main constituents are not leaves and sticks, but

anthracite coal. To make amends, it burns away merrily night and day, only needing to be replenished, I am assured, once in twenty-four hours. Her garden lies in the very middle of a big Pine wood, and the fire has its home in an open lodge, a *gazebo*, supported by Larch poles, without door or window, but made possible to sit in in cold weather, by being match-boarded on three sides, the south one alone being widely open. Until one has actually tried, it is difficult to believe how comfortable one can be in such a spot even on a very frosty evening; both feet extended to the blaze, and a rug tucked round to keep off stray draughts. As daylight wanes the red glow increases, lighting up the big Pine trunks, and awakening in one's mind vagrant suggestions of camp fires and forest settlements,

produced by any really strong atmospheric variation. Crackling grass and glittering ice-bound trees awaken one set of suggestions. Roaring winds, a drenched earth, and inky clouds tumbling wildly over the sky, arouse quite others. Even things inside the garden, plants that have been perhaps put there by one's own hands; clumps, say, of Bamboos and reedy grasses, *Arundo donax* and the like, assume suddenly new and slightly savage aspects when one sees them sweeping to and fro, or buckling like so many fishing-rods under the lash of a sudden tempest. The commonplace is not absolutely unescapeable, though it often seems as if it were. There are wider, freer notes, which only need awakening to stir and thrill us with their presence. The imagination leaps to meet them, and feels them to be its right. For we are all heirs to a large inheritance, though we are apt, as a rule, to be forgetful of the fact.

EMILY LAWLESS.

Hazlethatch, Gomshall, Surrey.

"IN A SMALL WAY."

NOTES FROM AN OBLONG GARDEN.

ONE of those delectable gardens, enclosing a large acreage, where knowledge and wealth have coaxed Nature into every manifestation of beauty of which she is capable, is my own little private dream of a heavenly mansion. Meanwhile I am doing the best I can with an oblong in a country town! Fortunately, it is on a hill, and out of the way of smoke and dust, having the inestimable advantage of being quite away from a road; still, it is painfully enclosed as to its two long sides with walls of like oblongs belonging to the next-door houses. And in most of these houses there are cats, which seem to prefer a garden where the owner is enthusiastic to one where, as on my left side, the house is empty and the garden in the perfunctory charge of the jobbing gardener who lives opposite. This morning, as I went round my oblong, I found a dear pussy had drawn diagrams all through and over a group of Cottage Maid Tulips, which are planted in front of the bit of rockery running up to the sloping roof of a little tool-house in the sunny right-hand corner against the house. On this rockery, which is made in little terraces and of crumbly yellow sandstone, I have planted all the enervated Saxifrages I could get hold of in the neighbourhood, and they seem very happy. I was tempted by some delightful lists of many varieties of both enervated and mossy Saxifrages and Sempervivums, intending to plant the mossy ones in another little rockery I have in partial shade. But luckily I consulted a Scotch friend who is clever in all ways horticultural, though chiefly interested in *Carti*. "Down here in the west," he said, "some of the most beautiful Saxifrages which succeed very well up north disappear the first winter. They don't mind frost, or the snow which in their native haunts covers them up all through the winter, but they can't stand our mild, damp, muggy winters." After this I confined my ambitions to the few he had tried and found willing, and I am glad to say one of them was the Spider-web Sempervivum which is spreading its little rosettes bravely, but at this time of the year is webless. Some big tufts of *Saxifraga hypnoides*, which seems to be very cheap, judging by the mass of it I got for 6d., I pulled into little bits in October, and dibbled out over a clump of



GYPSOPHILA REPENS IN THE WALL OF THE GARDEN, D'ACCLIMATATION, GENEVA.

while at other times it has the practical advantage of making many garden operations possible which, without such a speedy refuge to fly to, would in this chill-evoking climate of ours scarce be practicable.

It is odd what minute deviations from the every day stir the mind, and help it to shake off that dull crust of routine which it ought to be the aim of all of us to try and get rid of. It is one of the few merits, I think, of winter that places, at other times tame to flatness, seem in fierce or exceptionally cold weather to revert to an older and a wilder condition. Snow admittedly recreates everything—our most familiar paths and shrubberies, may, our very stable runnels, growing quite arctic and hyperborean-looking under its disguise. Apart from snow something of the same impression is

Watsonias, which in this mild climate will do very well in the border all winter if they have a little protection of some kind. Down each side of my oblong I have a wide border, shady one side and sunny the other: along each of these is a gravel path in the most approved plan of the builder, who lays out the garden with as little thought as possible, and in the middle is a rather nice long lawn with an Apple tree at each corner. I bless the planter of these four trees. They are always charming, whether loaded with bloom, with red and green Apples, or leafless, for one is a hoary veteran, gnarled and lichened in the most picturesque way, and in spite of age produced a vast crop of excellent Blenheim Oranges last year, while another, his opposite neighbour, is a cobby little Codlin just old enough to bear plentifully. The two at the other end are very old and not profitable. One, I fancy, is a Tom Putt, and bears very lovely bright red fruit, which was hard and wormy last year; the other only looked pretty and bore little but pink blossom. I put grease-bands round them in September, and on taking them off the other day, found them perfectly crusted with divers insects, which the robins, hedge sparrows and tits, who abound here, ate up immediately off the bands on the ground. I shall put these bands back in June to trap the codlin moth and confiscate its eggs, but I am too fond of the beauty of silver-lichen and green moss to smother the trunks and branches in powdered slaked lime or cover them with a wash of the same and paraffin, as I suppose I ought to do if I were a proper utility gardener. I have hung suet in the branches, and the ties of three sorts hang about and make our garden a *rendezvous*, while numbers of other birds, even a tree creeper, who is so shy, delight in the trees, and seem to find endless employment in picking them over.

There is always something to do, even in an oblong, and the boy who helps me is kept hard at work rolling the lawn and paths whenever the weather is the least fine. To-day I have had a bit of the shady border dug out 5 feet deep, then the soil at the bottom of the excavation was loosened, and a little old hotbed manure worked in with some good loam: over this 2 feet of peat, loam and sand; and when they arrive, a quantity of *Lilium pardalinum* will be planted here, with some Trimardeau Pansies, sown last August close by and pricked out in March, as carpeting. The border here gets a couple of hours' sun, from two to four, and I think these lovely tiger-like Lilies with their spotted yellow, green-tipped blooms, which remind one of that rather misnamed stove plant, *Gloriosa superba* (which is so much less glorious, being so much smaller than they), ought to do well. The Tiger Lilies are of all the autumn flowers the most splendid.

Bath.

M. L. W.

GARDEN DESTROYERS.

GARDEN PESTS: THEIR DESTRUCTION.

COOPERATION AMONGST GARDENERS.

It has often occurred to me that the destruction of garden pests, whether insect or fungus, particularly where gardens belonging to different proprietors join one another, would be rendered much easier if there were a certain amount of co-operation among the latter in this respect. What I would suggest is that every owner of a garden in a given district should agree together to use in the destruction of pests the same means and at the same time of year, for it is certain that most pests are able to travel considerable distances with the greatest ease. Take for instance such a common pest as the Goose-

tree to another during a high wind on pieces of the cotton-like substance that they secrete so freely. Even scale insects, the females of which are never winged, and so are incapable of moving from one plant to another unless these touch at some point, may, while in the egg state, be carried about by the wind, as the eggs are small and laid loosely under the body of the female. Thus it is very necessary, if our gardens are to be kept free from insect pests, that we must be sure that our neighbours are doing their best to keep theirs free. It is exactly the same with fungi, except that the only means for their dispersal is by their spores, which are so easily carried about by the wind, as they are so small and light, and in rarer cases on the clothes of persons or on the feet of birds. They are, as a rule, produced in enormous quantities, in many cases each little pustule formed on a leaf producing hundreds of spores. Everyone knows that when a ripe puffball is touched a



SAPONARIA OCYMOIDES, Gypsophila repens, ETC., IN A WALL IN THE JARDIN D'ACCLIMATATION, GENEVA.

berry sawfly, whose grubs do so much injury to the foliage of Gooseberry bushes. The sawflies can easily fly from one garden to another, so that however careful A may be in endeavouring to destroy this pest, and perhaps has succeeded in stamping it out on his premises, yet if his neighbour B is careless in this matter, A's bushes will in all probability be infested by grubs hatched from eggs laid by sawflies bred on B's domain.

It seems to be a law of Nature that every kind of animal or plant should be provided with means of migration or dispersal, otherwise there would be a great risk at times of the species becoming extinct through failure of their food, or from some other cause. Nearly all insects are winged, or some other means are provided for their transport from one plant to another. In the case of aphides, though the majority of individuals are wingless, some, particularly in the spring and autumn, are winged; the American blight, or woolly aphis, besides certain individuals which, being winged, are liable, also their eggs, to be carried from one

quantity of a dust-like material comes from it, and that you may knock it about for some time before you can get it all out. All this smoke-like dust is composed of spores, each of which is so small that it is quite invisible to the naked eye. It is much the same with many of the smaller fungi, so that the air at times is full of these minute spores, which may be carried for long distances. It is very fortunate, however, that only a very small number comparatively ever find a suitable locality in which they can germinate and become fungi, but it is quite certain that, as in the case of insects, if a gardener wishes to keep his crops free from fungoid pests, he must have neighbours that are of the same mind in this respect. It seems to me that it is a matter that might well be taken up by local horticultural societies. Instructions might be printed and given to each member, showing the best means of combating the various pests, and each member should promise when his crops are attacked, however slightly, to use the appropriate remedies at the proper time. Anyone that does

not belong to the society, but possesses a garden in the district, should be pressed to use the same remedies, and everything should be done to render it easy for him to do so. If there were, as probably there would be, several persons who might not be able to purchase knapsack sprayers or other spraying machines, the society might do so, and lend or hire them out to the members; and though at first sight such expenditure might not appear to come within the province of a horticultural society, on second thoughts it will be seen that it will conduce greatly to the quality and abundance of the fruit, flowers, or vegetables grown by the members, and so cannot be otherwise than a proper disposal of the funds of the society. I should much like to see this idea carried out by some enterprising horticulturists, and I feel certain that it would soon prove to be such a success that it would be commonly adopted. G. S. SANDERS.

THE FLOWER GARDEN.

THE HARDY PHYSALIS AS A POT PLANT.

THE Physalises were noted and illustrated at p. 28, and as a grower's views may be interesting, I find the newer variety, P. Franchetti, the one most admired, but, like other plants, it well repays good culture. As regards its growth, the first year from seed it is not a great success, but replanted in good soil with ample room to develop, it is a beautiful decorative object. There are few plants more telling in the autumn in a herbaceous border, and they are useful, as described at p. 28, for decorative work. These plants may be made to answer a better purpose if potted up for cool-house decoration. For this purpose the strong roots should be lifted now, potted up, and the shoots as they appear restricted to half a dozen of the strongest. Plunge the pots during the summer, and by the early autumn the plants will be excellent, and, as they last so long, are most useful. I do not advise seedlings in pots the first year of growth; they are too weak, but these answer well for potting up the second year, and as the plants increase so rapidly at the roots, stock is soon obtained. The plants during growth at any stage need ample moisture and should not be crowded.

G. WYTHES.

SCILLA SIBIRICA ALBA.

WHEN in the spring of 1892 it became known that the stock of the pure white *Scilla sibirica* was about to be offered for sale at one of the public bulb auctions which are regularly held in the Dutch bulb-growing districts every spring, the event was considered to be one of much importance. The blue Siberian Squill had for long been grown in large quantities by the Dutch bulb growers, and for its free-flowering qualities and bright blue colour had always found a ready and ever-increasing sale. Its value as an early-flowering forcing bulb, the happy colour effect it creates in the spring garden, either when grown in masses, by itself, or associated with other early-flowering shrubs or bulbs, all tend to make this Squill one of the most popular of the Dutch bulbs. Like the Hyacinth, it can be grown indoors in quite a number of ways, and it even lends itself to cultivation in water in glasses of small size made specially to suit the purpose, a way of growing this bulb which finds many admirers in Germany. No wonder then that a pure white-flowered sport of such a useful bulb was eagerly bought when offered for sale. This white variety was first found about sixteen years ago among a lot of two year seedling bulbs of the ordinary blue-flowered *Scilla sibirica*. A workman on sorting the bulbs in the autumn for planting chanced to observe one with a satiny white skin. The bulbs of the type being of a deep purplish-black colour, it was at once surmised that this albino bulb would also produce white flowers. The pleasure of the owner (the late Mr. Groenewegen) was great when in the spring this founding variety turned out to be a snowy white-flowered variety of great beauty. Unlike many

other cultural varieties of bulbous plants, the white Squill reproduces itself perfectly true from seed, and by this means gradually a stock was being worked up. In consequence of the death of Mr. Groenewegen the bulbs were put up to auction, and the whole lot, consisting of some hundreds of full size and yearling bulbs, realised about £100—a fairly large sum, it must be admitted. The bulbs were bought by several of the best Dutch bulb growers, who multiplied them as fast as they could, so that now they can already be had at a very cheap rate. Grown out of doors, the white of the flowers, though pure as snow, is apt to get discoloured by rain or spring frosts, and it is, therefore, best to select a somewhat sheltered spot for this dainty bloom. Under glass, however, the white of the flower is exceedingly pure, contrasting well with the luxuriant deep green of the foliage. In order to get the best results in growing this pretty Squill in pots, the bulbs should be planted quite early; they can then easily be had in flower very early. Later planted bulbs when forced not only have a somewhat stunted growth, but they also come into bloom very unevenly. A well-flowered batch of it makes a really beautiful group in any conservatory. JOHN HOOG.

Haarlem, Holland.

CROCUS IMPERATI.

A REFERENCE to this charming Crocus (p. 53) recalls a bright day in February last when we unexpectedly came upon it in one of its native habitats. A little bit of rocky woodland, nestling under the shelter of the towering walls of the Medicean fortress of Siena invited a hunt for sweet blue Violets, nowhere sweeter or bluer than in Italy. Amongst them, piercing through the withered grass of the last season and partly shaded by the leafless boughs of the low Oak scrub, were numbers of our old garden favourite, wide opening their pretty buff and lilac flowers in the sunshine. These were growing, not in clumps, but dotted singly or in twos or threes over the broken ground. To-day (Jan. 25), since this note was begun, a handful of the same lovely little harbinger of spring, brought from the gardens of the Villa Pamfili Doria, has testified to its still earlier appearance about Rome. Many years have passed since Crocus Imperati used to be reckoned one of the earliest ornaments of our unheated greenhouse, for which purpose I can heartily recommend it. It was never tried out of doors in our garden, and it is good news to learn that it is hardy enough to take care of itself in the borders. The flowers of the wild plant, as we find it in Italy, are seldom so large as they used to be under cultivation, but it is identical in all other respects, and here and there specimens equally fine reward a careful search. ROME. K. L. D.

GALANTHUS IMPERATI ATKINSH.

WERE I asked the names of the best dozen Snowdrops I had grown or seen, I should have no hesitation in including among the number the fine variety of *Galanthus imperati* which bears the name of the late Mr. Atkins, of Painswick. Its bold and beautiful flowers are remarkably fine, and it proves a good grower in this garden. In his paper on the *Galanthus*, read at the meeting of the Royal Horticultural Society in March, 1891, Mr. F. W. Burbidge gives some interesting details about this Snowdrop, but it does not seem clear how it first came into cultivation. One would like to know whether it was a seedling raised in this country or a selection from imported bulbs. It was, I learn from Mr. Burbidge's paper, sent out by Mr. Barn at 2s. 6d. per bulb in 1875. Mr. Wheeler, of Westminster, was the only trade purchaser, and it grew well with him, although it died out at Totting. A fresh perusal of Mr. Burbidge's paper shows that he thought this plant different from that *G. imperati* which was sent out by Messrs. Backhouse, of York, in 1877, which is said occasionally to bear misshapen blooms. I got my bulbs of G. I. Atkinsii from Mr. Allen some years ago, and I have little doubt but that they are true to name. While they generally bear blooms of perfect form, they have a tendency to produce

blooms with an additional segment, and thus present a most peculiar appearance when fully expanded. They give an effect like what one might imagine of a number of pure white butterflies poised on the stems. This is, however, certainly a defect, but whether it is due to the soil, the season, or to some inherent defect in the flower I cannot understand. Atkins' Snowdrop is exceedingly fine with its tall stems and usually shapely flowers.

Carsothora, by Dumfries, N.B. S. ARNOTT.

PLANTING FOR SHELTER.

FARM CROPS.

BY shelter is here meant more particularly protection to live farm stock of any kind, and there is only one way in which that can be afforded effectively. It has yet to be proved that much good, if any, is afforded to farm crops by planting trees in the vicinity of fields, except where the plantations are placed to the north of the crops, and then the value of the protection is more apparent than real, unless the sheltering belt is so placed that it does not chill and shade good land behind. It was pointed out to the writer many years ago by a very observant farmer that trees planted in any position where they obstructed the sun's rays at any time between sunrise and sunset did no good, but, on the contrary, injured every kind of crop, and he instanced particularly belts of trees that shut out the sun in the morning or afternoon—that is to say, belts running north and south. Their effect on crops on both sides was bad. The question arose in connection with planting on an estate, and for many years after I watched the fields that had been instanced, and found that the farmer's conclusions on the subject were borne out to the full every season. It was found also that other conditions being equal, more harm was done by shutting out the afternoon than the morning sun, whatever might be the reason. A belt of tall trees ran along the western side of two large fields. These trees began to cast a deep shade on the fields soon after three o'clock, and the shadow lengthened as the sun declined until it reached at least half-way across the fields, which were about 150 yards wide. On the fields on the other side of the belt the sun shone warmly in the long summer days till late in the evening, and the quantity of direct sunshine lost to the crop on the eastern side of the belt, measured by hours after the sun touched the tree-tops in the afternoon, was about five hours. The effect of the shade was very apparent on all crops, but especially upon Turnips and wheat. Stock was taken of the Turnips when they were got in, and it was found that for about 40 yards from the trees they were barely half a crop compared to the crop on the other side of the field where the sun shone all day. The further from the trees the crop got the better it was, and perhaps some would hardly believe that the long shade cast by the trees influenced the crop for nearly 100 yards. The corn grew rank next the wood, but was always longer in coming into ear than that on the other side and never so good. A perfectly open country is undoubtedly best for farm crops, and divisions by means of plantation belts should be avoided except under special conditions. Those who have travelled through the fine corn-lands of the north of France have been struck by the almost total absence of fences and shelter belts. Footpaths only divide the crops as far as the eye can reach. It is the same in Germany, where in well-farmed parts there are no trees nor hedges, and the lands are wind-swept enough, quite as much so as anywhere in Great Britain. I have alluded at length to this part of the subject because in England many estates

are cut up by narrow strips of trees that never yield a crop of timber, nor afford protection to farm lands. London and the landscape gardeners of the past have been responsible for much of this kind of work.

SHELTER FOR LIVE STOCK.

Shelter to cattle and other live stock on farms is undoubtedly provided by plantations laid out in a certain manner. They afford shade in summer and protection from cold in winter; but it is not the extent of such plantations so much as their character and distribution that give them their value. Plantations to shelter live stock need not cover much ground, nor necessarily good ground: they should consist wholly of Firs or evergreen species, and they should be dense and so laid out as not only to afford shelter from cold winds, but to give overhead shelter as well. In ninety-nine cases out of a hundred tree shelters afford protection from cold winds only when the cattle huddle up against the plantation fence on the lee side; whereas to be of real value the cattle should be able to get underneath the trees, but on the warm side only. The plantation need not be very wide, and it should be crescent-shaped with its back to the north. On the north side it should be kept dense and close and protected by a fence, with narrow openings here and there for the cattle to get through to the open south side. Another fence should run from end to end of the plantation, perhaps 10 yards or 15 yards from the outer fence, the object of the two fences being to keep the cattle out of the back part of the plantation. All shelter belts should be close and impenetrable on the cold side, as when the wind can blow through the plantation its warmth is gone. On the south side there should be no fence, and the cattle should be allowed to get under the trees up to the inner fence. A shelter of this kind, consisting of Spruce or Scotch Fir, or both, is soon got up high enough for the cattle to get under the branches. When the trees are that height the lower branches may be trimmed off, but in thinning the trees care should be taken to preserve the overhead canopy. A shelter of this kind is one of the most comfortable that can be devised in all sorts of weathers. The dense packing at the back keeps out the wind and cold currents, and the roof of branches prevents radiation from above. Deciduous trees afford shade in summer, but protection from cold in winter is what is most wanted, and they are next to useless for that purpose.

J. S.

LIBONIA FLORIBUNDA.

This Libonia is a remarkably free-flowering subject, whose bright-coloured blossoms are freely borne throughout the winter months. For some reason or other it is far less popular than it was a generation or so ago, for what reason it is somewhat difficult to say, unless the fact that it needs very careful watering has something to do with the matter, for a batch

of good healthy plants can be soon ruined by an excess of moisture at the roots. Besides this the heavy fogs frequently experienced in the neighbourhood of London quickly play havoc with the plants. This Libonia can be readily struck from cuttings in the spring, and if grown on freely during the summer months, will by the autumn form neat little specimens full of flower buds. They need the temperature of an intermediate house in order to develop their blossoms. Though an excess of moisture, especially during the winter, is fatal to the well-being of the plants, drought is just as injurious, and in the summer overhead syringing is of great service, otherwise they are liable to be attacked by red spider, which quickly injures the foliage and permanently disfigures the plant. As the pots get full of roots, liquid manure is of considerable benefit, with additional doses of soot water, as this latter tends to keep the foliage in good colour, a very important item in the case of the Libonia, whose leaves are apt to turn yellow unless carefully attended to.

treated in the same way. Azaleas can be readily struck from cuttings of the young shoots, particularly if they are produced in a little heat. All that is needed is to take them off at a length of 3 inches to 4 inches, dibble them into well-drained pots of sandy peat sifted fine, and keep close and shaded on a slight hotbed till rooted.

DAFFODIL MME. DE GRAAFF.

It is probable that very few readers of THE GARDEN have ever seen so many flowers at once of Daffodil Mme. de Graaff as are shown in this beautiful photograph of a beautiful thing. It is now nearly a score of years since this, still unapproachably the finest of all the Dutch seedlings, was raised by Messrs. de Graaff, of Leyden; but it is still comparatively rare and valuable, though a vigorous plant and of fairly rapid increase. No exact account of its parentage has ever been given, and it was



DAFFODIL MME. DE GRAAFF AT WARLEY PLACE.

AZALEA DEUTSCHE PERLE.

There is no other variety of Indian Azalea grown to anything like the same extent as this is, for white flowers are always in greater demand than those of any tint, and, apart from colour, this variety possesses many desirable qualities. It is of good free growth, while the semi-double blossoms are, when partially expanded, like little Rose buds, owing to the edges of the petals being somewhat reflexed. In addition to all this it is one of the most amenable to forcing into bloom, and where a collection is grown and treated as ordinary greenhouse plants, it is the first to expand its blossoms. Nearly all the Azaleas flowered in this country are grown in Belgium, and sent here as little bushes fit for 6-inch pots, or as larger specimens. They are invariably grafted on some strong-growing variety, but though this mode of propagation is so generally adopted, it by no means follows that such is the best, as plants on their own roots are infinitely more pleasing than when mounted on a stem a foot or so in height. I have even seen the delightful little *A. roseiflora* which grows naturally in a horizontal manner

in all probability a chance seedling, that is to say, the product of a seed-pod not artificially fertilised. But it is certain, from the character of the flower, that *N. albicans*, the largest of our older white trumpets, was one of its parents, and some large "bicolor" the other. The variety named Dean Herbert is suggested by the form and substance of its perianth and its somewhat late bloom. If it is not ungrateful to find any flaw in so lovely a flower, the one failing of Mme. de Graaff is that it retains too long something of the yellow of its bud stage, and is in danger of fading before its clear ivory-white is developed. Those who are fortunate enough to possess an ample supply of its bulbs should lengthen the season of this Daffodil by blooming a few under glass without any fire-heat. Its delicacy of waxen texture and purity of colour are greatly enhanced by such slight protection.

G. H. ENGLEHART.

AN ARTIST'S NOTE-BOOK.

GARRYA ELLIPTICA.

THE drawing shows male catkins of the Garrya in bloom, and represents also one of the most precious of winter-flowering shrubs. The cutting from which the drawing was made came from a warm corner in a Thames-side garden, where the plant is happier than in many northern places. Few wall shrubs are so leafy and luxuriant as the Garrya; and placed against a sheltered sunny aspect, it bears a profusion of catkins through the winter months, and to gather for the house. They possess a fresh, wholesome fragrance, and upon the plant have a strangely picturesque beauty. Occasionally the Garrya will cover a house front, but only in favourable situations. It is hardier than many suppose, as a plant in my garden was little harmed by frost during the last severe winter. T. E.

MORÆA
IRIDIODES.

WHEN properly treated this is a useful garden plant, but it is rarely met with, notwithstanding its beauty and its early introduction from the Cape, where it was found by Thunberg. Philip Miller grew it at Chelsea, having received seeds of it from the Cape as a white-water Lily. "It is of the easiest culture, and will grow many years together (without parting or removing) in the same pot; requires plenty of water; blooms several weeks in succession during the summer months; produces seeds in abundance, owing to which and its long standing in the country it is now one of the commonest of its tribe in our collections; has no smell." This was written nearly a century ago, when a figure of the plant was published in the *Botanical Magazine* (t. 693). It is grown in pots in a cold house at Kew, where it flowers every summer, but in an early volume of *The Garden* there is a notice of its behaviour in the open air in the Botanic Garden, Glasnevin. "This lovely and distinct looking plant has proved quite hardy at Glasnevin, where it is now (August) in bloom, as it has been through



MALE CATKINS OF GARRYA ELLIPTICA.

(From a drawing by James Cook.)

Vioussenia, and *Diets*. The most remarkable species, and by far the largest of all the plants of the great Iris order, is *M. Robinsoni*, the Wedding Flower of Lord Howe's Island, which forms a large tuft of strap-shaped leaves 6 feet or 7 feet long, and equally long-branched spikes of large beautiful white and gold flowers. There is a good example of it in a sunny greenhouse at Kew, where it has flowered several times.

The difference between this genus and Iris is mainly a geographical one. Mr. Baker says, "The line of limit between Iris and *Moræa* has been differently drawn by different authors, but the two genera are extremely close. I have followed Bentham, who limited Iris to plants of the north temperate zone, and *Moræa* to those of the Cape and Tropical Africa, with one species Australian." The Peacock Irises, formerly called *Vioussenias*, are dainty little bulbous plants with flowers in which the arrangement of colours justifies their name.

W. W.

A VILLA GARDEN. - I.

(WITH SUGGESTIONS ABOUT TREE AND SHRUB PLANTING.)

THERE are so many of these in the country, and so many mistakes are made both in planting and maintaining them, that it seems worth while to point out how easy it is without any material increase of expense to have even in a small space a varied, interesting, and well-assorted collection of hardy trees and shrubs. It usually happens when a small garden is to be planted that the proprietor, even if he be interested in Roses, Carnations, or herbaceous plants, looks upon the

TREES AND SHRUBS

as mere necessary furniture, about the special characteristics of which he is quite indifferent. He therefore makes a contract with the nurseryman to stock his garden for, say, £10, £20, or £30, according to the size. Naturally the latter supplies him principally with those plants of which he has a large stock, and naturally, also, he keeps in stock plants which are easy to cultivate and of rapid growth, and for which there is always a demand, but which are by no means necessarily suitable for planting in large quantities in a small garden. As illustrations of this class of what are called "bread-and-butter" goods I would mention among trees the common Elm, Oak, Ash, Horse Chestnut, Lime, Sycamore, and the London or Occidental Plane; among shrubs, Privet, common Laurel, Portugal Laurel, Spotted Aucuba, and Yew. Of course, the nurseryman will probably add to these a sprinkling of other plants which do not grow quite so freely, and Laburnum, Scarlet Thorn, common Lilac, Ribes, Laurustium, Golden Elder, Almond, and others will be found in the collection. Be this as it may, and however well selected and planted the garden may be, it is quite certain that nursery stuff if left to itself will in a few years be completely spoilt. The stronger-growing trees and shrubs will kill the weaker and will severely injure themselves in the process. Ultimately the big forest trees will grow together, forming a dense mass 30 feet or 40 feet up, darkening the windows and forming a blind where very likely no blind is required, while lower down, where an obstruction to the sight of the road is really wanted, they will have lost their lower boughs. At the same time the unhappy shrubs beneath them will have died, or, if hardy enough to survive in the struggle for existence, will have rambled up in search of light and air, showing twisted, unsightly stems 8 feet or 10 feet long with a bunch of green on the top. Probably during this process of degeneration it will be found that the mischief has not been confined to loss, and some uninvited newcomers will have sprung up in the garden who will not, however, add to the beauty of a shrubbery. They will prove to be probably Elm suckers, self-sown Sycamores, White or Black Thorn and common Elder, and perhaps the stools of two or three deciduous trees which, having been merely cut down instead of being stocked up by the roots, will have vigorously asserted themselves. Now, doubtless during the progress of the above events the owner or owners will have done some thinning out, but will have been prevented from doing so efficiently by the fear of laying his place bare to the road or to adjoining neighbours. How, then, is this state of things to be avoided? and how should a small garden be planted and maintained? In the first place, the owner must realise that if he is to have

AN INTERESTING SHRUBBERY.

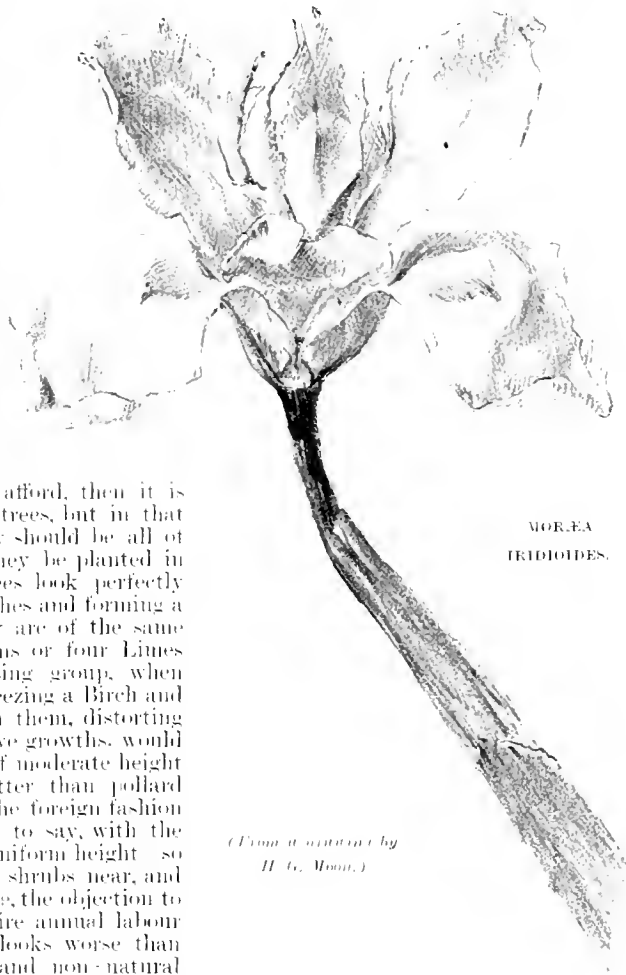
he must not look upon it as a screen, but must make his screen independent thereof. The

proper screen is a hedge, and the material used must be in accordance with the height of screen required. Let us imagine an ordinary villa garden with its two gates and semi-circular sweep, a block of shrubbery between the gates, expanse of turf between the shrubbery and hall door, belt of trees and shrubs on either side of the house and lawn behind, with the space to plant some trees at the end. Let us now consider how to deal with a garden of this kind. First and foremost, it is essential to shut out the road for the sake of privacy and with a view to the exclusion of stray dogs, who are not good gardeners. It may be hoped that the gates will be found to be of solid wood, and not open work. Between these gates I would plant a Yew or Holly hedge: Yew for choice where no cattle are in question, because, taking all kinds of soil together, it can better be relied upon to form a uniform and solid hedge, and because, though neither are bad in that particular, it stands the drip and shade of trees somewhat better than Holly. If it be necessary (to obscure another house that overlooks you, say, on one side of the garden) to obtain a screen much higher than Yew or Hollies can be expected to afford, then it is necessary to fall back upon trees, but in that case it is essential that they should be all of the same kind. Whether they be planted in rows or in groups, most trees look perfectly well commingling their branches and forming a compact mass, provided they are of the same sort. For instance, four Elms or four Limes together may form a pleasing group, when one Lime and one Elm squeezing a Birch and an Acacia to death between them, distorting and disfiguring their respective growths, would look very bad. If a screen of moderate height be required, nothing is better than pollard Limes cut and trimmed in the foreign fashion like a wall on legs—that is to say, with the lower boughs removed to a uniform height—so as to admit the planting of shrubs near, and the top cut square. Of course, the objection to such trees is that they require annual labour and trimming, for nothing looks worse than trees treated in a formal and non-natural manner if they are neglected. If as high a screen as possible be required, no doubt the most rapid grower easily and cheaply obtainable is the Balsam Poplar, but at the same time it is to my eye very weedy and unattractive, and personally I prefer the Lombardy Poplar for this purpose. However, none of the strong-growing deciduous trees, with the exception of the Oak, are suitable for this purpose, and it is very much a matter for individual taste, although I should be inclined to give the preference to the Hornbeam on account of its multitude of very small branches. If a high evergreen screen be required, then I unhesitatingly recommend *Pinus austriaca* on the ground that it is cheap, hardy, dense, warm-looking, and does not readily lose its lower boughs. If an evergreen screen of less height be desired, the *Thuja Lobbi* is not unsuitable, but in that case the hedge should not be cut off, as is sometimes done for the purpose of making them grow more thickly, as in my judgment it deforms them and makes them most unsightly. Assuming, therefore, the necessary screen to have been planted, and, space being an object,

obviously as near the boundaries as possible, let me now say a few words on the

PLANTING.

First and foremost, it will be well to choose the places for the forest trees: by these I mean such as may be expected to reach a height of about 50 feet or 60 feet. Probably in the small area contemplated it will be impossible to have more than about half a dozen of these in such positions that they can attain their full and perfect proportions without let or hindrance from others. And probably out of these six



(From a drawing by H. G. Moore.)

not more than two will have the good fortune to stand perfectly clear as specimens, say one in the centre of the grass plot before the hall door and one at the far end of the lawn behind the house. As it is only in this way by planting a tree singly, so that it shows all its fair proportions clear against the sky, that its full beauty can be realised, it becomes immensely important to consider in a small place which trees shall be selected for this special honour. Of course, the choice is almost boundless, but I will give two that have special advantages, and later on a list of others not quite common, from which selection may be made to suit particular tastes. Of course, I am very far from decriing common trees. None in the world can be more grand than Oak or Elm, but, setting aside the objections to an Elm in a garden, which are strong, one would naturally wish, if a lover of trees, to plant those in one's own little place which have some distinction from the rank and file one is likely to meet in the first field that comes in view. Therefore, I would suggest for the plot before the house a Copper Beech,

principally on account of its conspicuous foliage, and also because it is long-lived and fairly rapid in growth after it is once established. Moreover, it is more tolerant of a heavy clay soil than the common type, although in such a case it is necessary to stimulate its growth at first by a good supply of light soil and garden mould to its roots. At the back I would place a Weeping Lime, because it is hardy, fairly indifferent as to soil and situation, tolerant of smoke, and has a most graceful habit. It is just sufficiently pendulous to make it striking and attractive without being so much so as to have the unnatural, umbrella-like form which makes Weeping Ashes and Elms distasteful to some judges. Should there not be room either back or front for specimen forest trees, then *Pyrus Malus floribunda* with its wealth of pink blossom in the spring and a *Cercis Siliquastrum* with its even more striking flowers may very well take the places of honour.

Now, as to the trees and shrubs that I would exclude from a small garden: The Elm, because of its dangerous habit of letting fall without warning heavy branches, and because of the enormous quantity of surface roots that it makes, sucking out all the good from the top soil and shrivelling up shrubberies and flower borders to an incredible distance: the Oak, because it is intolerant of town atmosphere, and because it is difficult to establish—that is to say, unless the soil be both deep and well trenched you are not likely, except after many attempts, to get a free-growing and shapely tree: the Ash, because it is peculiarly deadly to any undergrowth in its vicinity: the *Sycamore* and common Horse Chestnut, because of their rank growth and coarse, unyielding branches, which render them such bad neighbours in the crowd that is likely to occur in a small space, however much the owner may struggle to avoid it. As to shrubs, I would eschew absolutely the common Laurel, for it grows most rankly to the detriment of better things, is subject to be killed to the ground in hard frosts, and even when it escapes that danger large pieces of it often die off suddenly and without apparent reason. If Laurels are wanted—and their glossy foliage is certainly attractive—plant *caucasicus* or *rotundifolia*. Both of these have the merit of being hardier and more compact than the type. Portugal Laurel should be planted sparingly on account of its free growth, and the variety *myrtifolia* has the advantage of being more elegant in leaf and less vigorous. I do not like Yews in any number in a shrubbery, as they tend to give it a very gloomy appearance, though they are admirable for hedges, or, when old, as single specimens.

COMMON PRIVET SHOULD BE AVOIDED.

unless it be planted merely as a nurse with the irrevocable intention to remove it as soon as it impinges on choicer plants. I should, however, have mentioned that it makes a very fair hedge where the expense necessary for Holly or Yew cannot be afforded. To say a little more about the planting of the garden, I would suggest your planting deciduous flowering shrubs and small trees and evergreen shrubs in the proportion of two deciduous to one evergreen. Do not make the common mistake of planting all your big things at the back and graduating down to the verge, but break your front line at intervals with small trees, such as Cherry or Mespilus. In this way you will gain space for a larger number of trees, and you will also add to the apparent depth and effect of your shrubbery.

VICARY GIBBS.

Alldonham House, Elstree, Herts.

(To be continued.)

THE PRIEST'S GARDEN.

A grey day in Italy—no wind, no sound—as seemed as if the world had forgotten to awake. The day after Christmas we drove along the narrow valley, up into the Olive-covered hills.

Vines hanging from pergolas; long-necked, long-haired sheep sauntering down the dried-up watercourse, full of wild Hellebore and Oleander bushes; cottages, buried in Fig orchards, hanging on the sides of rocks. No sign of bird or any living being, except an occasional peasant hacking at the Olive trees or a row of crouching women picking up the berries. Just now and then a breath passing through the dry Chestnut leaves made a slight rustle and showed that Nature was just alive.

Circling round and up the steep ravines at length we stopped, and saw the little grey clustering village away above our heads. From the rough-paved mule-path we passed into the village street, and found ourselves, after many strange turnings, out upon the little open *piazza* in front of the great white church, surrounded by a sentinel guard of graceful Cypress trees. Standing proudly up on its narrow *col*, with its splendid *campanile* pointing to the skies, the great church seemed to dominate the whole countryside, overlooking on either side the deep valleys below.

As we stood drinking in the great view around us, bounded by distant sea and mountain-range, a young priest, with great courtesy and dignity, stepped silently towards us in his dark, flowing robes, and, with that peculiarly graceful speech of the educated Italian, asked us if we should be pleased to visit his *crèche*. We followed him through a green door adjoining the church, and, entering first, he lighted a tiny lamp which hung in front of the *Bambino*. Gradually as we became accustomed to the semi-darkness we made out the figures—the infant Christ, with a white dove above him, lying in a most realistic manger, with a large cow on one side and on the other a wooden ass. The whole scene, which breathed a devout, simple, and religious feeling, depicted a crowd of modern peasants in gay *festa* costume, bringing various quaint and homely objects as sacred gifts to the Holy Family.

The picture of Bethlehem behind was really beautifully and most tenderly painted, with a flush of early dawn upon it. We asked the priest how he came by the painting, and who had made the little cottages and various objects in the scenery. "Myself," he said, "and the peasant people help me—we have done it all. A lady who was here the other day had just come from the Holy Land, and she said the view was very true to Nature. She took some photographs of my *crèche*." The long, coloured coats of the men and the pretty holiday costumes of the peasant women all came, he said, from Naples. They are made in the convents. He had himself carved the various animals and the little carts full of local merchandise, and to make the whole scene more realistic to his flock he made a model of the old ruined Lombard tower of Sta. Anna, which we had passed upon our road.

As we stepped from the darkness into the light a boy held out a box of *Limosina*. I dropped into it the few coppers I happened to have with me. Presently he ran after me and said, "You need only give me one *solito*, *Signorina*, and you have given five; it is a mistake." Then we strayed to the silent *Campo Santo*, lying amongst the Olive trees on the hillside; facing the east that it might catch the earliest sun, and sheltered by a grove of dark, delicious *flexes*. A Monthly Rose strayed over the wall and lightly clasped the

figure of the Virgin over the ancient door. As we came back down the village street, where the women were making lace, sitting in front of their bright-coloured cushions, rocking a cradle with one foot as they held their little tables steady with the other, the priest came again towards us and asked us if we should care to enter his little garden.

We followed him through another green door adjoining the church on to a tiny Vine-covered terrace, the deep valley dropping sheer

blue hills, the presiding genius of the spot, a magnificent, tall *Camellia* plant in fullest bloom—large, beautiful, rose-pink blossoms, standing out in fresh glory amongst their glossy leaves—the only spot of bright colour in the grey countryside.

"Pick, pick," he said; "I should feel honoured if you will accept them;" and he filled our hands with the lovely blossoms, mixed with a few early *Narcissi* and sprays of *Rosemary* and *Lavender*.



A MOUNTAIN PATH IN ITALY WITH YOUNG CYPRESSES.

below and the great mountains opposite. Scrupulously clean and neat was the little garden, with its paved paths beneath the pergola, its Lemon trees and Vines, its Orange trees and Myrtles, its round bushes of *Rosemary* and *Lavender*, Violets in shady corners; a row of uneven bisent boxes placed beneath the windows in the sun full of seed just beginning to appear; the well of water with the little figure of a saint placed above it half hidden behind the tall plants of *Oleander*. Then suddenly we saw, clinging to the corner of the pergola, gracefully defined against the

As we drove into the common world again down the narrow valley we saw the figure of the lonely priest dark against the sky standing on the lofty terrace beneath the pointed Cypress trees. Father, doctor, confessor, lawyer, scribe of all the *contadini* round, no one is learned or knows anything in San Massimo except the beloved *Signor Prete*. M. C. D.

Winter Aconite and Siberian Dogwood. These form a pretty combination. Flatly noticed a bed of the crimson-stemmed Dogwood, at the base of which the Aconite was flowering. T.

CHRYSANTHEMUMS.

JAPANESE KINDS FOR EXHIBITION. - I.

THE popularity of Japanese Chrysanthemums for exhibition, either as trained plants or otherwise, and also exhibited in a cut state, is still as keen as ever, and there is no doubt that the ever-increasing novelties will keep alive the interest and enthusiasm for a long period yet owing to their great diversity of form and colour. That the newer kinds are much superior to some of the older ones I cannot admit, for when one remembers the magnificent flowers of Mme. C. Audiguier exhibited by Mr. E. Molyneux at Kingston, Belle Paule by Mr. Munro, and E. Molyneux by Mr. Mackenzie, at the Aquarium and Crystal Palace some years ago, I doubt if any varieties of the present day can surpass these; and again the old *Boule d'Or*, *Yellow Dragon*, and *Viviani Morel*, among many others, were as fine as one could wish. But, unfortunately, the Japanese Chrysanthemums deteriorate surprisingly after a few years and become worn out, and with all the new sorts now before us there are none to take the place of some of these. E. Molyneux, for instance, one of the finest coloured Chrysanthemums ever raised, cannot yet be replaced, and I do not think there is any Japanese variety that has held its own so long as this, for even now we find it included in many of our best collections on the show table, though of very poor quality compared with former years.

Scores of articles and books have been written on the cultivation of the Chrysanthemum, and I can add but little to what has already been said, neither do I wish to attempt to teach the successful cultivator; nevertheless, to the amateur and beginner I may be able to afford some useful information. No amount of writing can make the intending competitor successful, as so much depends upon the indomitable pluck and courage of the individual himself. Constant care and attention for a whole twelvemonth must be cheerfully borne if the best results are to be achieved, for, as in many other pursuits, there is no royal road to success. How many times have I heard it remarked, "Yes, so-and-so ought to win; see the convenience he has got;" but depend upon it chance avails but little without determination. Only last year, for instance, the prize for the premier Japanese bloom in the large November show held at the Aquarium, which was probably the finest collection of Japanese blooms that has ever been brought together, was won by an amateur with only one small greenhouse, and this I happen to know was only one of the many grand flowers grown by this enterprising young man.

Forming a collection is often a great difficulty to the inexperienced, which is not surprising considering the immense number of kinds now catalogued, and I propose giving a list of what I consider fifty of the best standard varieties in order of merit, and twelve of the most promising new sorts, as this is of the utmost importance; it is far better to grow a few of the most reliable kinds than a large number of uncertain varieties.

LIST OF SUITABLE KINDS.

Mrs. W. Mease, Madame Carnot, Mrs. Coombes, Mrs. H. Weeks, G. J. Warren, M. Chemon de Leche, Oceana, Phobus, Mutual Friend, R. H. Pearson, Fair Maid, Emily Towers, Miss Nellie Pickett, Lady Hanham, Henry Weeks, Mrs. Barkley, Australia, Chas. Davis, Edwin Molyneux, Lady Ridgway, Mrs. G. W. Palmer, Mrs. W. H. Lees, Souvenir de Mme. F. Rosette, Viviani Morel, Soleil d'Octobre, James Bidenscope, Mrs. J. Carpenter, Chatsworth, Lady Crawshaw, Mrs. Fursden, Simplicity, Rivers H. Langton, John Pickett, Le Grand Dragon, Mrs. J. W. Barks, Mrs. White Popham, Edith Tabor, Emily Silsbury, Louise, Mrs. E. A. Bevan, Pride of Madford, Thomas Wilkins, Mrs. J. Lewis, Mme. P. Rivoire, Mrs. James Bryant, Mrs. W. Seward, Matthew Hodgson, J. R. Upton, Helen Shrimpton, General Paque.

NEW VARIETIES.

Miss Alice Byron, Lord Salisbury, Mme. von Andrée, Mr. H. E. Fry, Mrs. A. Tate, Mme. R. Cadbury, Mrs. W. Morgan, Souvenir de Marquise de Salisbury, Florence Molyneux, Edith Pilkington, Vicar of Leatherhead, W. H. Whitehouse.

Having determined on the number of plants to grow, all of which can be purchased at a very small outlay, excepting the novelties, rooted plants should now be procured and potted firmly in clean well-drained 3-inch pots. The compost should consist of three parts good light fibrous loam, one part well decayed leaf-mould, one half rotten manure or old spent Mushroom bed manure, with a liberal supply of coarse silver sand and a small quantity of wood ashes and bone-meal. This should be thoroughly mixed and used in a moderately dry condition, so that the young plants can be potted firmly without the compost setting together in a pasty mass.

The plants will require a little coaxing for a few days until the roots begin to push through. There is no better place for them than a pit with a hot-water pipe running through, but only sufficient heat should be given to counteract frost. Arrange them on a bed of finely sifted coal ashes quite near the glass; a slight syringing night and morning with tepid water will greatly assist them to recover from the check which they will have received; very little air will be needed the first week, but as soon as the plants show signs of making new growth, give air more freely and dust the points occasionally with tobacco powder to ward off attacks of green fly. After about a fortnight the majority of the young plants should be transferred to cold frames in an open position facing south, nursing on the weaker and later struck plants until they are in a fit state to join the more forward ones.

No matter how careful one may be, some of the best and more delicate kinds will be sure to lag behind in the early part of the season, but one should always try to have the whole of the stock as nearly in the same condition as possible when the time arrives for their final potting.

As regards airing at this season when in cold frames, we are much at the mercy of the weather, and one must use common sense. During spells of cold north-easterly winds very little ventilation indeed will be required, but on the other hand, when the wind is in a genial quarter air may be given freely, removing the lights entirely till last thing in the evening. One must be on guard against frost, as, though comparatively hardy, the slightest frost will injure the young plants at this season.

No hard-and-fast rule can be laid down for the time of the next potting, but many will be found to require shifting on before the others. The whole should be transferred to 6-inch pots, except the very weakest, using 5-inch pots for these. The pots should be thoroughly drained and always used perfectly clean and dry, and it is of the utmost importance that the soil should not be allowed to mix with the drainage, or the latter will become blocked, and the plants becoming water-logged will never be satisfactory. I know of nothing more suitable for placing over the drainage as fibre taken from the loam heap from which the soil has been rubbed out. If a thin layer of this is laid over the drainage, providing worms are rigorously excluded from the soil, the drainage should be as perfect when turned out as it is on the first day.

The soil for this potting should consist of three parts of good fibrous loam, choosing that of medium texture, and one part old Mushroom bed manure passed through a 1-inch sieve. To every barrow-load add a 9½-inch potful of bone-meal, the same amount of wood-ashes or finely crushed charcoal, and an 8½-inch pot of fresh soot, with sufficient coarse sand to render it porous. This should be prepared a week beforehand, thoroughly mixed and turned over every day till used. When everything is in readiness the potting should be carried out as promptly as possible. Never leave the plants standing about, but take out only those which can be dealt with at once and return again to the cold frame. The soil should be made firm at this potting; generally speaking, it can be made sufficiently so with the thumbs, but should the compost be extra light or dry, the potting stick may be used to ensure the whole going together firmly.

The lighter the soil the more firm it should be made. Each plant should be neatly tied to a small stick; well sprinkle overhead and keep the lights closed for a few days. The stronger plants will generally require to be watered on about the third day, but the weaker and more delicate not for a week, or even more, a syringing morning and evening keeping them sufficiently moist. Abundance of air must be given as the plants become established, entirely removing the lights on all favourable occasions, and leaving them off till bed time whenever the weather will allow.

E. BECKETT.

NOTES FROM N. WALLUF, RHEINGAU.

I AM very pleased to see in your issue of January 13 that Mr. W. E. Gumbleton calls attention to *Mischanthus nepalensis* or *Eulalia japonica gracillima univittata*, under which name it is better known in trade catalogues. As Mr. Gumbleton is doubtful about the hardness of this lovely ornamental grass, I am pleased to be in a position to state from many years' experience that it is perfectly hardy, even in our severe winters here in Germany. It is as hardy as a brick, and stood 20° R. with only a slight covering of moss round the roots. If cut back in spring the young shoots spring up very rapidly, and by the middle of June it forms a most ornamental bush about 6 feet to 8 feet in height. Unfortunately, the graceful golden feathery plumes are generally cut down by early frost before they can develop their full beauty. It seems to delight best in a heavy loamy soil, and, if left undisturbed, will soon form large clumps of a most graceful appearance. For imparting a tropical effect in the flower garden, for isolated positions on the lawn or on margins of lakes or streams, it is one of the most ornamental grasses I have ever seen. Its great commercial value, however, is as a pot plant in a cool greenhouse. If well grown in small pots it is a most striking and graceful plant for conservatory and table decoration. The thin wiry stems are clothed with long, slender leaves of a light green, with a conspicuous silvery band running through the centre of each.

Eulalia japonica zehriana stricta is a very handsome new variety, and the finest of all the *Eulalias* ever introduced. It is of a sturdy, compact growth, reaching only about 4 feet in height. The stems are thickly set with stiff, erect leaves, having bars of a clearer, brighter yellow than its parent, *E. japonica zehriana*. As I do not find this charming novelty offered in any of the catalogues of hardy plant growers, I believe it is still scarce in English gardens, but when shown at any of the London horticultural meetings, I have no doubt it will soon find its way into every garden where hardy plants are grown. C. SONNTEG.

FERNS.

BEST BRITISH FERNS.

TO the large majority of people who devote a corner of their garden to hardy Ferns the fact that our British Ferns, in their varietal capacity, are the most wonderful Ferns in the world is entirely unknown. Hence we find that only a few species are used, and of these only the common forms, as vended by the costermonger on his barrow; by the plant dealer, in boxes ignominiously exposed outside their shops like seedling cabbages; or by the local Vandals, who deplete the surrounding country, in ferny districts, to supply per post. Meanwhile, it is only here and there that collections proper exist of the hundreds of far more beautiful forms of these plants, which have been found wild in the first place, and in many cases subsequently highly improved by selective culture. At Kew, thanks to contributions and bequests, there is a magnificent collection of these varietal forms, and as they are in all cases perfectly hardy and easy of culture, we cannot too strongly advocate their extended introduction and adoption as decorative plants for

cool conservatories, cold frames, and sheltered rockeries out of doors. To this end we propose giving a brief outline of the finest varieties, and in this connection we may mention that the large majority of them are obtainable from the nursery-men who make these a specialty at such moderate prices as place them within the reach of all, especially when it is considered that they are all perennial, and once established last a lifetime. Nature, in fashioning these varieties, distributes them usually solitarily among the common forms wherever these are fairly abundant. Of "how it is done" we know absolutely nothing; all we know is that the Fern hunter who assiduously inspects the masses of Ferns which grow in many places so abundantly—in hedgerows, on old walls, in woods, in shady glens, and on the hillsides and moorlands—every now and again comes across a specimen which is altogether differently fashioned from its neighbours of the same species. All the tips may be elegantly tasselled, all the divisions

feathery; the crested, or tasselled; and the multiform, or "curio" types. Of these we incline to the belief that the plumose are the most beautiful. In these the normal simple grace of the species is maintained, but enhanced by such an amplification of the foliage as to put the common forms far in the background. In the Lady Ferns (*Athyrium Filix-foemina*) and Shield Ferns (*Polystichum aculeatum* and *P. angulare*) we have the grandest forms of these. *A. F. f. plumosum* Horsfall and *A. F. f. p. Axminster* are two wild finds of great beauty, and quite distinct from each other. The first, there is reason to believe, is the parent of *A. F. f. Kalothrix*, an uniquely delicate Fern, with fronds like spun silk or glass. *A. F. f. p. Axminster* has, however, proved itself the mother of not merely an individual gem but of a queenly race, sporting first into *A. F. f. p. elegans* Parsons, a refined edition of itself, and then through that into the glorious strain of *A. F. f. plumosum superbum*, a beautifully tasselled form,

lengthens out all its tips into mossy-looking tails to cap the climax. In addition to these raised forms we have some charming original finds. *P. a. p. Pateyii* and *P. a. p. Wollastonii* are both gems, while in the allied species *P. aculeatum*, *P. a. pulcherrimum* is really the plumose form of that species, but does its spitting in a slender, graceful fashion entirely its own. Among the Buckler Ferns, there is not so much in the plumose way, as *Lastrea Filix-mas Bollandie*, though good, is defective in make. *L. p. m. cristata* has given us a silky form in *L. F. m. fimbriata cristata*, and *L. montana* has yielded several beautiful plumose forms, Airey's and Whitwell's being the finest. The common Polypody (*P. vulgare*) has given us many forms of *P. v. eumbricium*, known as the Welsh Polypody, though found in other places as well. All these are beautiful, the finest being *P. v. c. Hadwini*, Barrowii, Oakleyæ (a dwarf), and *Prestonii*, the last incomparably the best. Even our little Black Maiden-hair Spleenwort (*Asplenium Trichomanes*) has given us several lovely plumosums (*A. T. incisum*), of which Clapham's form excels all. The plumose form of the Sea Spleenwort (*A. marinum plumosum*) is a grand variant of that simple species. Our true Maiden-hair (*Adiantum capillus-Veneris*) in the same direction has done its best to imitate *A. Farleyense* in *A. c.-V. comubiense*, and quite succeeded except in size and tint, and finally among the divided Ferns, *Blechnum Spicant* has given us *B. S. pl. Airey*, a fine three-divided plumose form of that pretty species.

The Hart's-tongue, despite the normal strap-like simplicity of its fronds, has managed to yield some exceptionally fine things by frilling and fringing. *S. v. crispum*, the plumose variety of this species, has been repeatedly found, and a well-grown plant of the kind is a decoration worthy of any post of honour. As all the barren *crispum* are good we need hardly name them, except that *S. v. c. grande* Wills is the finest. The frilled and fringed varieties have been raised by selection. *S. v. crispum fimbriatum* Staunfield and Cropper constitute the finest strains, which include some which are tasselled beautifully to boot. Naturally this species forms a delightful foil to the divided ones, and as it is quite evergreen pays its rent, so to speak, with interest.

With regard to the tasselled varieties their name is legion.

In these the tips of fronds, side divisions, and, in the best forms, even the ultimate divisions, are tamed out into tassels, giving a peculiarly rich and ornate appearance to the plants. The best of the Lady Ferns are *A. F. f. sup. pericristatum* and the whole of the *superbum* section, *A. F. f. pericristatum* Consens, *plumosum pericristatum* Consens, *regule gemmatum*, *Victoriae kilnshiensis*, *Elworthii*, *setigerum* (many forms) *Vernoniae cristatum*, *congestum cristatum*, and *corymbitermum*; but this by no means exhausts the list of gems.

The Shield Ferns in their various grandiceps forms *Abbotte*, *Talbot*, *Jones*, and others are splendid; *P. ang. cristatum* *Wollaston*, *pericristatum* *Moly* and ditto *Grey*, are beautiful, and typical of many others which run them close. The Buckler Ferns have given us the king of the male Ferns (*L. p. m. cristata*), a tasselled giant, and, if properly treated, a fine Tree Fern. *L. p. m. ramosissima*, *L. p. m. polydaetyla* *Wills* and *Dadds* are grand companions to it, and by selection and crossing we have a number of smaller crested ones, such as



DOUBLE SEA CAMPION (SILENE MARITIMA FL. PL.)

may be cut and recut into extra laciness, or crimped or crisped in many different ways; sometimes the whole plant is dwarfed and congested into a miniature edition, and sometimes enlarged into a grander one. Furthermore, these varied types may be combined, and, in short, since two such finds are rarely identical, the accumulated distinct forms are very numerous.

Then, too, it has been found that spores of such forms not only yield their type truly, but are apt to vary still more, and, finally, that if two types be sown together, they are capable of crossing and affording progeny in which the two characters are combined. All this, of course, apart from its indication of an interesting diversity, means that there is an absorbingly interesting field of culture open to those who take up Ferns as a hobby, and do something more than merely buy plants and take care of them.

To come now to the best, as space is limited, we may say that the varietal forms may be classified roughly into three types, the plumose, or extra

which in its turn yielded two distinct sections, tasselled and plain, among which *A. F. f. plumosum* *Drucery*, *uncrested*, and *A. F. f. sup. pericristatum*, in which even the fourth divisions are prettily tasselled, rank as the finest amongst a score of distinct and charming forms. Keeping still to the plumose forms, we come now to the plumose Shield Ferns. Some of these can only be compared to *Todea superba* for exquisite division of parts. A wild find of Mr. Moly's (*P. a. decompositum*) yielded, in the hands of Col. A. M. Jones and Dr. E. F. Fox, a number of densely divided plumose forms such as described; of these, *P. a. plumosum densum*, *P. a. p. laxum*, *P. a. p. robustum*, and last, but by no means least, *P. a. p. Baldwini*, excel all exotics in feathery loveliness. Of equal rank, but of less distinct origin, is *P. a. p. Esplan*, a plumose starfish, so to speak, and *P. a. p. Pearson* ranks but little lower. Finally, there is Messrs. *Burkenhead's P. a. plumosissimum*, a seedling probably from one of the foregoing, which, after doing the apparent utmost in feathery divisions,

L. p. m. crispa cristata, angustata cristata, and a host of others. *L. dilatata crispa cristata* Oseroff and *polydactyla* are both good native finds, which, however, the Azores have eclipsed by *L. d. foliosa cristata* and *L. d. f. digitata*, which have the advantage of being evergreen. *L. montana* (the Lemon-scented Fern) has provided a regiment of good things, tasselled and otherwise. *Asplenium Trichomanes cristatum* is a pretty dwarf. *Polypodium vulgare* has decked itself similarly in *P. v. cristatum*, *P. v. grandiceps* Fox, ditto Forster, and ditto Parker—the last all crest; and finally the Hart's-tongue has eclipsed every other species by the multiplicity and multiformity of its tasselling, ranging from merely forked tips down to a transformation into a seeming tuft of the finest moss (*S. v. densum* Kelway). Space utterly precludes an abstract even of the good forms of this species; it would be too invidious, and we can only say that those listed for sale may fairly be assumed as constituting a selection of the best, on the theory of "survival of the fittest."

CHAS. T. DRURY, F.L.S., V.M.H.

PTERIS SCABERULA.

This is one of the daintiest of small-growing Ferns, and is also suitable for small glasses in rooms. In almost any arrangement its pretty fronds may readily be singled out, and when grown in a cool house it is valuable for the way it endures after being detached from the plant. Though not at its best in mid-winter, it may be had in good condition with a little care. Formerly it was usual with some growers to water this plant freely overhead, but when so treated not only was disfigurement of the fronds more readily brought about, but the fronds were less useful for cutting and decoration generally. Grown in a large way for its fronds alone, it is a good plan to plant it out on the front stage of a greenhouse. For this purpose 3 inches of soil are ample, as it is not a deep-rooting plant, though covering much surface space with its freely spreading rhizomes. In this way it is surprising the amount of good material a square yard will produce, and no one having such a corner to spare and once having tried it thus would go back willingly to culture in pots. Little warmth is required to grow this Fern successfully. The most suitable mixture is one of peat and loam in equal parts and a very liberal dressing of burnt earth or broken brick rubble, the former being excellent and more easily obtained of the required size. During growth water may be freely given, and in such a mixture of soil as that suggested will do no harm. The objection to planting out comes when small plants are required for furnishing. For this purpose the plants are best kept under pot culture, though even then occasional pegging of the growths may be requisite.

E. J.

DOUBLE SEA CAMPION.

(*SILENE MARITIMA* FL.-PL.)

THE Sea Campion is a pretty thing even in its single wild form, as it grows widely trailing over rocks close to the sea, with its root thrust deeply into the rocky clefts. But its double garden form is a much better plant. The doubling of the flower makes it surprisingly large, and gives it almost the look of some good smooth-edged Pink. It is a plant that adapts itself readily to the wants of the rock garden, being handsome both in general effect and in detail, and has the partly hanging habit that is so valuable among well-placed masses of stone. The milk-white bloom and smooth bluish leaves are delightfully harmonious in colour.

Coreopsis verticillata. This perennial sort has something of the feathery lightness of the annual *Coreopsis*, and makes very pretty clumps in good deep soil. The foliage is thread-like in fineness of division, and the flowers, though small, are borne in abundance. They are of a clear yellow without any markings. As it grows only about 2 feet high, it is never straggling. It is perfectly hardy, and increases by underground stems in a moderate manner. The effect of a good clump is very distinct among bolder-leaved things. —T. J. W.

THE FRUIT GARDEN.

APPLES UPON WALLS.

THIS mode of growing the Apple is not often adopted where it succeeds under ordinary treatment, but in cold northern and elevated districts where standard and bush trees are unsatisfactory it may be carried out successfully and with advantage. An instance to bear this out may be cited. At Crimmoigate, Aberdeenshire, which is situated about three miles from the sea-coast, and is far from being a favourable position for hardy fruit culture, Apples as standards and bushes were a failure (I am referring to upwards of thirty years ago). The trees that were grown certainly sometimes had crops of fruit of inferior quality, but were scarcely worth the space they occupied. There were in the same garden two walls devoted to Apples, from which full crops of good fruit were obtained. The trees were excellent examples of skilful culture, being beautifully trained in the fan and horizontal methods, and when thickly clothed with blossoms or carrying crops of fruit they furnished a rare spectacle in that district.

At Goodrich Court, Ross, some varieties are splendidly grown upon walls by Mr. Spencer, viz., Cox's Orange Pippin, American Newtown Pippin, Margil Melon Apple, American Mother, King of Tomkins Comty, Lane's Prince Albert, &c. Fruits from some of these have been successfully exhibited at the Royal Horticultural Society's Crystal Palace shows, and perhaps the best dish of Melon ever exhibited in England was amongst them, and secured a first prize for Mr. Spencer in 1896. This points to the fact that even in our best Apple counties something is to be gained by this mode of culture. By it at least the colour and size of the fruit are improved, while it is easily protected from birds and is less exposed to wind than when grown in the ordinary way. It must not be inferred that I recommend this way of growing the Apple in a general way. Most varieties can be grown well enough in ordinary Apple districts without the assistance of walls, which are too restricted in extent in most gardens to be profitably utilised by the Apple, and delicate kinds, such, for instance, as Calville Malingre and Melon, can be very well dispensed with. It is in districts unsuitable to ordinary culture that I advocate its adoption, and in such a climate as that of Crimmoigate it is certainly deserving of being carried into practice.

In warm situations east and west walls or fences answer well for this purpose, but in cold and elevated places those with south aspects are preferable. The form of the trees is of secondary importance. Fans, horizontals, and cordons answer equally well. In choosing varieties, however, preference should be given to those upon the Paradise stock, as these freely form fruit-spurs and are not too robust in habit. Varieties that bear most of their fruit upon the points of young wood, of which Cornish Gilliflower, Lady Sudeley, and Gaseigne's Seedling are types, are unsuitable. Young trees planted upon rich garden soils are liable to make strong, unfruitful wood, but this can be checked by root-lifting and pruning, and a free-bearing state is thereby brought about.

THOS. COOPER.

LATE APPLES.

THE more fine rich-coloured Apples are seen in January and February, the more is manifested on tasting them how little have they repaid their keeping. Of some twenty or more varieties put before the fruit committee at the Drill Hall the other day as late fruit, not more than two or three had proved to be worth the trouble bestowed on them. All the rest should have been consumed in December. That is not what the public want. Those who desire to have really good fresh, juicy, brisk-eating Apples now and for the next two months should for kitchen purposes secure Prince Albert, Hornsea's Pearmain, Newton Wonder, Northern Greening, Wellington, and Norfolk Beaufin. There are probably no better half-dozen keepers in brisk,

plump condition than those named. All are good, but Prince Albert and Wellington are specially so. Myriads of fruits that in January and February look splendid and firm are found when tasted to be lifeless, mealy, and devoid of flavour. They are several weeks past their best, and beyond that best no variety should be kept. Then of eating Apples for late work, that delicious variety Cox's Orange Pippin, when allowed to hang late and kept in a cool place not too dry, keeps excellently up to the end of January. To follow that there is no better one than Cackle Pippin, one of the very best flavoured of Apples, which has nice crisp flesh. Adams' and Mannington's Pearmain will keep good till the end of February generally, and Rosemary and Brownlee's Russets, Duke of Devonshire, and Sturmer Pippin make up ample for the latest table supply. We get in new Apples very few additions to the latest ones, but many quite early, of which almost worthless section we have so many, and mid-season varieties. Of these latter we have enough to satisfy all needs for the next twenty years. But in that time we must expect to see some fifty new varieties added.

A. D.

TREES AND SHRUBS.

PTEROCARYA CAUCASICA.

SEVERAL tree-lovers, after seeing at its best our remarkable specimen of the above tree, have said that the sight of it was well worth a long journey, an observation that doubtless applies to anything that is the best of its kind, and I think we may claim this for this particular specimen, as all inquiry has failed to discover anything to equal it. It is still growing away rapidly alike in bulk and the spread of its branches, the latest measurements giving the circumference of stem and spread of the branches respectively at 16 feet 6 inches and 315 feet. The fact that the habit of growth of many of the huge branches is not far from horizontal, and about equally balanced on the north and south sides, caused the stem to split at the point from whence the branches sprung. It was not deemed advisable to spend the amount of money that chains and bands would have entailed, so the mischief was partially checked by placing huge props beneath the lower branches. As the latter, however, continued to grow rapidly until the tops touched the ground, the leverage naturally increased, until there was a strong probability the tree would split asunder, so with the view to prevent this I was reluctantly compelled to remove some of the lower branches and so release the strain, I say "reluctantly" because one does not like to remove even a small branch from a handsome tree. But it was absolutely necessary in this case, and the operation was performed so as to interfere as little as possible with its level outline. So far as its summer appearance is concerned, it has not been seen at its best for several seasons, and last year was no exception to the rule, a late spring frost nipping both the young growth and the catkins. The foliage broke again later, but the catkins were nearly all destroyed except a few in the central part of the tree. The early development of leaf and susceptibility to frost are naturally somewhat detrimental to the species as an ornamental tree; but as when seen at its best it is quite unique, it ought to find a place in all large collections.

E. BURRELL.

Chermonth.

GOLDEN ELDER AND PURPLE HAZEL.

ONE of the most effective combinations of hardy foliage trees in the garden can be made by the employment of Golden Elder and Purple Hazel. The only condition needed to make this quite effective is an open situation fully exposed to the sun, so that the full golden leafage may be perfectly developed. If there is the least shade from overhanging trees, the Elder then assumes a dull green and is quite ineffective. No plant that I know will grow better under what might be termed

unfavourable conditions as to soil: it will grow in any kind, heavy or light, and as to its propagation nothing is easier. Stout cuttings 1 foot long of the current season's wood taken off in October, cut square across below a joint, and firmly dibbled into sandy soil, will make nice plants in one year.

Instead of "dotting" the plants here and there in the shrubberies, as is too often the case, mass them together, not less than a dozen, giving them just enough room to make their annual growth. In front of the Elder plant a single row of the

Hazel, giving them sufficient room to stand clear of each other. An annual close pruning of both subjects down to within an eye or two of the base will induce a vigorous growth of young shoots every year and larger leaves, which will be more intensely golden than those coming away less vigorously. During the summer, when the shoots are, say, 2 feet long, nip out the point of each; this also emphasises the colouring. The Hazel, too, may be served in the same way. This yearly pruning ensures a compact growth.

E. M.

PALM HOUSE AT STREATHAM HALL.

THE accompanying illustration represents a view in the famous Palm house at Streatham Hall, Exeter, the residence of Mrs. R. Thornton West. This Palm house is one of the finest in the west of England, measuring 71 feet long and 40 feet wide. It is delightfully planted, Ferns, Palms, and foliage plants being associated with rare judgment and artistic effect.

BOOKS.

A book about lawns and cricket grounds.

We have received a book about "Garden Lawns, Tennis Lawns, Putting Greens, and Cricket Grounds," written by Messrs. Sutton and Sons, of Reading. It is a book fit for the library, well printed, well illustrated, and charmingly produced in every way. The information is thoroughly practical, and should prove of great value in the treatment of garden lawns and cricket grounds. The following extract about "Improving Old Lawns" (p. 25) will show how sound and practical is the information:

"IMPROVING OLD LAWNS.

"Old lawns become thin and bare from various causes, such as poverty of the soil, the encroachment of weeds, overwear, or because the seeds originally sown were not suitable for the land. Stimulating the surface by a vigorous use of the rake is one means of improvement, and the work will be more effective after the lawn has been mown. The immediate effect is apparent ruin, but the grass will speedily recover from the rough treatment and look the better for it. Over the loosened surface sift or lightly press some loam mixed a few days before use with Sutton's lawn manure in the proportion of 7 lb. to 10 lb. of the manure to a medium-sized barrowful of soil, and lightly rake the surface to ensure even distribution. After an interval of ten or fourteen days, sow a mixture of renovating seeds; rake these in, put the roller over the entire surface twice in different directions, and keep birds off.

"The work can be commenced at the end of January or beginning of February, supposing the weather renders it possible; and as the old turf will protect the young grasses from injury by frost, the seed may be sown early in March. An autumn sowing of renovating seeds can, however, often be made immediately the grass can be spared from play at the end of the season, but as a rule it must not be later than the middle of September. After that period sowings have occasionally been made with success, but they are not to be relied on. The possibility, already alluded to, of losing the clovers in winter applies here also, and the sward should be examined in spring to ascertain whether another sowing of seeds is necessary.

"A weak-growing sward may be stimulated by the application of 1 lb. of lawn manure stirred into 10 gallons

"Garden Lawns, Tennis Lawns, Putting Greens, Cricket Grounds." By SUTTON & SONS, Reading. London: Simpkin, Marshall, Hamilton, Kent & Co., Ltd. Price 2s. 6d.



PALMS AND FERNS AT STREATHAM HALL, EXETER.

of water. This quantity will suffice for a rod or perch of land, and it should invariably be administered in the evening. Dry artificial manure scattered over the surface in hot weather will certainly scorch the grass.

"We have occasionally been asked whether a lawn which is thin might not be allowed to thicken its herbage by seeding. A more disastrous course could not be pursued. It has exactly the opposite effect to that desired, by weakening the standing plant without any compensating advantage. The little seed that is produced will be shed by the coarser varieties, and if these seeds, instead of being blown by the wind on to the nearest border, take root in the lawn, the herbage will be deteriorated, and it may take years to remedy the injury."

CORRESPONDENCE.

NARCISSUS PALLIDUS PRÆCOX.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Mr. Arnott, in your last issue, asks for experiences of *Narcissus pallidus præcox*. I have had it growing here for some seven years, since I made my rock garden, and although it took a little time to establish, it has for some years been very happy, and is increasing. I have it planted on north slopes, more or less steep. The soil is fairly light, and our climate here is a very moist one, so that it gets an abundance of moisture. Encouraged by its growth in the rock garden, I have more recently planted it on a grassy bank with the same aspect, where, so far, it seems to be doing well.

SAMUEL TAYLOR.

Bicknall, Harborough, via Leicester.

THE WISDOM OF ROOT-PRUNING.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—I should not have troubled you with further remarks upon this subject had not Mr. Wythes (see page 106) evaded mentioning the real point that I took exception to in his article, viz.: "It is an easy matter to check gross growth at this season, and by so doing ensure a full crop next year." The fact of this having been written, as Mr. Wythes states, early in October instead of at the time published, viz., December 30, does not in the least detract from the misleading nature of the sentence, for, supposing root-pruning is done early in October, it does not ensure a crop the next year. As I before stated, root-pruning, if executed in the autumn, does not guarantee or promote fertility the following year, but it invariably ensures a good show of fruit buds at that time. Your correspondent's remarks about nurserymen's practice of making up their fruit quarters in March or April are not relative to the real question. Surely Mr. Wythes knows that this is not done with a view to ensure a crop of fruit the following autumn, or because it is considered the best season for transplanting, or root-pruning fruit trees for that matter, but simply to fill up vacancies caused by lifting trees to supply customers, and by so doing save wasting ground.

AN OLD PRACTITIONER.

DWARF POINSETTIAS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—In reference to Mr. Crawford's note and question on the above in *THE GARDEN* (page 91) I am induced to send the following remarks: When the plants have finished flowering, they are dried off and stored under the stage of the geranium house, and are removed in April to a heated pit, gradually exposing them to full light and sun. A few cuttings are rooted in June and kept on until September. The old plants are placed outdoors during July, August, and September, keeping them in full sun. The early plants or cuttings are potted on into 2½-inch pots, they grow about 3 feet high with

bracts 20 to 21 inches across. July and August cuttings are put into 6-inch and 4½-inch pots, and they grow from 1 to 2 feet high, with bracts 18 to 20 inches across. The September cuttings are rooted and grown in 4-inch and 3-inch pots, and are from 3 to 9 inches high, with bracts 12 to 18 inches across. Several plants are grown in 3-inch pots, and have bracts 14 inches across. The plants are only shaded while rooting in the propagating pit; at every other stage of growth they are exposed to full sun and cool treatment until early in December. The cool temperature in which they are grown makes them most useful for house decoration. I may add that a quantity of them were exhibited at the Royal Aquarium last December. After being three days there and two nights on the road, I used them out and in pots for house decoration until about a week ago, when the plants were stored away. The Poinsettia is an old plant in our gardens, but a most useful one, and is always admired whenever it is well cultivated. The secret if any is to avoid shade and strong fire-heat and give air freely.

JOHN FLEMING.

Wycham Park Gardens, Slough.

DEEP CULTIVATION OF THE SOIL.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—The discussion which has arisen over Mr. E. Beckett's reference to his method of deep trenching his garden soil at Aldenham shows how much stress gardeners lay upon deep culture. There seems to be two reasons why this deep trenching is not popular in many, and especially in amateurish, directions, the first being the arduous nature of the labour involved, and second the dread lest manuring subsoils should be productive of more harm than good. Now it has been shown that the important element in the Aldenham drastic method of trenching is found in the liberal dressings of manure which such exposed subsoils receive there. That is a feature which too few can adopt; hence those who have brought crude subsoils to the surface too often have, because no special food applications could be furnished, found failure. Now by far the safest course for all who have indifferent manurial means is when trenching, let the subsoil be what it may, to break it up deeply with a fork, or even, if need be, with the aid of a pickaxe. They will thus enable air to penetrate, sweeten, and even to help fertilise such low soils, though left where Nature found them. But if, in addition, there can be added on the surface of these low broken soils a dressing of manure, decayed garden refuse, or other vegetable material that will gradually decay before the topsoil of soil from the next trench is cast on to it, then very great good is done. The manure dressing washes into and becomes gradually incorporated with the crude subsoil, and in that way greatly promotes fertility. In the summer, when the air is heated and the surface soil is dry, root crops are encouraged to go deep into this subsoil, because it is now loose and porous, finding there both food and moisture, so that the gain is then great. But such trenching and manuring benefit the crops for some two or three seasons, and at the end of that period, when trenching again takes place, the poverty, crudeness, or sourness existing in the subsoil in its virgin state has largely disappeared, and a portion of it may be brought to the surface and be incorporated with the surface soil. In that way and by judicious treatment all subsoils are in time made fertile and sweet for some 24 inches in depth, and where soils are naturally deep even to 36 inches. To so great a depth vacant soiling-class kitchen gardens is invariably trenched each winter, and where cropping is judiciously managed, all the vegetable area is thus deeply trenched about every three years. It is only by such gradual process that kitchen gardens, the most productive of all soil areas, have been brought up to their high pitch of fertility. The work was not of one year, but of many. One of the remarkable results of this constant deep working is that areas continue to be wonderfully productive for generations—aye, even for centuries. There is no such thing as soil exhaustion such as we hear of so often in connection

with agriculture to be found in the gardener's vocabulary. The gardener understands that soil is, after all, but a rooting medium, and that it is but needful to replace in it what crops have taken from it to enable it to be productive for ever. But to enable so much, whether temporarily or permanently, to be done, deep cultivation is indispensable. The cause of decay in agriculture is found in lack of deep culture. Gardening, on the other hand, owes its success to deep culture more than to any other cause. Large trees send their hard woody roots deep down into hard subsoil and there find sustenance. Break up and manure these subsoils and the tender roots of garden crops can do the same. That is the basis of the gardener's cultural practice.

A. D.

SIR.—I would advise all those responsible for the articles appearing in *THE GARDEN* on the above subject to endeavour to keep in the proper groove of this interesting subject. I certainly fail to see what part "big Oaks and Beeches" play in this subject (see "E. H. J.," *Hampton Hill*, p. 88) of quick growing kitchen garden crops; also turning up a meadow and getting a good crop of Potatoes (see D. B. Crane, page 89). May I ask if the readers are to take it that this good crop of Potatoes was produced from the bottom 2 feet or 3 feet of clay or sand suddenly brought to the surface and immediately planted? What the readers (including myself) would like to know is how the quick change is brought about in such a wholesale way for immediate planting, especially for the small seed departments. I doubt whether anyone advocating "deep cultivation of soil" has practised it more than myself, as far as my means will allow. The present writers on the subject seem to ignore the chief point, viz., draining. I know what it was some years ago to deal with a plot of ground that had been trenched so many feet deep in clay without draining. When I was called in here it came to my lot to let off tons of water bottled up through this injudicious trenching—this, too, on a hill. In the advice laid down in *THE GARDEN* (January 13), in bringing a London clay to the surface, naturally strikes any practical reader as rather a drastic measure, viz., bringing up about 2 feet of such stuff to be afterwards rendered fit for immediate cropping. To deal with a plot of ground such as stated, consisting of so many inches of top soil, the rest London clay, broken up to a depth of 3 feet, any practical person knows that this so-called London clay must have a considerable amount of opening material added, or it must run together again. I may suggest that it is quite likely that very few would have such an amount at hand necessary to render such clay porous. The most practical way to go about repairing the difficulty is, first, to roughly drain such land, not less than 3 feet deep; secondly, portion off that part of the garden you can spare for burning. Turn this right over right down to drains, then start a fire built with a quantity of faggots and cordwood in the shape of a huge sugar loaf, fill up the opening with fine wood, then build the London or heavy clay 1 foot thick all over this, adding small coal to each layer when you have covered the whole pile of wood in, except one side where you intend starting the fire at top. It will astonish a novice the amount of material or clay this class of fire will burn. These fires are governed by feeding or adding the clay as the fire shows through, and adding the coal-dust more or less according to the way it is burning. It should leave the clay a mild ballast material, not burnt to a hard ballast. Burn about half the clay that is brought to the surface. This should again be well mixed back through the remaining part of the clay as the trenching again proceeds with other light material at hand. The workable surface will again be brought back to the top again, to be dealt with in the ordinary way. One will now have from 3½ feet to 4 feet of good a-rated soil, and the roots of kitchen garden plants will go well down amongst it. Deep cultivation of suitable soils is quite different to that of dealing with a London clay. Let any practical person consider the amount of opening material it would take to render 2 feet of heavy clay brought to the surface workable for any ordinary kitchen garden, &c., and also consider

what sort of a pincushion look the quarters of a kitchen garden would appear like, also what the walks would look like after a storm. I maintain that the only practical way to deal with a London clay is to well drain, and otherwise render it workable by fire, but on no account prefer the bottom clay to the existing workable top spit, otherwise the plot will be ruined for some considerable time. I have just recently had to deal with a so-called London clay where the men could hardly relieve their tools. Now, to bring such conditions to the surface would be nothing short of madness. However, I dealt with this special plot quite another way, which I hope to convey by permission later on, the success of which has been a great pleasure to more than myself. I can only again add that no practical person can ever run against good deep cultivation, but to try to convey such drastic measures as some would suggest is absolutely unjust to any novice. It cannot be too strongly impressed that a London clay is quite different to a strong loam. The latter is a gold mine compared with the former. I thank Mr. Beckett for his reply (page 109). I hope to be clearly understood. My objections are burying a good top spit, to be replaced with what is known as a London clay, which Mr. Beckett now informs us is very simply dealt with, by drawing drills in it and filling the same with fine soil for seed sowing. Now I wonder what practical gardener would ever bury a good top spit 3 feet deep, and expect it to have the magnetic power to draw down roots of kitchen garden material through 2 feet of the so-called London Clay. Now I am quite sure Mr. Beckett would not have us believe that he pursued this practice to produce the long tapering roots of Carrots, Beetroots, Parsnips, &c., which he so well exhibited in London last autumn.

JAS. R. HALL.

For Warren, Cobham, Surrey.

NOTES OF THE WEEK.

Gardeners' Royal Benevolent Institution and the annual dinner.

We are pleased to know that the Duke of Bedford has consented to occupy the chair at the sixty-first festival dinner of this association, to take place at the Whitehall Rooms on May 18 next.

Veronica spicata. The term "spicata," as applied to a *Veronica*, is not particularly determinate, hence it is not surprising to find in trade catalogues that an illustration of *V. longifolia* usually does duty for *V. spicata*; and so does the plant. The difference between the two, however, is well marked. *V. spicata* is really a dwarf, evergreen, slowly-creeping plant with somewhat broad dark green leaves, whence arises a stout spike of blue flowers in summer. It can be readily increased by division, as the stems root as they grow, and makes a good edging plant, always neat and tidy. It seems to me to do best where it can get a rather moist soil. T. J. W.

Leucopogon lanceolatus. In the days when hard-wooded plants were more generally grown than they are at present, this *Leucopogon* figured among the popular members of this class, but now it is rarely seen, though when in good condition it is a charming little greenhouse shrub. It forms a freely-branched bush, clothed with bright green lanceolate leaves, while the little pure white blossoms are borne in nodding racemes, and in such numbers that the plant is quite veiled with them. This *Leucopogon* is nearly related to the *Epacris*, and needs much the same treatment. It forms effective little flowering specimens in pots 5 inches or 6 inches in diameter. T.

Seeds of Crinum pensense. In the issue of THE GARDEN for January 6 I read the short note by Mr. Thompson, of Ipswich, on his experience with the seeds of *Crinum pensense*. This interested me the more, as but a short time previously I had read the similar experience that had come under the notice of Dean Herbert, an account of which was set out at some length by him in his letter on "The Production of Hybrid Vegetables," in the fourth volume of the Transactions of the Horticultural Society. In this he mentions that the seed capsule gathered from a

bulb of *Panercatium amboinense* which he had given to Lord Milton on being opened by that nobleman's botanic gardener was found to contain perfect turgidated bulbs. Dean Herbert said he greatly regretted not having had the opportunity of opening the capsule himself, as he suspected the bulbs to have been attached to withered seeds that had sprouted prematurely in the capsule. He mentions also that one of these little bulbs before it had sprouted produced within the outer coat an offset as big as itself, or rather it had divided itself into twin bulbs of equal size. Mr. Thompson does not mention whether the small bulbs were contained in the capsules or whether they were growing with the old seeds attached, there being some interest on this point, as Lord Milton's gardener was very positive that there was no other body in the seed-vessel.—REGINALD R. CORY, *Duffry, near Cardiff.*

Notes from Baden-Baden. Winter has passed mildly, but mostly sunless, dull, and rainy; in consequence bulbs in and outside have not done so well as usual. Nevertheless, *Crocus Boryi*, *C. marathonicus* and *C. atticus* began to show their buds in November, and readily opened after a glimpse of an hour's sunlight. The flowers of the first are pale lilac, feathered with violet-red, those of the second are large and pure white, and those of the last are bright blue, shaded red. All three are best kept either in a frame or in pots to adorn the greenhouse. Since December *Galanthus Whittallii* has been in bloom; it seems a very robust species which stands the inclemency of the season. Now the loveliest of bulbous Irises opens its buds; it is most likely a new species or a very distinct variety of *T. histrioides*; the flowers are large, of a pure satiny white adorned by an orange-yellow crest. Now also begins the blooming period of *Cyclamen libanoticum*. I beg to draw the attention of specialists to this new species, which, besides other qualities, is also hardier than persicum. I am convinced that, by cultural evolution, after a few generations *libanoticum* is likely to supersede or at least rival *C. persicum*, my conviction being based on the comparison of the flowering or collected wild bulbs of both species. The heart-shaped, comparatively large leaves of *libanoticum* are of a glossy blackish green, broken by a well-defined greyish zone; the flowers are very broad in shape and variable in colour, from white to deep rose, with crimson blotches on each of the segments. MAX LECHTLIN, *Baden-Baden.*

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

UNEXPECTEDLY, the frosty weather prevented many would-be exhibitors from bringing their flowers to the first February meeting of the society. Usually the exhibition at the Drill Hall on the occasion of the annual meeting is one of the most interesting of the whole series, but in spite of weather trials there was a good display, as the following report testifies.

FLORAL COMMITTEE.

A large and very effective group of the stellate form of the Chinese *Primula* was exhibited by Messrs. Cunnell and Sons, Swanley, Kent. The collection was awarded a silver Flora medal; it contained several varieties, among which were Miss Irene, rose; Purple Star; Lady E. Dyke, having pretty white flowers and bright green leaves; Mrs. H. Cunnell, also pure white; Queen of Roses; and Princess Eva, almost white, but with a slight tinge of pink.

A bright and pleasing show of colour was made by a group of Persian *Cyclamens* belonging to Mr. John May, St. Margaret's, Twickenham. The plants were splendidly flowered and the individual blooms exceptionally fine. This group also obtained a silver Flora medal.

Another pretty group was that of the useful evergreen greenhouse *Clematises*, *C. indivisa* and *C. indivisa lobata*, which won a silver Flora medal. The plants were in pots. We have never seen a more charming display of this climber, and such a display should increase its popularity for pot culture. One usually finds that the plant is grown simply as a climber. Shown by Messrs. William Paul and Son, Waltham Cross.

A silver Banksian medal went to Messrs. John Laing and Sons, Forest Hill, S.E., for an excellent display. It included a variety of foliage plants, *Crocus Webbiana*, some fine *Lilies of the Valley*, *Azaleas*, &c.

Messrs. Barr and Sons, King Street, Covent Garden, staged a small group of miscellaneous plants, among which were *Lachenalia Garnet*; *Lachenalia pendula*, a red form; *Narcissus minutus*, the pretty *N. cyclaminus*, both the white and sulphur-yellow; Hoop Petticoat *Narcissus*; *Primula obconica grandiflora*, and *Galanthus Elwesii* var. *Whittallii*, figured in THE GARDEN for January 20.

Messrs. J. Veitch and Sons, Chelsea, were again the exhibitors of a stand of their pretty greenhouse *Rhododendron* hybrids, showing a variety of delicate tints.

Two plants each of *Astilbe* W. E. Gladstone and *Astilbe* H. Whittier were brought before the committee by Messrs. van Waveren and Kruijff, Haarlem, Holland.

Mr. William Smythe sent a small semi-double mauve zalea named *Mauve Queen*.

Colonel Platt, C.B., Cordinog, Llanfairfechan, North Wales (gardener, Mr. W. Coates), showed specimen blooms and leaves of Chinese *Primulas* Princess May, Lady Sarah Wilson, Red Stem Queen, all having large white blossoms, Lady Sarah Wilson being new; Cunnell's Pink and Improved Holborn Blue, of a somewhat deep colour. The committee requested that plants be sent.

Sir Trevor Lawrence, Bart., Burford, Dorking (gardener, Mr. Bain), sent trusses of bloom of *Begonia semperforens* *Boule de Neige*, white, and *Triomphe de Lorraine*, bright red, both semi-double. In this case also plants were asked for. We think these *Begonias* will create considerable interest; they are quite distinct and fresh in colour.

Three fine new *Camellias* were exhibited by Messrs. F. Sander and Co., St. Albans. They were *Lady Buller*, rose, and almost single; *Lady Roberts*, pink, edged with white; and *Lady White*, white with splashes of red; both the latter are semi-double.

Mr. William Bull, 536, King's Road, Chelsea, showed specimen blooms of his strain of Chinese *Primulas*, including the new *Blushing Beauty*, a pink, semi-double form, and *Duke of York*, deep crimson.

ORCHID COMMITTEE.

Mr. R. E. White, Ardarauch, sent several good cut racemes of *Odontoglossums*, including *O. crispum*, *O. Histro*, three fine spikes of *O. Andersonianum* and a variety of *O. triumphans*, which resembled to a great extent the natural hybrid *O. excellens*.

Captain Holford, Westonbirt, Tetbury, Gloucester, sent a remarkably good form of *Cattleya Trianae*, *Cypripedium Calypso* Oakwood variety (a superior form of *C. nitens* variety), and *Mons. de Carthe*.

Mr. C. J. Lucas, of Warham Court, sent *Dendrobium macrophyllum* *Richardii*, a somewhat distinct variety of this shy-flowering species, to which a botanical certificate was awarded. The sepals are pale green, the petals yellow, the lip green, spotted with brown on the front lobe, lined with brown on the side lobes.

Mr. F. A. Rehder sent *Cypripedium Favarger*, a hybrid raised from the intercrossing of *C. Charlesworthii* and *C. concinnum*. The dorsal sepal is white, suffused with rose at the top, deep brown at the base; the petals greenish yellow, suffused with brown; the highly-polished lip deep brown, shading to green at the base.

Mr. W. Cobb, Dulcote, Tunbridge Wells, sent a fine form of *C. nitens*, *Laelia anceps*, *Stella*, and *L. Sanderiana*, each with five flowers on the raceme.

Mr. Chas. Maron sent *Laelia-Cattleya Ernestii* var. *pallida*. The sepals and petals yellow; the lip yellow, veined with maroon. It was derived from the intercrossing of *Laelia flava* and *Cattleya Percivaliana*.

Mr. E. W. Moore, Glasnevin, was awarded a botanical certificate for a cut raceme of *Zygopetalum Murrayanum*, a curious variety with green and white flowers.

Mr. J. Gurney Fowler, South Woodford, sent cut flowers of *Cattleya Trianae* (Glebelands variety), the flower having a very bright-coloured lip; *Laelia-Cattleya Miranda* (*Trianae* × *guttata* Prizii), with a five-flowered raceme, showing the intermediate characters of the parents; *Cypripedium woodfordense* (*Chamberlainianum* × *beechense*) and *C. Chamberlainianum*, showing the influence of the parents indicated in the name.

Messrs. Heath and Son, Cheltenham, sent a pan of finely-flowered plants of *Dendrobium barbatulum*.

L'Horticole Coloniale sent a grand form of *Odontoglossum crispum*, a finely-spotted *Odontoglossum Ruckeraeanum*, and *Cypripedium Schusterianum* (*villosum* × *volonteanum*). The influence of the combined parentage is most pronounced in the offspring, the yellow of *C. villosum* being particularly prominent.

Mr. N. Cookson sent *Calanthe Sybil*, pure white; *C. Phoebe*, bright pink; and the remarkable *Odontoglossum crispum* *Cooksonii*, with white and purple-spotted flowers of fine shape and substance measuring 4 inches in diameter.

FRUIT COMMITTEE.

The chief features before this committee were the two very fine collections of Apples from Kent and Herefordshire and a splendid exhibit of Rhubarb, Seakale, and Asparagus from Twickenham. A good number of seedling Apples were also shown, but all failed to get an award.

An award of merit was awarded to Rhubarb *Daw's Champagne*. This variety has a very good stalk, and is the result of crossing *Victoria* with *Hawke's Champagne*. It is earlier than the last-named excellent variety, is of better colour, and larger. This valuable forcing Rhubarb was sent by Mr. W. Poupert, Marsh Farm, Twickenham.

Messrs. G. Bunyard & Co., Maidstone, exhibited 100 varieties of Apples, all excellent as regards size and variety. There were some splendid cooking kinds. Mention must be made of the Afriston and Stone's, very fine dishes also of New Hawthornden, Annie Elizabeth, Peasgood's Nonsuch, Bismarck, Lane's Prince Albert, Royal Jubilee (an Apple well worth extended culture), and Mère de Ménage, the latter being highly coloured. There were also some grand dessert fruits, these being perfect in shape and colour. Among them were several good russets, such as Egremont and Royal, the newer Mrs. Phillimore, Lord Burgley, the Mother Apple, Winter Pearmain, Winter Ribston, Golden Reimette, and others, well meriting the silver-gilt Knightian medal awarded.

From Mr. John Watkins, Pomona Farm Nurseries, Withington, Hereford, came such a collection of Apples as is rarely seen in the metropolis, as there were some beautiful local varieties well worth notice; and to the fruit grower this collection was most interesting, as it shows what a wealth of

really beautiful fruits we have in the western portion of the country. Out of a hundred varieties it is impossible to name many. In the dessert section the colour was superb, and there were splendid dishes of Stoke Edith Pippin, Cowarne Seedling, a beautiful fruit, Lord Rindlip, Frankins Golden Pearmain, Emily Child, and Napoleon. In the cooking class were beautifully coloured fruits of Lord Beaconsfield, Newton Wonder, Beauty of Kent, Rymer, Tyler's Kernel, Bramley's Seedling, Hollandbury, Nelson's Codlin, and others. A silver-gilt Knightian medal was deservedly awarded.

Mr. W. Pompart staged four varieties of Rhubarb, a splendid example of culture, the varieties being Hawkes Champagne, the Victoria, Limons, and the new Daws Champagne, given an award of merit. He also sent some splendid heads of Senkale and Asparagus. A silver Knightian medal was given to this collection.

Some excellent Asparagus was staged by Mr. F. W. Campion, Reigate, in two varieties, Conover's Colossal and a newer kind, Sutton's Perfection.

A new seedling Apple, Melndoe's Russet was sent by Messrs. Veitch, Ltd., Chelsea. It is a New Zealand fruit, and of great merit on account of its good keeping qualities.

From Messrs. Lane & Son, Berkhamsted, came also a new Apple, a sport from the old Blenheim Orange, excellent in quality and quite distinct, being of a deep red colour. This just missed an award, some of the committee thinking it resembled the parent too closely.

The Duchess of Cleveland (gardener, Mr. Camio), Battle Abbey, Sussex, sent excellent Apples under the name of Sturmer Pippin, but they were thought to be Lord Banghley.

A new seedling Apple named Aurora, a pretty small dessert variety, was sent by Mr. W. Bull, Ramsden, Essex.

Apple Nancy Jackson was sent by Mr. Geo. Holmes, Acomb, Yorks. This is a favourite north country fruit, and an excellent cooker and keeper.

Mr. P. Crowley sent Quince jelly to show its value as a preserve. It was of excellent quality and good colour.

A hearty vote of thanks to the chairman (Mr. P. Crowley) for his services to this committee during the past year was proposed and suitably responded to, and he also thanked the members for their kindness and assistance.

ANNUAL MEETING.

There was a large attendance at the annual meeting on Tuesday, and it was certainly the most interesting and pleasant gathering that has been held for many years. The president (Sir Trevor Lawrence, Bart.) was in the chair, and near him were Sir John T. D. Llewelyn, Bart., M.P., Mr. J. T. Bennett-Poe, Mr. F. Du Cane Godman, F.R.S., Mr. T. E. Hayward, Mr. Frederick Lloyd, Mr. R. McLachlan, F.R.S., Dr. Müller, Mr. A. H. Pearson, Mr. Charles E. Shea, and the Rev. W. Wilks.

The minutes of the previous meeting having been read and confirmed and candidates elected, Mr. Bunyard said the best thanks of the members were due to the retiring members of council, and he mentioned that one had kindly consented to act again, namely, Sir John T. D. Llewelyn, Bart., who through many years has proved a true friend to the society. Sir Trevor Lawrence, Bart., the president, then reviewed the work of the past year set forth in the annual report. He first alluded to the completion of the catalogue of the Lindley library, and that the books are now encased in glass covers, which is, of course, in London in particular, a great gain, and referred to the part played by Mr. Elwes in making this change. Mr. Elwes had promised a valuable addition to the library if the books were protected. Sir Trevor incidentally mentioned that he knew the Fellows would sympathise with Mr. Elwes in his anxiety concerning his only son severely wounded in the war. There was a growing demand, he said, for gardeners who possessed a sound practical and scientific knowledge. The shows at the Drill Hall had fully maintained their character, and the exhibition that day would have been of greater extent if the weather had not been so unpropitious. The chairman referred to the new plants, fruits, and vegetables shown at the meetings, and that many plants almost new, so rare had they become, were exhibited, and displayed signal excellence of culture. A large number of awards was given, and the various committees devoted much labour to the work of adjudication, coming frequently from long distances to be present. Sir Trevor Lawrence said the warmest thanks of the society must be given to the members.

Reference was made to the Temple show and the demand for space, but the chairman said that the benches considered that sufficient tent room was provided according to the size of the gardens.

Then mention was made of Mr. Wright's good work at Chiswick and amongst the young men there, and this called forth considerable applause from the audience. The hybridisation conference was alluded to, and in feeling terms the chairman referred to the death of M. Henry de Vilmore.

Sir Trevor Lawrence Bt., hoped the Fellows would make up the £100 required to be raised by subscription to continue the fruit show at the Crystal Palace. The examinations, he said, help young men to further endeavours, and said that the possession of one of the society's certificates was of great assistance to a young man in obtaining a place. Then the new charter was touched upon, and it is interesting to know that now retiring members of the council can be re-elected the same year. The bye-laws must be drafted, and the work had been confided to a special committee.

We should have mentioned previously that the labours of the committee dealing with Orchids received warm praise. The centenary was approaching, and such matters as the new garden were touched upon. A garden had become necessary, as Chiswick was now surrounded by houses. The new garden must be within reasonable distance of London, with proper soil, water supply, etc.

Sir Trevor Lawrence then said that this was the only Western European country without a school of horticulture, and thought, with co-operation from county councils, it was a work the Royal Horticultural Society could pursue.

The financial position of the society was satisfactory, there

being a surplus this year of £1764, the largest that there has ever been in its history. The chairman paid a hearty tribute to the Rev. W. Wilks' good work, to the treasurer, Mr. Philip Crowley, and others.

Professor Henslow moved the adoption of the report, and spoke of Mr. Wright's good work and kindly consideration at Chiswick. He said he was gratified with the success of the lectures he had given to the young men last winter, and hoped to again speak to them next season.

Mr. Cheal was pleased to know the society was prospering, and hoped that an opportunity would be given for discussing the bye-laws before they were passed. He drew attention to the sum of £47 for Orchid pictures.

Mr. Geo. Paul said he hoped the new garden would be freehold, and Sir Trevor Lawrence said that it was the intention of the council to obtain the ground under this condition.

Mr. E. Dean also spoke, and Mr. Cheal proposed that a hearty vote of thanks be given to the president. The report was a splendid record, and the Fellows should feel grateful to the president. In reply, Sir Trevor Lawrence heartily thanked the members for their kind vote of thanks, and said that the council and the Rev. W. Wilks deserved unstinted praise for the work they had performed.

The vacancies of retiring members of the council were filled by appointing Mr. E. Du Cane Godman, F.R.S., Sir John Llewelyn, Bt., and Mr. Arthur J. Sutton.

Mr. Bunyard moved, and Mr. Geo. Paul seconded, that a vote of congratulation be sent to Sir Michael Foster upon his election as M.P. for the London University.

[Novelties certificated or given awards of merit at the Royal Horticultural Society's meetings are described under "New and Rare Plants."]

HORTICULTURAL CLUB.

A DELIGHTFUL evening was spent on Tuesday last at the Horticultural Club. It was the occasion of the annual dinner. Sir John Llewelyn, Bart., occupied the chair, and we were pleased to see the Rev. H. Honywood D'Unbrain present also. Several speeches were made, relieved with music. Mr. Bunyard was responsible for the arrangements of the dinner and music.

CARDIFF GARDENERS' ASSOCIATION.

ON Tuesday, February 6, Mr. T. Malpass gave an extensive lecture on the use of the Begonia for decorative and bedding purposes before the members of this association. Mr. H. Farmer occupied the chair. The debate was of a lengthy character, and many hints were thrown out as to a safeguard to rust and yellow thrips.

AUTUMN SHOW OF THE ROYAL CALEDONIAN SOCIETY.

THIS will be held in the Waverley Market on September 12 and 13, 1900, and there is little doubt that it will prove a great success. There are 261 classes in the schedule, with prize-money to the amount of £381. A large fruit class should prove interesting; it is for the best decorated table of dessert fruit, 10 feet by 4 feet 6 inches, 16 dishes of fruit to be staged, the kinds being Melons, Grapes, Apples, Nectarines, Peaches, Pears, Apricots, Figs, Plums, Cherries, and Strawberries. The prizes presented by the Corporation of the City of Edinburgh are £7, £5, and £3, for first, second, and third prizes respectively.

BRISTOL AND DISTRICT GARDENERS' ASSOCIATION.

THE fortnightly meeting of this society was held at St. John's Parish Room, Redland, on Thursday, 8th inst. Mr. W. Graves presiding over a good attendance. Mr. Rogers, of Stapleton Hill, supplied the paper, which was on the subject of tuberos Begonias. Dealing with the culture of the plant, he said seed should be sown in January in a temperature of 60 to 70°, pricked off as soon as possible, and kept potted as growth proceeded. The soil recommended for all purposes was loam, leaf-mould, and sand. For the greenhouse the plants should be kept in a light house and as near the glass as possible, a damp atmosphere being the best for them. Mr. Rogers strongly urged the use of Begonias for bedding purposes, and gave much valuable information regarding the culture for this purpose. A good discussion followed, and Mr. Rogers was accorded hearty thanks for his attendance. Prizes for Orchids in bloom were awarded to Messrs. Bannister and Newberry, and a certificate of merit to Mr. Maddock for a well-grown pan of Cyclamen.

ENGLISH ARBORICULTURAL SOCIETY.

WE have received from the secretary, Mr. John Davidson, part 2, vol. iv., of the transactions of this society. It forms a volume of considerable interest and importance, and contains accounts of the annual general meeting held in August last, excursions to English gardens. "The Pruning of Trees," by Mr. H. C. Lock, of Perth, and Mr. W. Forgan, of Alhwick; "The Different Kinds of Fences (Dead and Alive), their Cost, and the most Suitable Place for each kind of Fence," by Thos. Bewick, Ravensworth; "The Preparation of Land for an Estate Nursery, and the steps to be taken in starting the same," by Wm. Forbes, Swinton; "Notes on Larix leptolepsis," by J. R. Brown, Atrincham; "The English Arboricultural Society's recent Excursion to London and Neighbourhood: What was seen, and what advantages the members derived therefrom," by J. Ed. Dalgleish, Bishop Auckland; "Scale Insects," by A. T. Gillanders, Alhwick; notes and comments, subjects for essays for the present year and various other details. The book is illustrated. There are views of the Rock Garden, Kew; of the River Thames, from Richmond Hill; of the Terrace, Richmond; of Windsor Castle, East Front; The Long Walk, Windsor; the illustrations being of the places visited by the association.

COMMONS AND FOOTPATHS PRESERVATION SOCIETY.

AT the usual monthly meeting of the Commons and Footpaths Preservation Society, recently held at 4, Great College Street, Westminster, the Rt. Hon. G. J. Shaw Lefevre presiding, the report of the society's solicitor, Mr. Percival

Birkett, on the private Bills to be dealt with by Parliament during the current session was considered. It appeared that 42 Bills come within the purview of the society, which in the aggregate threaten to absorb nearly 3000 acres of common land and a large number of rights-of-way.

Among other Bills to which exception was taken by the society, and which it was resolved to vigorously oppose, in the event of satisfactory terms in the public interests not being forthcoming, are the Huntingdon Corporation Bill and the Hoylake and West Kirby Improvement Bill. Under the former Bill power is sought by the Huntingdon Corporation to deal with 336 acres of common land in its area. Of this large extent of open space it is proposed to allot only 10½ acres for the purposes of a public park, the remaining land to be sold, let on building leases and otherwise dealt with. This Bill was felt by the society to be a serious attempt to avoid the machinery constituted by Parliament under the Commons Act, 1876, for the safeguarding of public interests, and it was unanimously resolved on the motion of Sir John Brunner, Bart., M.P., to oppose the Bill in Parliament. The society also determined to oppose in its present form the Hoylake and West Kirby Improvement Bill, on the ground that its provisions are likewise contrary to the principle of the Commons Act. It is proposed under the Bill to allot about 108 acres of the common lands in the Manor of Great Meods to the persons legally interested in the land for building and other purposes. A further 88 acres of land would be devoted to recreation grounds and the provision of public streets, while 45 acres (partly reclaimed) would be developed to defray the cost of the construction of a sea-wall.

Exception was also taken to provisions in the Great Northern Railway and London County Council (General Powers) Bills. The former Bill proposes to give the company power to absorb 42 acres of Hexthorpe Ings, Doncaster, and under the latter Bill, an effort is being made to enable the Battersea vestry to deal with 11 acres of allotment land set out under an Inclosure Act (4 & 2 Will. IV., cap. 42). Part of the land is to be utilised for workmen's dwellings. In 1888 the Battersea vestry promoted a Bill to enable it to build on the land, but in face of the strong public opposition evoked, the Bill was withdrawn.

Amongst the water-schemes proposing to deal with common land are the East London Water, Exmouth and District Water, Paignton Urban District Water, and the London Water (Welsh supply) Bills. These affect over 1700 acres of common land, and the society determined to endeavour to secure the insertion of clauses in the Bills to give the public a right of recreation over the large catchwater areas which it is sought to establish on the commons involved.

THE ROYAL SCOTTISH ARBORICULTURAL SOCIETY.

THE annual meeting was held at No. 5, St. Andrews Square, Edinburgh, on the last day of January, the Earl of Mansfield, the president of the society, in the chair. There was an excellent attendance, and the routine business consisted of the re-election of office bearers, presidents, vice-presidents, council, secretary, treasurer, auditor, honorary scientists, and local secretaries. Votes of thanks and of sympathy by Mr. Mackenzie were proposed for lost members, especially the Marchioness of Lottian. It was then decided not to visit France this year as was intended, but that the excursion should be to Ayrshire or the north. Also that the promised international forestry exhibition in Glasgow in 1901 should not be held. Then two additional orders of members were established, the first to be called honorary associate members to have all publications gratis and pay no subscription; the second, that on the recommendation of the University lecturer, the senior student of the University class on forestry shall be made an honorary associate member. This is to have effect for five years from January 1, 1899.

A motion by Mr. George Fraser, factor, Dalzell, Motherwell, that at all general meetings of the society the members shall be entitled to vote by proxy, was opposed by the council and defeated by vote, with 25 against and 6 for. The council's and also the treasurer's reports were adopted, showing a credit balance on the capital account of £154 15s. 6d., and on the revenue account £130 0s. 0d. Since the close of the year the society had invested £200 of this sum in the Caledonian Railway Company. The death-rate of the society had been heavy during the year, but they had gained many others. At their last meeting the total membership was 892, of which 612 were ordinary members. At the present time there were 834 on the roll, 32 having been admitted during the year.

The Earl of Mansfield then gave a most suggestive and practical address on the training of young foresters; this was in brief to adopt the three years' apprentice system that had proved so effective in rearing good gardeners. He also recommended the better housing of foresters in lodges for fellowship and educational and social stimulus, likewise some training in farm work and the establishment of a registry for foresters, so that they might feel that they belonged to an independent profession.

As Lord Mansfield's curriculum may prove most useful to other landlords, we have pleasure in giving it here:

First year. Instruction in the home nursery, so as to make himself familiar with the different varieties of trees, their propagation and general treatment.

Second year. Instruction in the formation of plantations and their management, including fencing, hedge treatment, rough carpentering, and perhaps road making and bridging.

Third year. Learn something of the felling and management of timber, value of standing and fallen timber, and also the working and management of sawmills. Arrangements might also be made for retaining the apprentices as journey-men or foremen foresters on the same or other estates.

After some remarks by Mr. J. R. Mackenzie, W.S., on the relation between the forester and the gamekeeper, on the motion of Mr. Alexander Milne a vote of thanks was passed to the Earl of Mansfield. Dr. Nisbet, F.L.S., followed with a most interesting and instructive address on the present condition and future prospects of forestry in Britain. The subject at best had received but scant and spasmodic attention. Gracefully advertising to the assistance given by the

society, he went on to contend that the £18,000,000 worth of coniferous wood annually imported into this country could easily be grown in different parts of the British Isles. He then went on to show that the exhaustion of the forests of Germany and the United States were threatening. British supplies from Canada and the Baltic. The days of cheap timber in Britain were nearly at an end. Characterising British woodlands in the language of Sir Herbert Maxwell as largely pleasure grounds and game covers, he condemned dense planting and injudicious thinning. Woods to pay must be managed on some far-reaching plan. The rating of woodlands might also be lowered or abolished, and money lent at cheap rates for extensive afforestation.

Mr. James Kay, of Bute, followed, with a pithy paper on the afforestation of waste places of the country, and suggested that some of the spare time of our soldiers might be turned in this direction to the improvement of the physique of our troops, the securing of more and better recruits from the rural districts than the towns, and doing something to link more of the rural population to the land through bettering the condition of the common soldier.

The members of the society dined together in the Royal British Hotel in the evening, Lord Mansfield in the chair. After the usual loyal toasts, Mr. James Macdonald, the secretary of the Highland and Agricultural Society, proposed the toast of the Royal Scottish Agricultural Society, and in doing so adverted to the connection between forestry and agriculture, and hoped that more attention would be given to forestry in the future. The chairman, in responding, referred to two things that he found so common: profound ignorance of the society and great admiration for it. He invited all to come near enough to become useful members and render them some help at close quarters.

The Master of the Merchant Company, Mr. John Macmillan, submitting the toast of "Forestry Instruction," spoke of the necessity of improved forestry as a matter of national importance. He mentioned that the percentage of the average of the country under forest was smaller in Britain than any country in Europe, not excepting Holland and Denmark. "The small state of Belgium, with the densest population of Europe, had a forestry area of nearly five times greater in extent than this country. Dr. Nisbet, in reply, noted what was being done by the Indian Government, and observed that the failure of crops and constant famines in that country were to a certain extent due to the devastation and clearance of national forests to an extent almost beyond the power of man to replace. He strongly advocated the institution of a chair of forestry in the country, and appealed to the Merchant Company to assist the society in this direction.

Professor Bayley Bolton, professor of the Royal Botanic Gardens, Edinburgh, proposed the health of the president, and other toasts followed, and the forty-seventh annual meeting of the society proved one of the most pleasant and profitable that has yet been held.

Index and Editorial Notices will be found amongst the advertisements.

ANSWERS TO CORRESPONDENTS.

Names of plants. A. Y. Z. I. Begonia Arthur Malei; 2. B. nitida; 3. B. corallina; 4. B. Carrieri villosa; 5. B. Gloire de Semeur; 6. B. argenteo-guttata; 7. Maranta Makoyana. S. W. W. Probably a seedling form in the way of Cupressus Lawsoniana argentea.

KITCHEN GARDEN.

Peas (R. C.). So much depends upon your requirements. For earliest supplies sow early in March such kinds as Bonitaful, Bony or Boston, Unrivaled, these will mature in June. For July use sow at the end of March Shraples Queen, Stratagem, Dr. Maclean or Telephone. For August sow in April at the middle of the month Antocrat or Peedless Marrowfat or any strong growing Marrow variety. For later supplies sow in May and June such kinds as Ne plus Ultra, Windsor Castle, or the Michaelmas Pea. Any of the varieties named sown as advised are reliable.

Early Radishes (J. J.). Very many persons like yourself ask, and naturally so, why, seeing the Early Olive or French Breakfast Radishes looking so lovely in colour and so fresh and crisp in the shops, they cannot also have such in their own gardens. It is easy to do so, as seed is always readily obtainable and cheap. But still, it is all a matter of culture. Place a frame on the soil in a warm border, then throw into it several barrowloads of short, well-mixed stable manure, and level it and tread it down; then strew 2 inches of good fine soil over the surface, sow the seed thickly, and water it. Then, shutting the frame close and covering it up for a few days, the warmth generated in the manure will soon germinate the seed and in about eight days the soil should be thick with plants. Remove the covering and give a little air behind. One other watering may be needed, but in any case there should be plenty of Radishes to pull in about six weeks. If you cannot spare a frame, make a bed outdoors by throwing out the soil 4 inches deep, tilling up with manure and adding soil. Then sow the seed, water and cover it up until growth has begun. Even then give cover at night-time.

Peas for crop (ALFHY). The choice of good Peas is indeed great, for there are scores of good varieties in commerce, nearly all producing Peas of the best marrow quality. We certainly advise you to prefer those of medium height. That is, from 3 feet to 3 feet 6 inches to quite tall ones. Of these Peas of medium height, quite early ones are Gadus, May Queen and Bonitaful, then follow Senator, Magnum Bonum, Peedless Triumph, the Queen and Antocrat. This is really a first-rate selection, coming in in the above order. Peas of this height should be sown in drills fully 3 feet apart and quite

thinly. A quarter of a pint should sow a drill of from 20 feet to 25 feet. This comparative thinness enables the plants to branch as they grow, and they crop longer. Your first sowing of one of the earliest should be made at once on a warm border, the others following in succession once a fortnight.

FLOWER GARDEN.

Seeds of Mistletoe. "Medway, The Grange, Bromden, Cranbrook, asks if some reader of THE GARDEN would be so good as to send him a few Mistletoe berries when fully ripe for sowing.

Sowing Poppies in turf. "K. S. S. asks for advice about sowing Shirley Poppies on a piece of rough lawn. It is not usual to sow Poppies in turf, and we are doubtful whether they will do much if sown among grass already established, although they would be likely to thrive if sown with grass seed on ground otherwise bare. However, to answer the question as nearly as we can, the best way would be to lightly scratch the turf with a rake and sow the seed very thinly broadcast and then to roll the turf. This should be done in the end of August, or beginning of September at latest. The Shirley Poppies, being the most nearly related to the wild field Poppy of all our garden kinds, would be more likely to succeed than any others.

Lawn weeds (GLOSTER). Only persistent extracting weeds from a lawn will keep them down, but the work wants to be done methodically. The proper course is to strain a line across a portion of the lawn, marking off a width of 3 feet; then employ a sturdy woman or girl for they usually do the work better than lads armed with a weed fork and a basket, to begin at one end and clear all the weeds from the yard width. When that is cleared, then clear another yard, and so on until the entire lawn is done. Then topdress with fine soil, well raking it in, and roll frequently. The grass will soon grow over and fill the vacancies created by pulling the weeds. These pests usually give most trouble in dry weather, when the grass is less strong.

Primroses sowing seed (J. S. C.). By the term Primrose we assume you mean all those grown in gardens. Polyanthus as well as Primroses, as all need the same treatment. In ordinary good garden soil and during a fairly moist season it is sufficient to sow seeds outdoors in April or May keeping it just damp and shading until there is good growth. But in the case of choice seed or where the quantity is small, we advise sowing it thinly in a shallow box or pan filled with soil, then if watered and stood in a frame or cold greenhouse and shaded from hot sunshine, good growth soon ensues. Such a sowing may be made in March, as then the plants have become strong by the end of May or early in June, and they may be carefully lifted and be transplanted where they are intended to flower. But the best plan of all is to get seed in August and sow it outdoors thinly about the last week of that month, and then, leaving the seedlings in the bed all the winter, to plant out in the spring.

Filling wire baskets (G. S.). The best time of the year to fill wire baskets that are intended for hanging out of doors during the summer is towards the latter part of April, as that will admit of their being kept for a few weeks in the greenhouse in order that the plants may become established before putting them outside. Some of the most useful plants for the purpose may be raised from seed, while others must be struck from cuttings. In the case of those increased by seed it should be sown sufficiently early to allow the young plants to become established in small pots before they are put in the baskets, as they then grow away without any check. The latter end of February or early in March is a good time to sow the seed, which in a warm greenhouse will quickly germinate. Plants that can be raised from seed include Petunias, especially the single-cusped and semi-double varieties. These will flower throughout the entire summer, and if attended to will yield an enormous quantity of bloom. Topodoliums of different kinds may have much the same end of them, except that the middle of March will be early enough to sow seeds of these, as they germinate in a few days and quickly make headway. *Thunbergia alata* is an annual plant of a climbing or drooping habit. There are several varieties of this varying somewhat from each other in the colour of the flower. The showiest is that of a rich orange-yellow with a purplish brown throat. Seed of this is readily obtainable. Lobelias when raised from seeds are often of a loose style of growth, and for hanging baskets they are just the thing. Plants that are propagated from cuttings and kept during the winter in the greenhouse are Ivy-leaved Pelargoniums, which are surpassed by no other plant for hanging baskets. There are several varieties, all of which are very beautiful, but however limited the selection, Madame Grosse, salmon-pink, and Souvenir de Charles Turner, carmine, must be included. Pelargoniums of the zonal-leaved section, though they are wanting in the grace and elegance of the Ivy-leaved varieties, will flower well under such conditions. Some of the looser growing Fuchsias readily lend themselves to this treatment, while tuberos-rooted Begonias, not little seedling mites, but those that flowered last year will make a good display in baskets. Some of the Campanulas, particularly *C. isophylla* and its variety *alba*, are now very popular basket plants, and in their way hard to beat. The Creeeping Jenny (*Lysimachia Nummularia*) will yield a wealth of its golden blossoms throughout the entire summer. In planting these large wire baskets they should be first of all thoroughly lined, if possible, with large closely woven flakes of moss, which are in some districts readily obtainable. Failing this, thin turves with the grassy side outwards may be employed, and the plants disposed at will therein. The soil used should be moderately rough, as if fine it is apt to make its way through any spaces that may exist and be washed off when the baskets are watered. A few flakes of moss pegged on the surface will do much to obviate this. Watering must throughout the summer be carefully attended to, as upon this to a great extent depends the display of bloom. T.

INDOOR GARDEN.

Climbers for greenhouse (C. C.). The climbers must be planted in a border inside the house, as by so doing they are rendered safe during severe frost. A width of a yard is very suitable for the border, and the soil should be taken out to a depth of 2 feet. Six or 8 inches of drainage material, such as old bricks, rubble, and broken pots, must be put in the bottom, and if possible over this a layer of turves, on which the remaining soil should be placed and trodden down moderately firm. By making a border in this careful manner its permanent success is ensured, and a little extra trouble in preparing it is time well spent. As your hot-water pipes are so near the front wall, there is not room to train up the climbers between the two, in which case they may be planted 6 inches from the pipes inside the house and carried up direct to the rafters that they are to furnish. Though most climbers are vigorous rooting subjects, and will require a good amount of water when once established and growing freely, yet care must be taken that they are not kept too wet, otherwise the soil will become sour before the roots have taken possession of it. A good half-dozen climbers for the purpose indicated, omitting Passifloras and Lapagerias, which last would be scarcely likely to succeed under such conditions, are: Clematis *indivisa*, white, February and March; *Golga scandens*, purplish, summer and autumn; *Kennedia Maritima*, scarlet, February to May; *Solanum jasminoides*, white, nearly all the year round; *Taesonja van Volxemi*, magenta-scarlet, summer; and *Tecoma jasminoides*, white with purple throat, summer; besides the above selection, six very desirable subjects for training to a roof, which, though not strictly climbers, are of a loose rambling habit, are: *Abutilon Double de Neige*, whose white bell-shaped flowers are borne from the early part of the summer till the end of the autumn; *Abutilon Golden Flere*, a counterpart of this last, but with yellow flowers; *Fuchsia Monarch*, a fine bold dark colored flower; *Habenarium aurantiacum*, orange, autumn and winter; *Hadrothamnus elegans*, crimson, much the same time; and *Plumbago capensis*, a charming plant, which throughout the summer bears a great profusion of clusters of light blue blossoms.

APOLOGY.

TO MESSRS. SUTTON & SONS, Seedsmen, Reading.

GENTLEMEN. We extremely regret that in our catalogue we should have infringed the copyright of your "Amateur's Guide in Horticulture" by having used two of your original pictures of your vegetables and making use of paragraphs of your text.

We acknowledge that we have thus laid ourselves open to legal proceedings and a serious penalty, and we offer you our apology for what we have done. We also undertake that we will not in future infringe your copyrights, and we will forthwith surrender to you all catalogues or circulars in our possession containing prints of the blocks and paragraphs, together with negatives, negatives, and photographs of the illustrations complained of.

We desire to thank you for your generous treatment in not having taken legal proceedings against us to enforce your rights, and we authorise you to publish this letter in such a manner as you may think fit, and we engage to pay all the legal and other expenses you have been, or will be, put to in the matter.

Yours faithfully,
(Signed) PENNELL & SONS,
Seed Merchants and Nurserymen, Lincoln.
January 20, 1900.

APOLOGY.

TO MESSRS. SUTTON & SONS, Reading.

GENTLEMEN. I much regret I have infringed your copyright in two illustrations taken from your "Amateur's Guide," by making process blocks, engraving them with my name, and printing them in Messrs. Pennell's "Book of Seeds for 1900."

I wish to state that as I made the blocks from photographs supplied to me, the infringements were quite unintentional on my part.

I beg to offer you my apology, and at the same time my thanks for your consideration in refraining from enforcing your rights, and I authorise you to publish this acknowledgment in such manner as you may think fit.

Yours faithfully,
(Signed) W. HOLMES.

Littleton,
February 2, 1900.

CATALOGUES RECEIVED.

Manual of Horticulture. Kellogg and Son, Lancaster, *Souriree*.
Hardy American Plants. H. F. Kelsey, Trenton Building, Boston, Mass., U.S.A.
Garden and Conservatory Plants. Wm. Cribb and Son, Manchester.
Seedsmen's Catalogue. W. A. Burpee and Co., Philadelphia, U.S.A.
Market Gardeners and Florists Catalogue. W. A. Burpee and Co., Philadelphia, U.S.A.

TRADE NOTES. APPLES FROM CANADA.

Canadian Apples are entering into serious competition with American fruit in the London market. Shipments during the month of January were particularly heavy, in one day 7524 barrels, containing 22,572 bushels, having been loaded. A fine variety of Newtown Pippin, hitherto exclusively obtained from American orchards, was among the importation. The culture of this variety in Canada promises more extensive shipments in the near future.



THE GARDEN.

No. 1475.—VOL. LVII.]

[FEBRUARY 24, 1900.

A SCHOOL FOR HORTICULTURE.

WE feel a sense of self-satisfaction in the knowledge that horticulture is to receive stronger support in the future than in the past; and if one ponders a moment, is it not discreditable that horticulture, pursued so ardently and successfully by the trade and private individuals, should have crept into the background as if ashamed to reveal its great power and importance amongst the business pursuits of this country?

There must be no hiding a brilliant light under the proverbial bushel in the future, and the good words spoken during the past few days should make the horticulturist think that it is time to act in support of the great industry in our midst.

We know the work that has been accomplished in the Chiswick gardens of the Royal Horticultural Society in forming the nucleus of a school for practical gardening. This foundation, laid, we believe, in a way unknowingly, should become a solid structure. Students have sought the historic gardens to commence their career without any great advertising of the benefits to be received there.

But under kindly and sympathetic superintendence this school has developed, and when the society enters into its new life amidst pleasanter surroundings, from this school will come forth young men with sound gardening knowledge to undertake horticultural duties at home and abroad.

We are not forgetful of the great work accomplished by the director of the Royal Gardens, Kew, in encouraging young men to make positions for themselves at home and in botanic gardens abroad, and this work will be even helped forward more strongly when the school of practical gardening provides a home apart from government supervision for training young men in horticulture.

It will be interesting to watch developments in the future, and those who assist to push forward this new departure may rest assured of our hearty co-operation. The school must be founded in a thoroughly business way, without fanciful conceptions of gardening, but with the firm conviction that practice and science must go hand in hand to fit the man for his work in life. Young men will enter this school to equip themselves for horticultural work at home and in our colonies, and examinations will doubtless take place, as at the present time, under some

authoritative governing board—may be the Royal Horticultural Society, or members of it.

The future is hopeful and full of possibilities, and the next few years should witness a remarkable change in the status, so to say, of horticulture in this land. The sister calling of agriculture has received far greater support than horticulture, but we feel that this will be altered in the near future with distinct advantage to the community.

Surprising ignorance exists even in these days of many of the elements of gardening, and of fruit and its culture our markets display an unpleasant reflection of the methods of the past. An awakening has taken place, and steady progress is preferable to hysterical upsetting of old customs. The school must be upon a sound basis, and for the advance of horticulture alone, with judicious assistance from more scientific pursuits. Horticulture cannot be mastered in a day, nor any branch of it. There are sufficient details in the cultivation of fruit to long occupy the earnest attention of the beginner, who must be drilled in every phase of the business, varieties to plant, their individual requirements, soils, and ways of managing the land to render it profitable over many years. There is only one way to accomplish this, and that is by educating public opinion to the advantages of a thorough horticultural training for those who follow this calling.

Horticulture in many ways is winning friends, and the English garden reflects an altered conception of this pursuit, now followed by many for its own sake, not at the dictates of the prevailing fashion. In the pleasure ground, in the woodland, by the lakeside and upon its surface flowers have their place, and are regarded as essential attributes to life's happiness. There is the other side—horticulture followed for the livelihood it brings, and this industry must excite as deep an interest as the pure enjoyment and knowledge of flowers. Competition in fruit and flower culture at home and through foreign importations must be faced, and the only way to do this is by training men in a school founded for this object.

ROYAL GARDENERS' ORPHAN FUND.

It is satisfactory to know that this fund—a children's fund—is progressing steadily, and this at a time when the purse-strings of the nation are untied for our soldiers at the front

But the gardeners of England must remember that the fund concerns themselves; it is a fund for the benefit of the children left at the mercy of the world when the bread-winner is called away. The annual meeting was held last Friday (February 16), and was a pleasant gathering of horticulturists, trade and otherwise, to help forward a thoroughly deserving institution. Whenever the committee is in the happy position of possessing a healthy report, the annual meeting reflects the satisfaction of the members. It was so on this occasion, for we are pleased to know that the receipts show an increase over those of the previous year of nearly £80, but the report says, "The revenue derived from subscriptions and donations, though showing an increase on the previous year, reveals a sensible decrease in the amount collected by local secretaries, a circumstance which the committee can only regard with some anxiety, though they have reason to believe that the falling off in this source of income is only temporary, the result being due rather to the difficulty experienced in collecting subscriptions than to any slackening of the efforts of those who have hitherto done so much in support of the fund. In common with most other charitable institutions, there is only too much reason to fear that the fund may suffer from the pressure of the times during the coming year, but the committee sincerely trust that the supporters of the institution will assist them to the uttermost in their efforts to avoid such a deplorable contingency. To maintain the usefulness of the fund unimpaired should be the aim of everyone interested in gardeners and gardening, and the committee more especially appeal to gardeners themselves to increase their efforts on its behalf by collecting small sums in their own districts."

We hope gardeners will help this fund, especially young gardeners, for to them it appeals more strongly than to men of advanced age. True, a large annual subscription is impossible, but a shilling a year surely is not too much to ask even from under-gardeners, and every shilling swells the revenue. Since the fund started only one child has died whilst receiving support, and the number of children upon the books is now eighty-two, thirteen having been elected at the last meeting. Since this fund was started, eleven years ago, £7111 2s. 6d. have been distributed among destitute orphans.

Many interesting particulars of the last annual meeting and of those who are working diligently for the fund are given in the usual department at the end of the paper. We give this brief outline here to place the claims of the fund conspicuously before all who are interested in gardens and their gardeners, and the gardeners themselves. It is only by united efforts that the committee are enabled to give relief to more children, and too often children are many, but funds few. It is hard to refuse relief to little destitute orphans, but without funds charity is impossible.

INDOOR GARDEN.

LACHENALIAS.

LACHENALIAS are making a brave show in several Norfolk gardens just now. Several good varieties have been raised in the county, two of the best being *Gunston Gem* and *Vicar of Causton*. Both at Blickling and Gunton these beautiful flowers are well grown, and are invaluable for cutting or for use in ornamental baskets in the drawing-room. Lachenalias frequently get rough-and-ready treatment, but no bulbous plant requires more careful culture. Good fibrous loam, a fifth part well rotted manure—cow manure is best—a sprinkling of leaf-mould, and sufficient sand to ensure porosity form a suitable compost. Mr. Allan pots his bulbs in August, placing ten in a 6-inch pot which is well drained. Good drainage is imperative, as Lachenalias are thirsty subjects when in vigorous growth. Popping completed, they are stood in a cold frame and protected from drenching rains. At the end of October they are placed in a house in a temperature of from 45 to 50, and afforded a position near the glass. The plants are fed with weak liquid manure, and during February and March produce freely the richly coloured flower-spikes. Lachenalias will stand gentle forcing well, but those that are forced one year should not be allowed to come on quite early the next. Careful drying off of the bulbs is an important point in their culture. After flowering, the supply of water must be gradually lessened—not entirely withheld all at once, as is sometimes the case—and in June the pots should be stood at the foot of a sunny wall in order that the bulbs may become thoroughly ripened. Some growers prefer to let the bulbs start into growth before re-potting them, while others equally successful in their culture pot them when dormant. *Lachenalia Nelsonii* is undoubtedly the finest variety in cultivation.

Frogmore, Windsor.

H. THOMAS.

A HEDGE-BANK GARDEN.

THE reason that one sees so few banks well treated is doubtless the difficulty of getting rid of the original inhabitants. I know some five or six banks that have been planted, and with the exception of two they are failures because of the way the Couch Grass and other weeds flourished in the soil put down for the newcomers. Personally I advise the partial pulling down of the bank and the entire removal of the old surface soil, and then a reconstruction on the Devonshire plan of alternate layers of stone and soil; a bank so treated is certain to succeed and is easy to keep clear of unwelcome intruders. The list of shrubs in last week's GARDEN cannot be bettered except that I should exclude the Elder, which has an unhappy knack of monopolising more space than it is meant to occupy, and under which many plants refuse to flourish and some to grow at all. But that is a matter of opinion, and, judging by the large number of the variegated Elder one sees around, it must have many admirers. One thing that should be planted extensively is *Jasminum nudiflorum*. Cuttings stuck into the side of the bank will strike and increase rapidly, and this plant when in bloom looks better with a green background than it does with that of a red-brick wall. Also in places where *Tropaeolum speciosum* will survive the winter out of doors, clumps of tubers should be planted in the soil with the shrubs, and in a little while they are sure to assert themselves.

I also have a few suggestions for the bank-sides. A good strain of *Honesty* should be planted in bold patches and it will soon sow itself perchance, too freely. The flowers in early summer and the seed-pods in autumn are at their best when the plant is grown in a semi-wild fashion. Again, the wild *Toadflax* should not be forgotten and will look after itself, and hard by there should be a clump or two of purple *Liatris*. The wild *Aquilegia* loves a bank, and the shady side suits it best, and it throws up heads of bloom and foliage far finer than when grown in the border. Care must be taken, however, to get seedlings of the right colours, and single above all things. The wild purple, pink, and white are far more beautiful than the hybrid washy colours, and even were the hybrids more beautiful they would be out of place growing in semi-wildness.

Speaking of washy colours as I have above, I of course refer only to the common forms; the hybrid spurred varieties in their many colours are amongst my favourite flowers, but they are unsuitable for bank planting. There are, however, many strains of the commoner forms in which the colouring of the spurred varieties has been borrowed, and much out of place it is on the more robust and less refined type. A few plants of various kinds of *Periwinkles* look well and soon cover a large space, and a few good clumps of *Lily of the Valley* often hold their own and run freely. With the addition of some patches of the wild *Arum* a bank would be well supplied with plants, and there would only remain bulbs to be considered. Of these I recommend plenty of single *Snowdrops* and a few good patches of *Snowflake*. I say a few because they do not always succeed.

Scilla nutans, pink, blue, and white, but in particular white, and *S. campambata* also should be planted in broad stretches, and would make a fine show in spring.

Thirdly, a few *Narcissi* should find a home. The best varieties for our purpose are the common double *Telamonius*, the wild *Lent Lily*, and the charming and once wild *obvallaris*. Thus planted a bank should succeed and be lovely through spring, summer, and autumn.

There still remains winter to think of. Some *Iris foetidissima* would give a bright patch of colour, and should be gay with its scarlet seed-pods until early spring, and if sweetness is wanted and the planter is not afraid of trouble in the future, he might plant some winter *Heliotrope*.

Newton Abbot.

B. D. WEBSTER.

GARDEN THOUGHTS.

WINTER THOUGHTS ON SUMMER FLOWERS.

"He who would have beautiful Roses in his garden, must have beautiful Roses in his heart."—DEAN HOLE.

WINTER is ever a time for reflection—a period when one can take a retrospect of the year's work; but it is not a time of inactivity, as a gardener's duties are never ended. Winter for him is a season of increased watchfulness. There is a hidden meaning underlying the almost proverbial words quoted above. One must not be content with merely admiring our Roses on the exhibition table, or blooming in the garden under the fairest of summer skies, but in the darkest period of the year, when to the casual observer there is no attraction in the garden, they must then be in our thoughts.

We must shelter the weakest from biting winds and long-continued cruel frosts; we must discern in them even now, under their most adverse conditions, the possibilities they possess of future beauty. Our most cherished Teas must be to us, at this unfavourable season, as charming in our mind's eye as when their first blossoms unfold. Thus, after tending, watching and pruning, when winter's storms are over and Nature has relaxed her grasp, they shall yield to the gentle influences of returning spring and again beautify.

But the quotation may be applied in a much wider sense, for he who truly loves his garden often reviews his favourite flowers. The June borders, so bright in their effulgence of blossoms, are "pictured" by the one who has planted them long before the first buds expand. To him the time of waiting is also a time of pleasurable anticipation. Perhaps no profession or pastime makes more claims upon one's thoughts than that of gardening, for to have gardens beautiful there must be exercise of forethought, trials of patience, and perchance at times lessons of failure; but through it all there must also be a steady plodding.

Each month in a garden or greenhouse there will be the allotted tasks of sowing and planting, of tending and watering; and just in so far as we have put our heart into the daily routine there will be an equivalent in the days that are to come, and the highest reward of our labour will be the abundance of ever-welcome flowers.

LEAHURST.

Deep cultivation of the soil. The discussion upon this subject has aroused considerable interest, but owing to pressure upon our space this week several contributions must be held over.

PRIMULA VERTICILLATA.

THIS greenhouse species of *Primula* from Abyssinia may be had in flower the following winter by sowing seed in the month of February. It is a most charming little plant, bearing whorls of yellow flowers, well thrown up above the pretty whitish-coloured leaves, in themselves very attractive. A suitable method of culture is, after the seed has germinated in a pan of light soil, to transfer four of the seedlings to a 4-inch pot, and allow them to remain there until flowers are produced. This number will be found to be quite sufficient to well fill the pots when the plants are fully grown. Very careful watering, a cool, shady pit, and plenty of room in which to properly develop are essentials to their successful treatment. The leaves are extremely liable to decay if either too much or too little water is applied. The soil dries quickly in hot weather, for with four of the *Primulas* in each pot it becomes full of roots. All flowers that appear during the growing season should be pinched off; none ought to be allowed to remain until winter it, as I am supposing, the plants are required for winter flowering.

Frogmore, Windsor.

H. THOMAS.

ERANTHEMUM PULCHELLUM.

NOTHING could be brighter or more attractive in the stove at the present time than the beautiful blue flowers of this acanthaceous plant. These are not only produced freely, but a long succession of them is maintained, two or three dozen plants furnishing a supply of flowers throughout the greater part of the winter months.

There is no difficulty connected with the cultivation of *E. pulchellum*. Cuttings of the young growths, produced from plants cut down after having flowered, are inserted several in a 4-inch pot, and the latter plunged in the stove propagating frame. When rooted, each plantlet is potted off into a 3-inch pot, using for the purpose a compost of loam, peat, and silver sand. If kept near to the glass in the stove throughout the

FRUIT GARDEN.

PEAR DURONDEAU, OR DE TONGRE.

THE fruit illustrated is usually known as Durondeau in this country, and it is a great favourite at all exhibitions on account of its large size and shape and free-bearing habit, even when grown in different soils and situations. This Pear is more at home in a warm soil and in southern counties, as I have seen heavy fruits in Devon and Cornwall. Many of my readers may have noticed the huge fruits of this variety grown in Jersey



THE DURONDEAU PEAR.

and those exhibited at the Crystal Palace fruit show last September by the Jersey Horticultural Society. There it was shown as De Tongre, and under this name it is largely grown in France. Many growers confuse this variety with Grosse Calebasse, a stewing Pear of less value, but an equally large fruit and not unlike it in many respects, being a long fruit much covered with grey-russet, whereas the De Tongre is a shorter fruit, more shining, and with streaks of dark crimson on the sunny side, yellow on the opposite, and covered with cinnamon russet.

This variety is in season early in October from a south wall, and from colder sites the fruits keep good well into November. It is

described in Dr. Hogg's "Fruit Manual" as a first-rate Pear, but no one can class it with Doyenné du Comice or Marie Louise, and I should certainly consider it second-rate, though by no means one of the worst in that section. During the past two seasons I have gathered splendid fruits, as regards flavour, from bush trees on the Pear stock, and though smaller as regards size than wall trees they were of excellent flavour. I have seen fruit from large trees in a wet clay soil crack badly, and this shows it requires a well-drained soil; doubtless such is the soil where this beautiful Pear originated at the village of Tongre Notre Dame, in Belgium. It was raised by M. Durondeau, hence its name in this country. The late Mr. Blackmore, the novelist, a great lover of Pears, who never hesitated to give a Pear a bad character when it failed with him, says of Durondeau that "it is a great bearer, very pretty, but always acid," and doubtless this is correct, as the fruit from some soils has a harsh taste, whilst in others the flesh is sweet, melting and tender. There can be no doubt whatever of its value on account of its cropping and size, and its free growth in any form will always make it a favourite.

G. WYTHES.

APPLE NANCY JACKSON.

APPLES are an important factor in the welfare of the people of this country. Almost everybody likes them in one form or another, and when eaten raw they are known to be beneficial to health. We cannot complain of any deficiency in the number or quality either of the dessert or culinary varieties of Apples, though their cropping abilities vary considerably. In a private garden many sorts can be grown that in a market garden would have to be discarded, as the market grower requires quantity, quality, and size. Whilst not pretending to give a full list of the best varieties, the following

may be relied upon as worthy of a place in any garden. For dessert: Ribston Pippin, Cox's Orange Pippin, Red Juneating, Mr. Gladstone, Adam's Pearmain, Scarlet Pearmain, Worcester Pearmain, Golden Russet, Yellow Ingestre, and Warner Pippin. For cooking: Alfriston, Bismarck, Blenheim Orange, Keswick Codlin, Old and Improved Cockpits, Ecklinville Seedling, Lady Henniker, Lord Derby, Lord Grosvenor, Lord Sutfield, Mère de Ménage, Peasgood's Nonsuch, Chaplin Pippin, Cox's Pomona, Pott's Seedling, Wellington or Damelow's Seedling, and last, but not least, Nancy Jackson. This last variety, although very little known in the south of England, holds a high reputation with the market gardeners in some parts of Yorkshire. It was originally introduced into the York district by Mr. Danley, the York

and Ainsty huntsman of a past generation, who discovered it at Yarm. It has now taken a firm hold in this neighbourhood, and one hears of many young trees being planted every year. In my garden there are about one hundred trees of Nancy Jackson which appear upwards of thirty years of age. They bear a fair crop of fruit every year, and I have gathered three and four large Apples from the end of a branch no thicker than the tip of one's little finger. It has all the points that a good Apple should have, being large, viewly, late, and of excellent quality. Mid-season Apples suffer from the fact that their time of sale corresponds with that of the fallen fruit, which in recent years has been regular and plentiful. Fallen Apples can be bought for 1s. per bushel, whereas the gathered fruit should make 6s. the bushel. With a late variety like Nancy Jackson the fallen fruit makes no difference in the price, as they may be stored the day they are gathered and left in the fruit room for five or six months without being attended to, and then be sold for 8s. to 12s. per bushel. During a storm, whilst other sorts are shedding their fruit in every direction, this variety holds fast to the tree, and even the fallen fruit will keep for months if their skins are not broken. I am told that very few nurserymen catalogue this Apple, but its merits demand that it should be more widely known. I learn that the first shipment of Apples from Tasmania sailed on the 17th of this month. These Apples will make 20s. per bushel, and surely this is a reason why the cultivation of the best Apples, and especially late ones, should be encouraged in this country. GEO. HOLMES.

Accomb, York.

GARDEN CARNATIONS.

THE advent of spring, when it is accompanied by soft breezes and sunny days, irresistibly turns our thoughts to open-air gardening, with the result that we not infrequently suffer loss through over-hurry. Caution in early spring is therefore a great virtue, and we exercise it to its fullest extent with Carnations, which, though hardy when established, are apt to suffer from hard as well as from wet weather when lately planted. In the case of open soils, planting can be proceeded with long before heavy soils are in fit condition, and it is in those of the former class only that this operation should be carried out at the earliest moment the ground is fit. Some dry sandy compost, or even sand alone, mixed with the natural soil, and packed about the roots of Carnations, is of much value in promoting a more rapid root-action, and when the plants are strong it well repays the trouble to attach each growth to a short stick, which steadies it during high winds. Carnations succeed better in firm than in loose soil, and on this account the ground should be treated in the same way as is usual for the Onion crop, by trampling it with the foot or compressing it by means of a roller. Should, however, it be inexpedient to firm it previous to planting, as soon as the ground is sufficiently dry to permit of the operation it should certainly be effected—in these circumstances, of course, by foot trampling. I would advise extreme caution in manuring ground for Carnations, which when ordinarily fertile requires no manure, the evil effects of manuring appearing in gouty stems, and in autumn in the greater susceptibility of the foliage to "spot."

Manurial aid can at any time it is thought to be required be given in the form of surface dressings, sweepings of pigeon coots being suitable, and also fresh soot, than which no material yields better results provided it is applied in sufficient quantity. Soot is also valuable dusted on the foliage of Carnations when wet as a protection against birds, which of late years have become a pest. It is, indeed, advisable

where small birds abound to apply soot to the foliage directly planting is completed, because once they get a taste of the leaves they are not easily stopped from further raiding. Some seasons the weather in spring is so unpropitious, that planting is delayed beyond the period one can expect the plants to do well. Last year was of this kind. The best course to pursue when this happens is to pot on the plants into 5-inch pots, keeping them as quiet as may be, and not attempting to place them in their outdoor quarters until every suspicion that harm may follow has disappeared. I was obliged to plant several clumps with plants treated as above early last summer, and I was not dissatisfied with the result.

No doubt the best method of outdoor culture is to plant them into permanent positions in autumn. Stronger and more free-flowering plants are obtained and there is less labour. These also require attention at the earliest opportunity, when surface weeds should be removed, and the ground slightly stirred and then dusted with a ½-inch layer of soot. Previous to application, however, the plants should be examined carefully and every bit of withered or spotted foliage cut off. If through too late planting any have slightly protruded above the surface, press them gently down to the general level.

Perhaps less thought is given to the selection of varieties best suited to open-air culture than the case demands. There is too much running after novelty without considering whether new varieties possess any greater or equal merit to those we already have. The points chiefly to be considered in an efficiently equipped Carnation are, I think, a vigorous constitution, profusion of flowering, an upright habit of growth, and the possession of decided colour in the flowers. For these reasons, I would choose such old varieties as Raby and Vivid in preference to many novelties. The drooping habit that affects so many sorts I would indeed consider sufficient cause for exclusion from the garden, where much tying is unmitigated by any corresponding benefit. It is, too, perhaps worthy of note that the prevailing methods of arrangement opens to Carnations as decorative subjects a wider field than they formerly held. A dozen, or a score, or a couple of hundred plants of a variety, as we choose, properly selected and judiciously grouped, add a charm to any garden. But against this we have to place the almost certainty of failure following the employment of varieties deficient in any of the points insisted on above.

Some varieties, otherwise valuable, are apt to decline in vigour after a few years' cultivation, and this fact shows us the need of occasionally importing new blood, Carnations undoubtedly being adversely affected by some soils, and being very responsive to a change. Yellow and apricot-coloured sorts are affected to the greatest extent, but the benefit of a systematic introduction of plants from another soil is not confined to these. R. PAGE.

ORCHIDS.

ODONTOGLOSSUM CRISPUM HARRYANUM

ONE of the finest additions that have been made to the *Odontoglossums* for some years, and the fact that it has been artificially raised between the species indicated by the name should dispose of the idea which has grown amongst hybridists that *Odontoglossums* cannot be raised from seed. There must be an

end to the great importations which are annually being introduced. I was struck recently by the similar characteristics of two plants exhibited at the Drill Hall under the name of *O. crispum Harryanum* to those plants which had been previously certificated as being the inverse cross of each other. In the one the segments were extremely long and narrow, very light in colour, and the spots sparingly and evenly distributed, resembling the plant originally certificated at the Temple show a few years ago. In the other (a flower of which I have before me) the segments are much shorter and the flower altogether more compact. The sepals are each about 1½ inches long, pale creamy yellow, broadly barred across with brown spots. The petals are not quite so long as the sepals, deep purple, beautifully margined, marbled and tipped with creamy white, the basal half yellow on the disc, where there is a tuft of prominent bristles. From the disc to the outer margins there is a thick covering of purple of the same shade of colour as seen in the lip of *O. Harryanum*, marbled and mottled with white, the apical half white and much crisped on the margin. This variety resembles greatly the plant exhibited as the reverse cross, which received a second certificate. The raiser, when offering the plants for sale, did not see fit to distinguish the crosses. The question may, therefore, be reasonably asked, Did the two varieties originate from one pod of seed? H. J. C.

CYPRIPEDIUM LORD ROBERTS.

(*C. CHARLESWORTHII* × *C. CREON*.)

LIKE *C. Spicerianum*, the use of *C. Charlesworthii* as a parent in the production of hybrids has been practically a failure. It is, therefore, pleasing to note one exception. *C. Lord Roberts* was raised by Messrs. Charlesworth and Co., Heaton, Bradford, Yorkshire, and was exhibited by this firm on December 19 last at the meeting of the Royal Horticultural Society, being awarded a first-class certificate. The dorsal sepal is 2½ inches in diameter, white at the top, slightly tinted with rose. It gradually becomes more intensely suffused towards the base. There are numerous prominent rich purple veins spreading from the base towards the outer margins. The petals are rather more than 2 inches long and highly polished: the lower half is purple mottled with green, the upper half being suffused with a darker shade of colour, showing the influence of *C. villosum*, introduced through *C. Harrisianum* being found in both parents of *C. Creon*. The lip is deep brown and highly polished, the disc on the column being pale rose veined with green. As stated above, the flowering of *C. Charlesworthii* hybrids has been disappointing, especially when crossed with species of the Eastern section with tessellated foliage.

JOTTINGS FROM CEYLON.

FOR the variety and beauty of its products, combined with the salubrity of its climate, probably Ceylon, compared with any other country of the same size, stands unrivalled. During a recent and somewhat prolonged tour, embracing many countries in tropical regions, and with experience gathered from wide wanderings hither and thither through this wicked, but beautiful world of ours, the writer certainly is very decidedly of the above opinion. The wealth and profusion indeed of the growths of this glorious earthly island paradise are at the first blush somewhat bewildering, for as you skim along in your rickshaw, ride among the outskirts, and through the cinnamon gardens of steamy Colombo, there will speedily be introduced to your enchanted gaze numerous varieties of the Palm, Mango, Bread-fruit tree, Banana and Mangosteen, besides Pine-apples, also Prickly Pears, and countless other growths. Gliding along half-embowered lanes fringed on either side may be with sentinel Cocoa-nut trees, you revel in the grateful shade after the glaring sunshine endured in Colombo itself,

marvelling the while at the extraordinary endurance of your coolie, running mile after mile in such great heat, with no apparent exertion or effect other than a somewhat profuse perspiration on his shiny skin. Returning for a breeze by the open sea, you are, nevertheless, glad that to-morrow will find you out of this vapour-bath, high up in Kandy, than which, though I have sojourned in manifold cities and countries, I know no more peaceful or beautiful spot—an inner oasis, as it were, even in a country so marvellous throughout in its perfections, that it may perhaps claim for itself the title of the very pearl of creation itself.

Up in Kandy then, and higher if you will, to wilder and grander Nuwera Ellia, you will find it wise to make a prolonged stay. The former, however, struck me as being the more fascinating, its beautiful lake, fringed and mirrored with Palms, being not the least of its multitudinous enchanting features. Saunter out in the comparative cool of the mystic scented evening, and in a few moments you will find yourself in a rickshaw being wafted you care not where, so enwrap are you in the romantic spell of a delicious dreamland. Your "boy" may be taking you miles in the country uphill and down dale, with fireflies dancing all around and fragrant perfumes all about, beneath canopies of exquisite foliage, with glints of the departing gloaming now and again peeping through the trees; or you may be skimming around the fairy lake and flitting past the little Buddhist temple without a sound to break the wondrous repose and gladness in which your soul is revelling. No other place, methinks, exceeds in subtle charm and perfect rest this beautiful spot at evening. For a study of India's growths and tropical productions in general you will find yourself making repeated trips out to the far-famed Perideniyeh Gardens, lying as they do but a few miles outside Kandy. I must confess to being less enthusiastic as to the Palms than a charming American lady, to whom it was my privilege to act as escort on several occasions, and I fear somewhat lost caste in her eyes when more than once I produced my butterfly net and a small boy and entered heart and soul into catching the beautiful and vivid specimens with which these gardens abound. But I think even my fair friend was interested in the very curious flying foxes of which there is a kind of rookery in some tall Eucalyptus trees. Perhaps the most attractive of the Palms, at any rate from an eccentric point of view, was the Sealing-wax Palm.

The road (a broad bowery lane would better describe it) from Perideniyeh is in itself a perfect study of tropical productions. Banana, Durian, Mango, Bread-tree fruit, Eucalyptus, Cocoa-nut, Date and other Palms, Jack-fruit, and a host of others abound in the greatest profusion, while just beyond Perideniyeh a comprehensive idea of the growth and manufacture of tea may be readily and instructively obtained. Some little distance from Kandy may be seen the vast estates of Messrs. Lipton, situate in mountain and valley surroundings of very great beauty. Of the tea and coffee grounds of Ceylon, however, I saw but little, though in my case, having seen the industry on the lowlands beneath the Himalayas between Calcutta and Darjeeling, and the extensive plantations in the Nilgherry Hills around Coonoor, in Southern India, I was well content to rest on my laurels in that respect. But for contemplation generally in Nature and her varied growths, combined with perfect peace and (for the tropics) a comparatively cool climate, commend me to the elevated positions of Ceylon in general, and of Kandy in particular. VIATOR.

NORFOLK ISLAND PINE.

(*ARAUCARIA EXCELSA*.)

How often one hears the remark, "I wish the Norfolk Island Pine was hardy in England." Unfortunately, it is not so; but one can obtain a good idea of it from the specimens in the temperate house in Kew Gardens. The specimen figured was planted in the garden of Mr. Henry Mathew Arderne at Capetown by his late father about fifty-six years ago. The plant at that time was 6 inches high, and was brought to Capetown by an Australian captain. Mr. Arderne paid £5 for the young tree. The specimen is now 130 feet high, and is believed to be the tallest in the world outside Norfolk Island. This fine tree was known in England half a century before Mr. Arderne's tree was planted. It is stated in the second edition of "The Hortus Kewensis," vol. v., p. 412, that it was introduced in 1793 by the Right Hon. Sir Joseph Banks, Bart., K.B. The only other *Araucaria* mentioned is *A. imbricata*, the Chili Pine; it was introduced three years later by Mr. Archibald Menzies.

J. D.

COLD WEATHER NOTES.

THE SNOW PAUSE.

LIKE the people in "The Pilgrim's Progress," we have arrived at a place called "Stop!" Everything is at a standstill. The new paths that we were making through the copse; the ground that was being prepared for grass sowing; the flower beds that had still to be cut to the right shape; the sods that were coming from a distant common where they were to be had discreetly; the whole bustle of the garden is brought suddenly to a state of arrest. Into the middle of our fussy little rhythm Nature has dropped her own big imperious full-stop. Against that full-stop there is no appeal. In vain we protest to her that we are really and truly in a desperate hurry. That unless these particular flower beds are made, unless especially yonder piece of ground is got ready for grass sowing, March will be upon us swiftly, close at its heels April, that the spring is coming on, and that we *must* positively get our work done. To this remonstrance of ours Nature merely opens her eyes with a mildly sarcastic air, and replies, "Must you!" One feels oneself to be precisely in the position of the old woman of the nursery tale, who *had* to get her pig over the stile in order to give her old man his supper. In that case, if I remember rightly, she did, after many repulses, find a complacent beast who undertook the task. The right spring was touched; the spell was broken, and the whole state of deadlock dissolved at once. How in such a case as this to obtain so desirable a dissolution we have yet to learn. We know of no spring to touch, no bird, beast, or element that can be appealed to with the slightest hope of success. The sky, iron-grey, with vicious inky streaks across it, does not seem promising; neither does the wind, which keeps to its beloved north-east. The earth is invisible, and is, therefore, for the moment out of reckoning; while as for the birds and beasts, they are much more disposed to turn to us to help them than to make any friendly propositions the other way.

It may be a piece of mere vanity upon my part, but it always seems to me that the smaller birds recognise their heavy, wingless, two-legged kinsfolk with less difficulty during this sort of weather than at any other time of the year. The fact that we bribe them to such recognition by vulgar doles of breadcrumbs

may have something to say to it, but I fancy that I read a distinctly less-alloof, less-smubbling expression in their eyes. They glance up at us with an air of comparative condescension. They perceive we share their own helplessness; that we are not after all so very different from themselves, only bigger and stupider. For instance, I have been publicly and painfully snubbed this whole winter by the tomtits. Under the eye and in the knowledge of the entire garden I set up a large post, hung over with cocoa-nuts, for their convenience. Some of the cocoa-nuts were sawn into slices, others, more artfully, into

heard that there were sparrows who were less particular, but it had never been *their* custom! I felt—as anyone naturally would feel under the circumstances. To-day for the first time, thanks to the friendly connivance of the snow, this fastidiousness has broken down. With elation I perceived that my disdainful blue friends are not only pecking at, but actually sitting and swinging in the long-despised brown rings. I hope that I am bearing my triumph meekly, and am helped towards doing so by reminding myself of the well-known fact that in times of stress and famine social dis-



THE NORFOLK ISLAND PINE (*ARAUCARIA EXCELSA*), 130 FEET HIGH, IN THE GARDENS OF MR. H. M. ARDERNE, CAPETOWN.

rings, and I pleased myself by believing that they would sit and swing in them as they pecked an unfamiliar, but not unpalatable meal. Will it be believed that not one single tomtit has ever deigned to touch those cocoa-nuts! They hopped to and fro on the boughs almost within peck of them, yet never so much as ascertained whether they were eatable or not. They preferred, in fact, not to do so. In *their* family, they practically sent me word, they never eat victuals that had not been selected by themselves. Other people might do so, and they had

tinctions are apt to break down. I shall have to wait accordingly till the weather relaxes to see whether this amiability is anything more than a sort of truce, born of the hour of trouble, and not intended to last beyond it.

How odd, if one comes to think of it, this whole thickly encrusted, and apparently solid, white setting is, and not at all the less odd for being so perfectly familiar. Looking round me to-day, I begin to wonder why I should have taken the trouble to go and listen to Captain Nansen, or to have followed with such profound

interest the record of his indescribably uncomfortable journeyings. Had I even the slightest desire to share in his sensations, to do as he did, or to sleep as he slept, why I could do so this evening! I will not pretend that I have the slightest intention of doing anything of the kind, and I merely mention it as a proof of how easily experiences which illustrious travellers court at vast cost and peril to themselves come wandering of their own accord quite readily to the very humblest doors. It was the tropical or sub-tropical regions of the globe that not very long ago were good enough to send us specimens of their weather, as enterprising tradespeople enclose samples of their goods in envelopes. There were days last summer—to be accurate, I believe, there were sixty-three of them—when it was by no means necessary to go to the Sahara or the South-eastern Soudan in order to ascertain what a state of almost mendicant drought could be like. For the present I feel that these two samples will suffice me. I cannot, unfortunately, return them, since I do not know their sender's address, but I feel under no obligation to charter either camels or whale-boats in order to go and make their acquaintance upon a larger scale.

As for the mere ferocity and killing powers of Nature even in such comparatively sheltered scenes as these, we are not without a taste of her capacity in that respect. Apart from the wild creatures, which have to look out for themselves, she exacts in weather like this a pretty stiff list of victims from the old, the weakly, and the very young.

My Chow dog insisted upon my taking a late run through the snow this afternoon, and, as we stood for a moment near the stile, there came up a melancholy little chorus of lamentable bleatings from some sheep-fold in the valley below us. I peered over into the white darkness, but could see nothing. My Chow licked his lips, and I earnestly trust he was not thinking of mutton. It may be mere weakness or stupidity, but I have always felt glad that in my various commings with the good green earth I have stopped short at the garden, the wood, the bog, the hillside, the sea-shore, but never once stepped into the paddock or the farmyard. Reading Rider Haggard's admirably written "Farmer's Year," as I have been lately doing, the one drawback to my pleasure, and a very considerable drawback it was, was the eternal and detestable apparition of the butcher! Whenever the small lambs, that frisked so delicately, were beginning to grow pleasantly plump; whenever those Irish bullocks, whose vicissitudes one followed so breathlessly, were pronounced to be certainly not improving as fast as they ought; even when the poor old milk cow, who had given so much good milk and had brought so many calves into the world, had begun to flag—always there was that abominable apparition in a smeared apron waiting for them close by, or peering in at us in a sinister fashion from round a corner. No, whatever other functionaries or local potentates I might be willing to share my pursuits with, assuredly I could never, never consent to share them with Mr. Bones! The objection may be puerile or merely sentimental, but then so are most of our likings and dislikings merely sentiment. Now as for these green clients of ours, it is quite true that they do die pretty frequently upon our hands, and the fact, no doubt, is a very distressing one, the more so as in nine cases out of ten we are quite aware that it is entirely due to our own fault. Still, we are able, as a rule, to take their demise with a remarkable share of fortitude and resignation; there are at least in their case no heartrending

squeals or groans, either heard or unheard. They go to their own place in peace, wafted as it were by slow music towards the gentlest of dissolutions. As for us, if we are their murderers, well, we manage to hold up our heads and take particular care never to allude remotely to the subject. On the contrary, we put on an air of extra cheerfulness and alacrity, and make haste to plant something else!

EMILY LAWLESS.

Hazlatch, Gomshall, Surrey.

ORIGIN OF SOME HYBRID GARDEN FLOWERS.

PELARGONIUM. The home of the Pelargonium is the Cape of Good Hope. Bentham and Hooker record 170 species, of which only two or three come from Australia or New Zealand. In 1855 Pritzl ("Index Iconum") enumerated more than 250 species and cultivated forms which had been figured at that date. Some of the earliest illustrations of species introduced into Europe appear to be about half-a-dozen from South Africa in a work of Rivinus in 1690, of which he calls the largest flowering *Geranium maximum*, and another species *triste*, which (if the same) was introduced into England in 1632. Of species which play an important part in modern floriculture the first to be imported were *P. inquinans*, in 1714, and *P. zonale*, in 1710. These are the parents of our "scarlets" and "zonals." The Ivy-leaved *P. peltatum* arrived in 1701. Other species were imported sparingly during the early part of the 18th century, but a large number came after 1770. In 1794 *P. grandiflorum* was introduced, and this species is the basis of many of our existing large-flowered or fancy Pelargoniums. Numerous hybrids and subsequent crosses have been raised, but those first formed early in this century were insignificant and probably are now lost to cultivation.

With regard to the form of the flower, the original shape is mostly very irregular, the posterior petals being often much the larger, while the stamens are declinate, the sub-genus *Hoarea* having lost the anterior petal. This structure is almost an invariable rule, that when the androecium supports the weight of the insect-visitor the petals below them are lost or atrophied, or at least not specially developed; just as in the Horse Chestnut, the stimulus, due to the weight of the insect, &c., being now thrown on to the stamens, only the posterior petals behind the nectary are presumably stimulated to extra growth.

This theory also accounts for mimetic resemblances in flowers, in that similar insects visiting different flowers, these latter respond to them, and so give rise to forms having a strong external resemblance to one another, but with no real affinity. Thus *P.* (*Hoarea*) *corydalliflorum*, like *Corydalis* itself, is not unlike a Vetch. Similarly we find genera with declinate stamens both in Labiate, as *Colens* and *Plectranthus*, and in Scrophulariaceae, as *Collinsia*, &c., which thus assume a pseudo-papilionaceous form.

PECUNIA. This genus contains about fifty species, chiefly natives of Mexico and South America, a few being found in New Zealand, such as *P. exorticata*. Like *Calceolaria*, it thus points to a former geographical extension from South America to New Zealand. The first species that appears to have been introduced was *P. coccinea*, probably from Brazil. The date is 1788, but as *P. magellanica* (also

called *macrostema*) arrived soon afterwards, it usurped the specific name of *coccinea*, and is now generally known as such. The true *P. coccinea*, supposed to be lost to cultivation, was discovered in the Botanic Gardens, Oxford, and still cultivated in Guernsey in 1832. Loddiges had figured it in 1825, and Sir J. D. Hooker re-figured it in 1868 in *Botanical Magazine*, t. 5740, showing that it was different in several particulars from the common or so-called *P. coccinea* of gardens. As this species is a native of the extreme south of Chili, it is hardy in the warmer parts of Great Britain, forming hedges and even trees in Cornwall, Jersey, &c. Several varieties of this species were imported about 1825, as *discolor*, *conica*, and *gracilis*, while *recurvata*, probably a hybrid, appeared at Glasnevin, Dublin, in 1835. The well-known *P. globosa* was first shown by Mr. Dennis, of Chelsea, in 1832, but whence it arose is not known. It is believed to be a garden variety of *P. magellanica*. There is a hedge of it at Lee, near Ilfracombe. In 1837 came the handsome long-tubed *P. fulgens* from Brazil. This was followed by the large-flowering species, such as *P. spectabilis*, from the Andes, *P. corymbiflora*, from Peru, *P. splendens*, from Guatemala, &c. As all *Fuchsias* appear to cross with each other readily, an innumerable number of hybrids and subsequent crosses have been raised. *P. Standishii* (*Bot. Reg.*, 26, 2) is an interesting one, as being a hybrid between two such extremely different species as *P. fulgens* and *P. globosa*.

CALCEOLARIA. Like the *Fuchsia*, this genus finds its home in South America. According to Bentham and Hooker there are nearly 120 species on the Andes, from the Straits of Magellan to Colombia and Mexico, while two occur in New Zealand. The first to be imported were four species with yellow flowers in 1822. Of these, *C. corymbosa* was soon used for hybridising with the purple *C. arachnoidea*, which followed in 1827. In 1831 *C. crenatiflora* was introduced, having a yellow corolla spotted with crimson and a deeply crenated "slipper." This species, *C. integrifolia* and its varieties, *angustifolia* and *viscosissima*, imported in 1822, laid the foundation of the subsequent innumerable forms. The species are either herbaceous or somewhat shrubby, but they all intermix freely. More than one experimenter raised hybrids from the above-mentioned species. The results were that either yellow or purple became the ground colour, the other forming a large spot upon it, or else they combined, producing scarlets, &c. The additional aid afforded by *C. crenatiflora* furnished the variously spotted forms now in cultivation. The shape of the corolla first aimed at was circular, but of late years this has passed into a more ovoid type, while the size has increased enormously; so that by calculating the cubic capacity of one of Mr. Carter's Japanese and Victoria *Calceolarias* and comparing it with that of *C. corymbosa*, it contains just about twelve times the volume of the slipper of the original species.

PETUNIA. The three species which contributed to the formation of our present garden varieties were *P. violacea*, purple (1831), *P. nyctaginiflora*, white (1823), and *P. bicolor*. They all came from Brazil. The last species is the origin of hybrids of a tender nature and less easy to cross. It originated the dark-mouthed and streaked kinds, having been crossed with *P. nyctaginiflora*. It is remarkable that for many years no doubles could

* For further details on the application of this theory to the structure of flowers, the reader is referred to "The Origin of Floral Structures," caps. xi., xii.

† *Botanical Magazine*, iii., t. 97: Though called *P. coccinea*, it is really *P. magellanica*.

be raised, when they appeared simultaneously both on the Continent and in England.

AMARYLLIS. This name, now appropriated by the well-known and handsome hybrids, is a retention of an old one given to a plant called the Jacobea Lily (*Botanical Magazine*, 17). A. (*Sprekelia*) *formosissima*, named in honour of Dr. Sprekel, a native of Guatemala, and introduced into Spain before 1593. The name *Amaryllis* is now confined to *A. Belladonna* of the Cape. Those species which have entered into the composition of the modern florists' productions belong to *Hippeastrum*, so named from their fancied resemblance to the star of an equestrian knight.

valuable results of hybridisation is the tuberous *Begonia*. Four species have laid the foundation of the innumerable varieties now in cultivation. They are as follows: *B. Pearcei*, introduced in 1865 from Bolivia, has yellow flowers about an inch in diameter (*Botanical Magazine*, 5545); *B. Veitchii*, 1867, Peru (*Botanical Magazine*, 5663), has large flowers, rose-red, and about 2 inches in diameter; and *B. boliviensis*, 1864 (*Botanical Magazine*, 5657), from Bolivia, has an elongated form of flower, the petals being about 2 inches in length and acuminate. These three laid the foundation, then *B. Davisii*, with flowers of a brilliant orange-scarlet, from Peru, 1876,

to lose its beauty. Mr. Veitch has also raised a new series between *socotrana* and the above-described hybrids, valuable for their late blooming. GEORGE HENSLOW.

CROCUSES UNDER BEECHES.

THERE is no statement more frequently repeated respecting garden or woodland planting than that nothing will grow under Beech trees. Like many other sweeping assertions that are in the main erroneous, this one has a grain of truth. For if we wander among the chalk hills, where the great wild Beeches—perhaps the very grandest of our forest trees—stretch



CROCUSES UNDER A BEECH TREE AT SEVERN HOUSE, BEWDLEY.

The foundation of these hybrids was laid in *H. vittatum*—*Reginae*, introduced in 1769 and 1725, respectively. The latter was called the Mexican Lily. The result was called *H. Johnsoni*, raised in 1810. About 1867 the species *pardua* was introduced from Peru, and in 1869 Mr. Pearce brought forward *Leopoldi* (named after the King of the Belgians). From these new hybrids were raised, and, with the assistance of the species known as *Aekermanii* and *puleherrina*, there have appeared the vast array of hybrid varieties now familiar to all. *Sprekelia*, which has a remarkably irregular flower, has always proved very refractory, though it has been crossed with *longifolia*.

BEGONIA.—The latest and one of the most

was used with hybrids between *B. Veitchii* and *B. boliviensis*, and some beautiful results followed. The flower being unisexual, it was not long before the staminate flowers became double, and so added considerably to the value of the hybrid progeny.

In 1879 Professor Balfour introduced *B. socotrana* from the island of Socotra. This has rose-coloured flowers rather more than an inch in diameter and peltate leaves. Crossed with *B. Dregelii*, a white-flowered species introduced in 1839 from the Cape, it has produced a valuable acquisition in the more well-known *Gloire de Lorraine*, a very floriferous plant, and as it is at first entirely male, it lasts long; female flowers are produced later, as it begins

their great arms wide and high, we find beneath them no forest sward, or Bramble tangle, or brake of other bushy growth; nothing but the carpet of dry rotting leaves, this leafy carpet remaining undecayed for a longer time than that of the shedding of almost any other forest tree. But it is to be remembered that gardening is the introduction of plants, for the advantage of their utility or for enjoyment of the gladness of their beauty into places where they would not otherwise occur, and we gardeners have of late years found out that even the dry hard soil under Beech trees may be made to bring forth abundant flower-beauty.

How well Crocuses thrive even under Beech trees is shown in our illustration.

THE ROSE GARDEN.

PAPA GONTIER AS AN INDOOR ROSE.

IN addition to the beautiful pink Roses, such as Caroline Testout, La France and Mrs. W. J. Grant, which will soon be seen in every florist's shop, that fine variety Papa Gontier will undoubtedly be met with in large numbers. Growers for market have not as yet found a better high-coloured Tea Rose for mid-winter cutting than the above. Its buds are perfectly handsome and of a very intense rosy crimson shade of colour. Many who grow this Rose outdoors are surprised at its behaviour under glass, for in summer there is nothing much in the flower. When, however, the growths are developed rather slowly under glass, the petals stiffen and increase in size until the flower assumes a totally different character to what one is accustomed to find outdoors. Anyone desiring a high-coloured erect-growing Rose that is easy to grow and prolific in blossom could not do better than plant out a quantity of this variety. Lord Brougham instances bushes of it at Cannes that have attained the dimensions of some 25 feet in height by 7 feet in diameter. What a picture such a shrub would be growing in the centre of a Rose house! I often wish I had the opportunity of affording plenty of space for such Roses under glass, where they could be planted out and allowed to attain the magnitude alluded to above. We cannot expect such specimens outdoors in our fickle climate, but there is nothing to prevent this consummation in a nice modern-built Rose house, where the plants are enabled to receive a far greater degree of sunlight than in the old-fashioned thick-raftered houses.

PILLOWELL.

NABONNAND'S ROSES.

Of the many continental raisers of Roses, few, if any, can claim so large a number of sterling novelties as MM. P. and C. Nabonnand. To name only a few of the best out of the 157 upon my list will give a good idea of the great service this firm has rendered to rosarians.

I was induced to look up the varieties from Golf Juan through noticing how many of our very best decorative Roses have come from there. It is a singular fact that several really grand Roses have been all but missed by our principal Rose growers here. For example, we have Georges Nabonnand, so prominently mentioned by THE GARDEN a few years back, and which very few were acquainted with. During the present winter we have another Rose on the market that very few British growers stock. This is the deep flesh-rose Paul Nabonnand, certainly one of the very best for winter culture. But to give a little description of what are, perhaps, the twelve best varieties from this firm.

Franziska Kruger (often spelt Françoise Kruger) appeared in 1880. For hardiness and general free-flowering qualities, also for pot work, it is indeed hard to beat this beautiful coppery-salmon Rose, and a more constant variety of its colour does not exist. Papa Gontier was sent out in 1883, and is a truly grand button-hole Rose, especially late in the autumn or when forced. The petals are large, buds extra long and firm, and the colour a deep red. A very free grower and almost always in bloom. The satin white sport from this was introduced in 1894 and is named Fiametta Nabonnand. It is one of our very best light-coloured Roses for any purpose except among what are known as "exhibition Teas." Princesse Vera, Paul Nabonnand (already mentioned), Comtesse de Pansse, and Cannes la Coquette all appeared in 1878. Agathe Nabonnand (1886), Isabella Nabonnand (1874), Marie d'Orléans (1884), Duchesse de Vallombrosa (1879), Bardou Job (1887), Reine Olga de Wurtemberg (1881), and L'Idéal (1887) will give the reader an idea of MM. Nabonnand's success in raising new Roses of merit.

RIDGEWOOD.

THE TEMPLE OF CONCORD AT GIRGENTI.

Al Tempio (To the Temple).

We ask the goat-herd whither leads
The path beneath the silvery leaves
Of Almond woods and wheat-green meads,
"Al Tempio."

With columns slim, enclosed in blue,
Concordia stands against the sky
"Signora, may we come with you,"
A host of eager children cry.

Al Tempio!

They sing and play—they show the way
Picking berries—eating cherries;
In and out amongst the corn
We follow them throughout the morn

Al Tempio.

The mountain range *celesti* lies;
Azzurro sleeps the waveless sea;
Turchino are the cloudless skies,
And gentians blue encircle me.

Al Tempio.

We see Girgenti far away,

On high, mysteriously defined;
Till fall of day we dreaming stay.

With gold in front and blue behind,

Al Tempio.

M. C. D.

[The Temple of Concord at Girgenti, in Sicily, is one of the best-preserved and most remarkable examples of ancient Greek architecture.

The Italian words *celesti*, *azzurro*, and *turchino* all express some degree of brilliant and beautiful blue colouring. Ed.]

While winter's snow is still upon us and we have yet to face the freezing winds of March, it is good to turn our thoughts to those distant southern

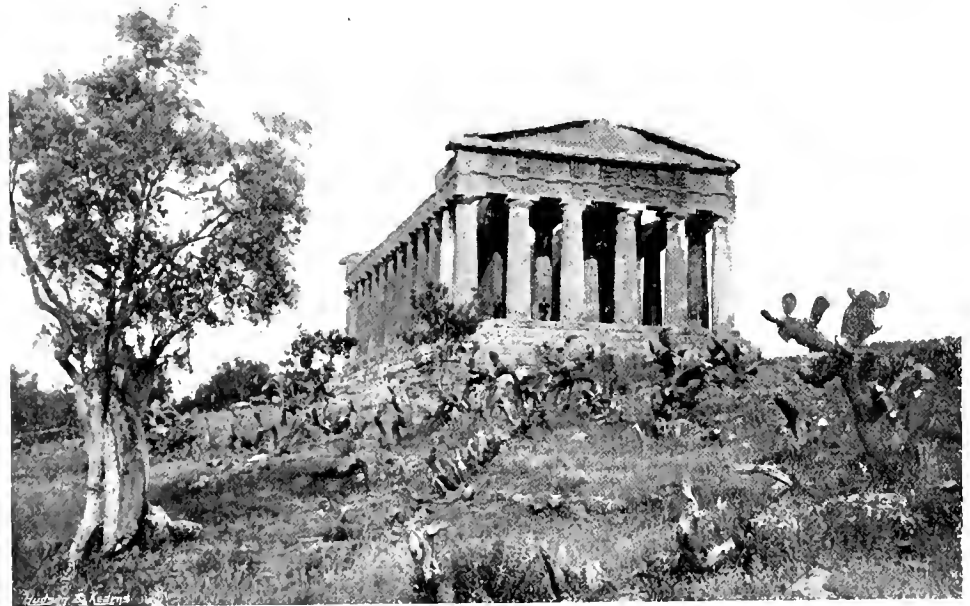
beast lived and moved amid the throng of worshippers.

To-day it is roofless and silent, and still it stands, as it may yet stand through other hundreds of years, an undying monument of the earlier ages of a civilisation wherein the sister arts of architecture and sculpture attained to a height that has never since been reached.

And, thinking of how the sentiment of love and veneration for the flowers and the green-growing things that now make the happiness of our gardens was present in the minds of the Greeks of old, we remember how some plants and leaves became identified, as their special attributes, with certain of the gods and heroes of the ancient Greek mythology of Bacchus crowned with flowers, while his servitors bore the *thyrsus* of pine-cone mounted on a ribboned rod, and of the places dedicated to his worship that were hung with branches of Vine and Ivy. And of Hercules, wearing in ancient sculpture chaplets of many kinds; of Ivy or Poplar, of Pine, Bay or Olive, or of interwoven flower and ribbon; while we yet may see the altars where the living laid their offerings, sculptured round with flower-garlands, while the chiselled Ivy still decks the marble casket that held the ashes of the dead.

A VILLA GARDEN. II.

Be careful to avoid an excess of plants, whether trees or shrubs, which have silver, gold, copper, or other unusual foliage. Although they are excellent at due intervals for lightening and giving variety to a shrubbery, they can easily be overdone and produce a garish and unnatural effect. This is particularly the case with the Golden Elder, which, though it has a very fine appearance on a large place when



THE TEMPLE OF CONCORD AT GIRGENTI, SICILY.

shores, where even now there are days of hot sunshine and skies of cloudless blue: where, as on the South Sicilian coast the Almond trees are already in bloom, and century after century the ancient Grecian temple stands, its marble mass gold-lichened against the blue of sea and sky and distant shore.

And we think how, long ago, on the days of solemn festival, the massive building, whose archaic Doric would proclaim its antiquity even if history were silent, had its pillared porch thickly hung with green garlands, and how its flower-crowned, white-robed priests and wreath-decked sacrificial

seen from a distance, is gaudy and staring when you are close by it. I may mention here that all golden plants, as far as I know, except the Aucuba, require full sunlight to make them colour properly. Expense being often an object for those who are planting a small garden, it may be well to remember that money will go immensely further in deciduous than evergreen stuff. It would not be difficult to stock the whole of a moderate-sized garden with 150 varieties of different deciduous trees and shrubs, not spending more than 2s. 6d. on any single

plant, whereas fair specimens of fancy Yews, Cypresses, Junipers, and other larger conifers could not be obtained under 7s. 6d. or 10s. apiece. In giving a list of some trees and shrubs suited to a villa garden I shall not mention any expensive evergreens, but confine myself to some of the cheaper shrubs sufficient to warm up and furnish the garden in winter. One of the principal objects to aim at in any garden is to have a succession of flower all the year round, and this in a mild season can be obtained with a little pains from trees or shrubs,

flowering : Ash, silver variety and flowering ; Beech, Copper, cut-leaved, crested ; Snowy Mespilus, common and canadensis ; Spanish Chestnut, gold and silver varieties ; Nettle Tree (*Celtis australis* or *occidentalis*) ; Cherry, double-flowering, *semperflorens*, and *Padus* ; Judas Tree (*Cercis siliquastrum*) ; Hawthorn, double scarlet, pink, and white, *orientalis*, *crus-galli*, *præcox*, *tanacetifolia* ; Maiden-hair Tree (*Salisburia*) ; *Gleditschia triacanthos*, *Koelreuteria*, *Laburnum Alleghingerii*, *Parkesii*, and *Scotch* ; *Liquidambar*, *Tulip Tree*, *Mul-*

never more than a matter of two or three pence except in the case of quite recent introductions. I calculate that it will be possible for anyone that is going to plant a garden to get one hundred of the above deciduous shrubs, twenty-five deciduous trees, and seventy-five evergreen shrubs for about fifteen guineas ; with the expenditure of another £5 it would be possible to obtain a sufficient assortment of creepers, also some hardy Roses and a good assortment of herbaceous plants, and in this way a collection might be made larger and more interesting than is usually seen in gardens of much greater size and pretension than the one I have tried to describe.

VICARY GIBBS.

Aldeham House, Elstree, Herts.

CLEMATISES AS WALL CLIMBERS.

THE merits of this climber demand many more to be planted than is the case at present. For walls or stems of trees these climbers are unsurpassed.

Clematises are more accommodating as to situation than many suppose. The variety *Jackmanii*, so well known for its mass of violet-purple blossoms, will succeed well on a northern aspect ; coming into flower there later than it does on a south wall, the period of flowering is prolonged. This variety is well worth a place in the centre of a flower bed, where it will annually give an immense crop of flower if it is pruned to within an eye or two of the ground every year in February and its roots freely supplied with manure at the same time. The culture of the Clematis as a wall climber is not at all difficult.

Soil that is heavy and retentive of moisture is unsuitable for Clematises, because it delays growth in the spring too long. A suitable compost would be turfy loam three parts, one part peat or leaf-mould, and one-sixth part of half-decayed horse manure with a sprinkle of road grit, sand, or wood ashes to keep the whole porous. The middle of March is a good time to plant Clematises ; even a month later will do, as the plants are always raised in pots, and they can be turned out of the pots without injury to the roots. After planting, should the weather be hot and dry for a time, mulch the surface 2 feet round with manure or leaves to prevent evaporation of the moisture. Mulching ensures a cool, moist rooting medium. When the plants are growing freely, liquid manure copiously given to the roots will promote vigorous leafage, which means a corresponding return in flower.

Pruning Clematises is perhaps the only point about their cultivation that requires special treatment. The sections require separate treatment.

As previously noted, that popular variety, *Jackmanii*, requires close annual pruning, as the blossoms are produced upon the current year's shoots. The white form of *Jackmanii* requires then the same treatment, and so do the following varieties : *Star of India*, reddish violet-purple, with red bars ; *Rubella*, velvety claret ; *Lilacina floribunda*, pale grey-lilac ; *Tunbridgensis*, bluish-purple ; and *Flammula*, small white blossoms.

Varieties of the *lanuginosa* section produce their blooms from the previous season's growth, therefore require but little pruning. This section includes *Alba magna*, pure white, purplish-brown anthers ; *Duchess of Teck*, pure white, delicate mauve bar when first opening ; *Lady Caroline Nevill*, bluish, mauve bars ; *Grand Duchess*, white, flushed rose ; *Henry*, creamy white ; *Duchess of Albany*, bright pink, deeper down the centre, softening to lilac-pink round the margin of the petals ; *Mrs. Hope*, deep lavender ; *Mme. van Houtte*, white ; *Louis van Houtte*, deep violet-purple, with darker veins ; *Albert Victor*, deep lavender.

The *florida* and *patens* section should be left untouched. Amongst these are *Duchess of Edinburgh*, double white, tree, vigorous, and fragrant ; *John Gould Veitch*, lavender-blue ; *Devoniensis*, bright azure-blue ; *Miss Bateman*, white, chocolate anthers ; *Sir Garnet Wolseley*, pale blue, plum-red bar ; *Mrs. Quilter*, pure white ; *Standishii*, lavender-blue ; and *Mrs. S. C. Baker*, pink.

B.



ALMOND TREES IN BLOSSOM IN SICILY.

As an illustration I would remind the reader that the various kinds of Aster and Hibiscus flower in late autumn, and the Hellebore and the Wych Hazel in the depth of winter, when in many gardens not a vestige of flower is to be seen. I now subjoin a list of plants suited to a villa garden which does not pretend to be exhaustive, and in which preference is shown to plants which are cheap, hardy, of moderate size, of striking appearance, and which flower freely. I cannot in the limits of this article go into details, and the reader, if unimformed, must refer to a nurseryman to see if any one of those here given be delicate or intolerant of smoke or particular soils.

EVERGREENS.

Arbutus Unedo, *Aucuba*, male, green, long-leaved, spotted ; *Berberis Darwinii*, dulcis, *stenophylla*, *Jamesonii*, *japonica* ; *Buddleia globosa*, *Box* in variety, *Laurel* (*caucasica*, *rotundifolia*), *Cistus* of sorts, *Cotoneaster* (*shrub*) *buxifolia*, *microphylla*, *Simonsi* ; *Pyracanthus*, standard or creeper ; *Daphne Laureola*, *Diplopappus*, *Euonymus* of sorts, *Garrya elliptica*, *Holly* of sorts, *Bay*, *Golden Privet*, *Olearia Haastii*, *Osmanthus*, *Phillyrea buxifolia*, *Ruscus Hypoglossus* and *racemosus*, *Skimmia japonica*, double-flowering *Spanish Gorse*, *Veronica Traversii*, *Laurustinus*, *Periwinkle*, green and variegated. All the above can be bought at about 1s. to 1s. 6d. each from any good nursery.

DECIDUOUS TREES.

Maple, *Colehiemum rubrum*, *laciniatum*, *Schwedlerii* ; *Sycamore*, silver var. and purple ; *Horse Chestnut*, yellow and red ; *Alder*, cut-leaved ; *Almond*, white and red ; *Peach*, double

berry, *Parrotia persica*, *Oriental Plane*, *Populus Bolleana*, *Siberian Crab*, red and yellow-berried ; *Pyrus Malus floribunda*, *P. M.*, *John Downie*, *White Beam*, *Mountain Ash*, *Scaveola Tree*, *Silver Birch*, *Scarlet Oak*, *Rose Acacia*, *Sophora japonica*, *Linne*, cut-leaved ; *Elm*, gold, purple, or silver. Good plants of the above can be bought for 2s. 6d. each.

DECIDUOUS SHRUBS.

Dwarf Almond, *Berberis*, common, *Thunbergii*, purple ; *Broussonetia papyrifera*, *Allspice* (*Calycanthus floridus*, *occidentalis*, *præcox*), *Caryopteris*, *Colutea arborescens* and *erecta*, *Dogwood* (*Cornus brachypoda*, *sanguinea*, *Spathii*) ; *Nut*, purple and cut-leaved ; *Cotoneaster affinis* and *Roylei*, *Pyrus japonica*, scarlet, white, or pink-flowered, and *Mauléii* ; *Broom*, white, *Andreana*, *præcox*, and *Spanish* ; *Daphne Mezereum* and white-flowered ; *Deutzias* of sorts ; *Dimorphanthus* ; *Spindle Tree* (or *Euonymus*) of sorts, *Forsythia suspensa* or *viridissima*, *Snowdrop Tree* (*Halesia tetra- ptera*), *Ribises* of sorts, *Hydrangea paniculata*, *St. John's Wort*, *Hypericum androsiumum*, *Moserianum*, *Kerria japonica* and *variegata*, *Lycesteria*, *Lilac* or *Syringa* of sorts, *Negundo* (white foliage), either as tree or shrub ; *Nuttallia*, *Philadelphus* of sorts, *Prunus triloba*, *P. Pissardi* (or purple Plum), *P. flore-pleno* (or double-flowering Sloe), *Rhus Cotinus*, *R. glabra*, *R. typhina* ; *Ribes* of sorts, *Shepherdia*, *Spiræas* of sorts, *Stephanandra*, *Symphoricarpos*, *Viburnum* of sorts, *Weigela* of sorts. All the above can be procured at from 1s. to 1s. 6d. each.

It is well to note that in their young state the difference in price between the more uncommon species and varieties and the most ordinary is

AN ARTIST'S NOTE-BOOK.

SPIRÆA PRUNIFOLIA
FLORE-PLENO.

THERE are few flowering shrubs more charming than the old double-flowered Spiræa, a spray of which is now figured. It is usually in bloom by the middle of April. The plant forms a dense thicket of slender arching stems graceful in habit and attaining some 5 feet to 6 feet in height. The leaves, as the name implies, resemble to a certain extent those of some species of Prunus—the Black-thorn (*P. spinosa*) for instance. The flowers appear very abundantly, three to six in a cluster, and are of the purest white. Each one is about half an inch across and almost perfectly double, resembling, in fact, a small Bachelor's Button. The shrub is an excellent one for the front of a shrubbery, or it may be planted in isolated groups or beds, in which case it is advisable to associate with it some dwarf evergreen, for, of course, it has but little foliage of its own when in flower. It may be propagated by cuttings, but I have found it is a quicker and more satisfactory plan to remove the young side-suckers from old plants in spring, pot them up, and give them a little heat for a few weeks. They soon set up active root-action, and can then be planted out. Whatever pruning is done should be mainly a thinning out of old and crowded stems.

I do not think the

Dr. Siebold's sale, is now in the possession of Louis van Houtte, florist, at Ghent." Plants, to be sent out the following April, are offered at one guinea each.

The single or wild type of *Spiræa prunifolia* is a plant of which but little is known. It is,

blue. It will interest growers of small alpine winter-flowering, hardy plants. W. W.

MERENDERA CAUCASICA.

A CHARMING little Crocus-like plant, which blooms in mid-winter with the earliest Snow-drops, and continues to push up its pale pink-mauve flowers in all kinds of weather. On a border at Kew it has been in flower throughout the trying weather experienced since Feb. 1, and when the snow disappeared the flowers were then as fresh as ever. It is also worth growing in pots, to be taken into a conservatory when in flower. The genus is closely related to *Colchicum* and *Bulbocodium*, but the flower segments are divided to the base, forming a cluster of slender filaments instead of a tube. Ten species are known, and they are natives of South Europe, North Africa, and the Orient. The flowers of all of them are either lilac or white, with bright green stamens. That here figured is probably the best for the garden. Although long known to collectors of choice bulbs, it is not found as often in gardens as its early-flowering habit and prettiness deserve. W. W.

TREES AND SHRUBS.

DECIDUOUS DAPHNES.

THE value of showy hardy flowering shrubs for decorative purposes is becoming recognised more every year, and those whose blossoms are produced during winter are specially welcome. With regard to the culture of the deciduous Daphnes, a cool, moist, rich soil and an open situation suit them admirably. *D. Mezereum* is a British plant, and, strange to say, a sadly neglected one in a cultivated state. Its clusters of sweet-scented rosy purple flowers are borne in great abundance along the entire length of the erect vigorous shoots in February and March. It is a lovely shrub for massing. There are several varieties of much merit, of which one named *grandiflora* or *autumnalis* should be cultivated extensively, as its blossoming period in mild seasons generally extends from autumn to early spring. The colour is a beautiful shade of rose-pink. Another variety, *alba* is noteworthy for its white flowers and yellow berries, but for general effect is less valuable than those named above.

LAURUS-TINUS.

So few are our good evergreens other than conifers, that those that we have are all the more precious. Though barely hardy in our colder midlands, the well-known *Laurus tinus* thrives in all but our worst climates. In mild winters its welcome flowering sprays are indeed precious, and if it is given a well-sheltered place, it will reward the planter's kindness with a bountiful mass of its pretty white



SPRAY OF SPIRÆA PRUNIFOLIA FLORE-PLENO.

(From a drawing by H. G. Moon.)

however, in cultivation, and has, I believe, flowered and fruited on the Continent. But it does not seem likely to ever rival the old double-flowered variety, which by long cultivation by the Japanese has been not only improved, but considerably altered. W. J. BEAN.

MUSCARI PRÆCOX.

THIS is one of the new garden plants that we owe to M. Siehe, of Mersina. It was introduced to Kew last year, and is now flowering in a sheltered border facing south. Strictly speaking, it is not a *Muscari*, but a *Hyacinthus*, and probably nothing more than a pigmy form of *H. azureus*, of which we know of several forms widely divergent from the type, the most striking, perhaps, being that named *H. azureus* var. *gigantens* by Mr. Baker, also one of M. Siehe's discoveries on Mount Muris, in Northern Cilicia, at an elevation of about 1000 feet. This form is the other extreme in size to that here figured, the latter being barely 3 inches high, whilst the former is almost a foot. The typical *H. azureus* was first introduced into gardens in 1856, but it was not generally known until about fifteen years ago. It grows about 6 inches high, and has a conical raceme $\frac{3}{4}$ inch wide of deep blue flowers. The plant here figured has a smaller raceme, and the colour of the flowers is light or Cambridge

value of this *Spiræa* for early forcing is generally known, or, at any rate, taken advantage of. A few batches of it have been forced this season for the decoration of the greenhouse at Kew. The slender wands studded with snow-white flowers are particularly graceful and effective, rising out of a mass of dwarf dark green plants.

Like many other valuable Japanese shrubs and plants, this was introduced to Europe by Dr. Siebold between fifty and sixty years ago. An advertisement in the *Gardeners' Chronicle* for February 20, 1847, states that "the stock of this magnificent Japanese novelty, bought at



A NEW GRAPE HYACINTH (MUSCARI PRÆCOX); FLOWERS TURQUOISE-BLUE.

(Drawn at Kew by H. G. Moon.)

bloom, while as yet there are but very few hardy flowers in the garden. It should be remembered that it is a shrub of Southern Europe, and therefore grateful for as warm and well-sheltered a place as it can have; indeed, it is by no means to be despised as a warm wall shrub, showing when so grown by its wealth of bloom and pretty blue berries how well it likes such good treatment, while its neat foliage and way of growth make it quite worthy of a good place.

It is a very strange thing that the other kind, the Black Laurustinus (*Viburnum hirtus*), should be so little known and grown. It is the hardier of the two, scarcely less good in flower, and more free and handsome as to its really ornamental bunch of berry, which has a remarkable degree of bright blue metallic lustre.

Viburnum lucidum, a native of the Atlas range, is a more beautiful shrub both in leaf and flower than either of the better-known ones, but, alas! is too tender for English gardens in general, though it would do well wherever Myrtle, Sweet Verbena, Fuchsia and Hydrangea stand the winter without protection. It is like our common Laurustinus enlarged and improved in both flower and leaf. It is usually the case that a plant that is an enlargement of a well-known type is made coarser by the increase of size, but though as a rough description *Viburnum lucidum* is a larger shrub of much the same appearance as the one with which we are so familiar, it has distinctly a more refined character in every way. The flowers are whiter and the ovary is somewhat looser; the foliage is also less stiff, of a livelier green, and bears a handsome polish, while the whole shrub is more elegant and free of outline.

TREES AND SHRUBS OF RECENT INTRODUCTION.

DURING the last decade our parks and gardens have been enriched by many ornamental trees and shrubs suitable for open-air culture in the British Isles. The following are a few of the most meritorious that have been put into commerce within the last year or so:

Amongst evergreens, *Ilex Golden King* makes a capital companion to the well-known *Hodgins' Holly*, a vigorous form with broad deep green leaves. In habit, vigour, and form of leaf *Golden King* bears a close resemblance to the last-named; in fact, it might almost be taken as a golden form of it. The leaves are irregularly, but clearly margined with deep yellow. The parents of the hybrid *Escallonia langleyensis* are very ornamental garden shrubs, *i.e.*, *E. philippiana*, a form from Valdivia with an abundance of small white flowers in July, and *E. macrantha sanguinea*, conspicuous for its lovely red flowers. The progeny takes after the first-named parent so far as habit of growth is concerned, but the delicately tinted rosy red blossoms remind one of those of *E. macrantha sanguinea*. It is very floriferous, free in growth, thoroughly hardy, and may be used with good effect in the mixed shrubbery or as a wall shrub, also for training up pergolas, &c. It is a gem amongst hardy evergreen free-flowering shrubs. *Picea (Abies) pungens glauca pendula* is a charming conifer of truly weeping habit. The long, pendulous branches fall close to the main stem, and are clothed with attractive greyish coloured leaves. It is of good growth and well adapted for planting as an isolated specimen on the fringe of the lawn. *Hamelis mollis*, the latest addition to the Witch Hazel family, should prove a fitting companion to the deservedly popular *H. arborea*, from which it differs in having larger leaves and flowers of a brighter hue. *Prunus (Cerasus) pseudo-Cerasus James H. Veitch*, shown for the first time at one of the Royal Horticultural Society's Drill Hall meetings last May, is a precious shrub, and unquestionably the best of the ornamental Cherries. In habit it is similar to *Waterer's Cherry*, but the flowers are larger, deeper in colour, and about a fortnight later in coming to perfection. The foliage, too, is very distinct, the colour being a pleasing shade of bronze-green, which affords additional variety. For

decorative planting it is sure to be in large demand. Another shrub or small tree belonging to the same family is *Prunus (Amygdalus) persica magnifica*, conspicuous for its gorgeous semi-double rosy carmine flowers. It is a splendid subject for forcing into bloom for the greenhouse and conservatory in early spring. *Humulus lupulus foliis aureis* is a fast-growing ornamental Hop. It is a lovely plant for clothing arbours, arches, and such like structures, and if exposed to full sunlight the colouring is very fine.

The *Deutzias* are very free-flowering shrubs with white or pale pink flowers. *D. corymbiflora*, introduced from China, is an acquisition to the group. It is of excellent growth, quite hardy, and bears corymbose panicles of pure white flowers in abundance.

BOOKS.

General Index to Miss Ormerod's Reports. In the "Report on Injurious Insects," published in May last year by Miss Ormerod, she mentioned that she intended that it should be the last of the series, and that the report on insects



MEIBOMIA CATASCIA: FLOWERS LIFE SIZE. (Drawn at Kew by H. G. Mann.)

noticed in 1899 should commence a new series. It was also stated that an index of the 22 reports already published was in course of preparation, and that it was being compiled by Mr. R. Newstead, the well-known curator of the Grosvenor Museum, Chester. This index has recently been published, and forms a very valuable and helpful addition to the series of reports. It consists of a preface by Miss Ormerod, a general index, plant index, animal index, and an index to unclassified hosts. In the preface the authoress gives a short history of the reports which at no little trouble and labour she has now drawn up for 22 years. She then gives with very short notes in each case a list of 17 different insect infestations that have been specially reported on. Referring to the continuance of the reports, she says, "For myself, so long as health sufficient for the work is granted me, and I am honoured by being asked to assist, it is only a pleasure to me to do my very best, and I hope to continue to publish yearly results, but with a little difference in plan, so that I may utilise short notes

General Index, by R. Newstead, F.E.S., to "Annual Reports of Observations of Injurious Insects, 1877-1898," by E. A. Ormerod, F.R.M.S. London: Simpkin & Marshall.

of useful means of prevention and remedy sent me in a separate section following the body of the report, and under a distinctive heading." She also mentions that she has arranged with Mr. Newstead to assist her when necessary. The value of these reports is very largely increased by this index, for it is now an easy matter to refer to any point in them, which before was a tedious operation. Every one who has this series of reports should make a point of procuring a copy. Indexing is a great art, and the modern system of giving in publications of this nature a general index and also special ones is very useful, provided it is well done, as it is for the most part in the instance before us. But there are some curiosities; for example, in the animal index the ox is given a separate heading, and is not included, as one would have supposed it would have been, under that of "cattle," so that anyone looking under "cattle" for reference to the warble fly will not find any mention of it under that heading, which would make it appear that cattle are not attacked by this insect. Reference to this insect will be found under the heading of "ox," which is not right, as heifers are also liable to the attacks of warbles. The index to unclassified hosts is really not required; only ten "hosts" are mentioned, and they would have been much better placed in one of the other indices; grouse and the excreta of cattle might have found a place in the animal index with much advantage. This "animal index," however, is of little use, for there are only twelve animals mentioned in it, and in three cases the reader is referred to the general index. Though called an "animal index," it should have been entitled "Animal Host Index," for it is only animals that are infested with parasites that really find a place there. In spite of these slight mistakes warm thanks are due to Miss Ormerod and Mr. Newstead for this valuable termination to the first series of these reports. G. S. S.

Gardening Year-Book and Garden Oracle. We expect a book of this kind in the new year, but of course that is the publisher's business. With regard to articles and garden recipes, there is nothing to quarrel with, and the pages are brightened with many illustrations. It is published by Messrs. Colnaghi, 4, Ave Maria Lane, Paternoster Row, E.C.

One-and-All Gardening. We have received this interesting annual for amateurs, allotment holders, and working gardeners, conducted by E. Owen Greening, of the Agricultural and Horticultural Association, 92, Long Acre, W.C. It is a useful book and freely illustrated.

RECENT PLANT PORTRAITS.

THE third monthly part of the fifteenth volume of "Lindera" contains portraits of the following Orchids:

Epilobium elegans. A most beautiful species, with spikes of pure white flowers, the lower petal of which is distinctly spotted with carmine on the inner half of its length, with a deep rosy purple spade-shaped outer portion, which is distinctly margined with pure white. Quite a lovely flower.

Cathaya Loddigesii var. *Harrisonii* subvar. *alba*. This is an absolutely pure white-flowered form of the *C. Loddigesii* var. *Harrisonii* formerly figured in this work, the only trace of any other colour present being the faintest yellow shading of top of lip.

Lalia cubensis. This bears a perfectly upright spike of soft purple-lilac flowers, with deeper purple eye and small white tip.

Cathaya lobata var. *Affodiana*. A fine large flower of rosy purple, veined faintly with white.

W. E. GUMBERTON.

The Netted Iris (*I. RETICULATA*). This flower is charming in pots, and the bulbs seldom fail to bloom in an ordinary greenhouse. The rich blue-purple colour and fragrance of the flowers make this a favourite species. T.

GROUPS OF FLAG IRISES.

In the late May and early June days no nobler flower graces the garden than the German Flag, or Flag Iris (*I. germanica*), so varied in colour and delicate in fragrance. The illustration shows the plant grouped with other flowers, the true way to obtain rich and distinct effect.

GARDENING OF THE WEEK.

KITCHEN GARDEN.

WINTER AND SPRING CABBAGES.

SUCH a winter as the present one shows the value of a good breadth of winter Cabbage, as these being very dwarf growers suffer less in our variable winters than plants with a long stem, and such kinds as Sutton's Favourite and Christmas Drumhead are most valuable, as on removal the snow they are found to be uninjured, and delicious when properly cooked. At the same time, in very severe frosts it is advantageous to lift winter Cabbages and pack them rather close in a frame or cold house, and treated thus the hearts remain good for weeks. The value of these winter varieties consists in their small, compact growth and the long time they remain good when nearly full grown. For use at this season they are best sown in May or early June, according to the locality; on heavy soil I would advise late May sowing. Spring Cabbages, such as Ellam's Dwarf, and Mein's No. 1, are much more forward in growth than usual at this season owing to the late autumn growth which they made, and I fear in some soils there is a tendency to bolting. Of course, the severe weather of late has checked growth, and if previous advice was followed, now will be seen the advantage of moulding up, as this protects the stems, the most vital portion of the plants. With a break in the weather new growth will soon begin, and this will be greatly assisted by using a fertiliser of some kind. We find such aids as guano applied fortnightly excellent, but any quick-acting food will be suitable.

CARROTS.

need a mild bottom-heat to assist germination, which is much slower than is the case with Turnips and Radishes. Avoid thick sowing, as I find severe thinning of the plants loosens those left, and this should be avoided. For present sowing such kinds as the Early Nantes and Sutton's Early Gem are splendid for frame culture, and those who prefer

the short stump-rooted kinds will find the French Forcing, a small-topped variety, very good. Carrots like light rich soils when grown under glass and the soil made firm to assist the roots to bulk quickly. More warmth may be given than to Turnips, so that these roots should have the warmest part of the frame.

TURNIPS.

are well worth glass culture—indeed, in my opinion, more so than Carrots, as last year's Turnips are worthless early in the spring, being flavourless and dry. Little heat is needed to grow Turnips, and the new roots are sweet and serviceable at a time there are so few good roots. Sow thinly and give ample ventilation in the early stages of growth, otherwise there is fear of the plants running. For frame culture I do not know of any better variety than Carter's Early Forcing, an oblong root and of excellent quality. This matures in twelve weeks from time of sowing and should not be forced hard.

FORCED SPINACH.

At times there is a deficiency of Spinach at this season, and now is a good time to make up losses.

the front of the house, and are trained up a trellis parallel with the rafters and fixed about 1 foot from the glass.

Plant 18 inches apart, at the same time nipping off all side shoots, and frequently afterwards go over them for the same purpose, so as to confine them to one stem. The soil must be of a porous nature, so that frequent waterings do not make it inclined to become sour. Loam with quite one-third of lime rubble answers the purpose well. At the time of planting only afford sufficient soil to sustain the plants for a short time, and add to it afterwards, a little at a time, as often as it becomes permeated with roots.

As often as necessary examine the soil to ascertain its state of moisture, and when approaching dryness, afford a liberal application of water. They enjoy a dry, warm, airy atmosphere, and for the present, dry surfaces should only be damped on fine days to prevent dust rising. The temperature may range from 55° as a maximum during the night to 65° in the daytime with fire-heat, with a rise of 10° with sun-heat. Keep ventilation on the apex of the house at all times, except when the

external conditions are of the worst. The quantity must be regulated according to the state of the weather.

Sow seeds to produce plants for planting outdoors at the end of May and give them good attention, so that by that time they may be sturdy and established in 6-inch pots.

STRAW.

BERRIES.

Those plants that have set their fruit may be hurried along in a higher temperature than they have had hitherto, and the swelling of the fruit may be assisted by mixing in the water occasionally some good artificial manure. When they begin to colour afford as much air as circumstances will allow to improve the

colour, flavour, and the solidity of the fruit. From now until they begin to colour syringe in the early part of fine days. A later batch of plants with the bloom-spikes extending will be coming out. Thin out the blooms as soon as the weakest can be nipped out with the finger and thumb, leaving eight to ten of the strongest on each plant. This early thinning is a preventive of waste of energy of the plants. While in bloom, to encourage free setting, maintain a sweet, buoyant atmosphere with fire-heat and ventilation, with temperatures from 50° to 55° at night and 60° in the day from fire-heat.

Take indoors plants for later supplies, and start them slowly into growth as recommended for plants earlier in the season. Green-fly is a troublesome pest in forcing Strawberries, which must be kept in check by fumigation. Richards' XL All fumigating compound is the best remedy for it. It is important to give an application immediately



GROUP OF FLAG IRIS (*I. GERMANICA*).

A few pots of seed sown in frames will make nice material to plant out at the end of March, or seed may be sown in frames as advised for Carrots. The Carter Spinach is the earliest I have grown.

G. WATKINS.

FRUIT GARDEN.

TOMATOES.

Move plants that are strong and established in 5-inch or 6-inch pots into their fruiting pots, or plant them out in houses. Some growers fruit them in pots, thinking they set more freely, but I do not think they do if precautions are taken to guard against over-luxuriance in the early stages when planted out. The labour is considerably lessened when the plants are grown on the latter system. They thrive in either span or lean-to houses providing they have the best position, &c.,

before they come into bloom so that they are clean at the blooming period. Examine the remainder of plants still in their winter quarters so that they do not suffer for want of water. G. NORMAN.

The Gardens, Hatfield House.

ORCHIDS.

THE outside conditions during the past few weeks have not been favourable for disturbing plants which have been waiting for attention as regards re-potting, &c. It is not advisable to disturb anything that can possibly wait while the very severe weather prevails, as any disturbance at the roots considerably affects the well-being of any Orchid. Excessive fire-heat is most detrimental under such conditions, and is, therefore, to be avoided. I advise that all re-potting be postponed until favourable conditions again prevail. The temperatures of the various departments should be allowed to fall almost to the minimum, thereby avoiding any necessity for excessive fire-heat. With lower degrees of temperature the moisture in the atmosphere must be reduced correspondingly, and the damping of the floors, staging, &c., should be deferred until the normal degree of temperature has been resumed. With lengthening days, and the sun's power also increasing, the temperature in clear weather soon reaches the desirable degree, and the necessary atmospheric moisture may then be quickly obtained. Care must also be taken to damp the houses sufficiently early in the afternoon to allow excessive moisture to evaporate before evening with its falling temperature comes on. With low conditions of the temperature in severe weather the plants are not nearly so liable to become damaged if they are retained in a dry condition at the roots. This especially applies to Masdevallias and cool house Orchids. If drier conditions were maintained when low temperatures prevail, I am sure we should not find nearly so much black spot and permanent disfigurement of the foliage as we now meet with where Masdevallias and other cool subjects are grown.

Among imported Orchids now arriving there are none more attractive than *Odontoglossum crispum*. Unfortunately, importations of this lovely species are not likely to be so plentiful as usual this year. The present is a good season in which to procure plants of *O. crispum*, and the earlier the plants are procured the better chance they will have of becoming established before the hot summer weather sets in. This species always sells well, as no Orchid is so much in demand at the present day. The many remarkable forms that have been imported during the last few years have given encouragement to growers of this section, and as these flowers have been considerably multiplied owing to the fact that so many market growers have adopted their culture for cut-flower purposes, and notwithstanding the fact that many large growers have imported direct, the demand has been greatly in excess of the supply, and good prices are thus realised.

In dealing with imported plants, some have a preference for planting them out in a prepared bed consisting of good fibrous peat, sphagnum moss, and a liberal sprinkling of rough silver sand. This is a good system in the case of very small plants, but not one which I should advise amateurs to adopt. When first received lay the plants on a cool, damp bottom for a few days in the *Odontoglossum* house. The shrivelled bulbs will quickly regain a plump condition, and those likely to decay can also be observed. When this has become apparent, clear the plants of all decayed matter and cut away dead roots and bulbs. It is advisable to procure pots which are just sufficiently large to contain the plants comfortably. They should be clean and filled to two-thirds their depth with clean crocks. After placing the plant in position the remaining space should be filled with fibrous peat and living sphagnum moss in equal portions, pressing the compost moderately firm, and thereby securing the plant in position. After potting, the plants should be thoroughly watered, using a rather coarse rose on the water-pot, and they should then be placed in a moist position of the

house where the light is not too strong. Careful attention will be required at first, but as soon as roots make their appearance every encouragement should be afforded. Soft rain water is necessary for the successful culture of *Odontoglossums*; without this they rarely succeed satisfactorily. H. J. CHAPMAN.

INDOOR GARDEN.

YELLOW CALLAS.

CALLAS of the *Elliottiana*, *Pentlandii*, and *aurata* type which may be wanted to flower in April and May should now be potted. If the corms have been well ripened they will be found totally devoid of living roots, and such corms, if big enough, may be depended on to flower well with good treatment succeeding thorough ripening. In potting use good fibrous loam, with a liberal mixture of dry and finely pulverised cow manure, using also a good quantity of sand (either silver or river sand will do), a handful or less of which, according to the size of the corms, should be placed round each one. The corms should be kept well below the surface to encourage the principal feeding roots which spring from the base of the new growth. Place the plants in a house with a temperature of from 60 to 65 and with a moist atmosphere, using the syringe freely. To attempt to grow these yellow Callas in the temperature which best suits the common *Arum* is to court failure, for they enjoy and must have more heat. Very little water should be given until the plants are growing away freely.

ARUMS.

The white Callas, now being in full growth and throwing up spathes, require to be well fed with liquid manure from the stock-yard in a diluted form, and to be kept constantly moist at the roots. A temperature of 50 at night suits them best, but if it is necessary to bring them forward quickly, they will bear more heat, though the spathes will then be less lasting. As fly breeds fast on these plants, vaporise them frequently with one of the nicotine vaporisers in preference to fumigating in the ordinary way, for the use of ordinary fumigating materials browns the tips of the spathes and spoils them.

WINTER PELARGONIUMS.

For winter flowering it is necessary to strike one's cuttings of the zonal section early, and the present is an excellent time to do so. Look out for the healthiest and sturdiest cuttings from plants which have not become drawn, and give each cutting a small pot to itself. Strike in an intermediate temperature in a house or pit the atmosphere of which is dry. Few plants give such a bright effect as these in winter; but all varieties are not alike useful, and I would suggest that old favourites should not be discarded to make room for newer ones with more showy or better formed flowers until the latter have been tried and proved good for winter flowering. J. C. TALLACK.

CHRYSANTHEMUMS.

JAPANESE KINDS FOR EXHIBITION. II.

OVERCROWDING in any stage of their growth must never be permitted, or weakly, drawn-up plants will be the result, and blooms of the finest quality can never be expected from these.

By the end of April it should be safe to transfer the plants to a sheltered spot in the open, standing the pots on boards on the beds, where, if occasion arises, they can be protected with tiffany or some light covering.

The summer quarters for the Japanese Chrysanthemums should be a light, open, sunny position. It matters little whether the plants are arranged on beds or in lines running by the side of the garden walks, but I prefer the latter, as they are more easily attended to and they enjoy a free circulation of air.

FINAL POTTING.

Prepare a mixture similar to that advised for the last potting, except that the loam should be broken up roughly with the hands into pieces about the size of walnuts, and add a 6-inch potful of Thompson's plant manure, one of ½-inch bones, and one of finely broken charcoal to every two bushels of soil.

In my opinion Japanese Chrysanthemums are generally over-potted. Providing the after-watering be well attended to, 8-inch or 9-inch pots should be large enough for the reception of nearly all, except just a few of the very robust kinds, for which 10-inch pots may be used. A thin layer of ½-inch bones should be placed on the fibre for this potting, and if the soil is in a good condition it can hardly be made too firm, which should be done with the potting stick, but a little more fine soil should be shaken over to prevent the soil caking or baking on the top. See that each plant is correctly labelled and a longer stick will be required, to which the plants should be neatly tied. Place them in their summer quarters on boards, allowing a distance of at least 15 inches between each, arranging them in their heights so that the taller plants do not overshadow their neighbours. Stout posts should be driven in at intervals and strong cord should be stretched along to which the plants can be tied.

The plants should not be watered in for a day or two, but may be syringed overhead several times a day during hot, drying weather to prevent them flagging. As soon as the plants require water give them a thorough soaking, filling up the pots at least three times so that every particle of the soil becomes moistened. Watering at all times requires to be done judiciously and thoroughly. Though the Chrysanthemum will take up a great deal of water, much injury accrues through too much being given, and though the plant will to a great extent recover after becoming too dry and suffering much at the time, very seldom will it do so if it ever becomes sodden.

During the summer a thorough syringing morning and evening will be of much benefit. Millew, thrips, green-fly, earwigs and rust are the most troublesome pests to the Chrysanthemum. Frequent dustings in the points with tobacco powder will generally keep at bay the two first named. Flowers of sulphur applied to the foliage when damp will keep down millew, and I know of no better plan than picking off and burning leaves affected with rust. Though there are many advertised remedies, I cannot say much for them. Earwigs can easily be trapped by hanging Broad Bean stalks, about 4 inches in length, about the plants, from which they can easily be blown and killed.

FEEDING.

After the plants become filled with roots, but not before on any account, feeding may commence. This requires to be done with great caution, as though the Chrysanthemum will take up a lot of stimulant, it can easily be overdone. When procurable there is nothing better for this purpose than fresh animal manure, either cow, horse, or sheep droppings. Place a barrow-load of either in a large tub or tank with one bushel of soot tied up in a bag, and add about 150 gallons of water; this forms a good safe manure. It should be stirred up and used at every other watering, diluting it to about the colour of weak tea. By way of a change a small quantity of ichthonic or Peruvian guano may be given, which is best applied in showery weather. A dessert-spoonful is ample for each plant, which should be shaken evenly all over the surface of the soil.

TIMING AND SELECTING BUDS.

To have the whole of the flowers in perfection at one time of course many of the varieties will require pinching. The first bud is generally formed during May; this is called the break bud, because the plants break away into new growth immediately the bud is formed. The three strongest shoots should be retained and the others rubbed out. In about three months the shoots produce another bud, which is called the crown bud. In a few instances of late varieties this bud should be secured, taking out the whole of the shoots which

appear around it. This will generally be early in August. Unfortunately, many of the best varieties do not come clean and of good colour from this bud, so that special means should be taken to induce second crown buds to form early in November, and to obtain this the points of the shoots must be pinched out from the last week in March to the second week in April, unless the plants break away naturally, when they should form buds about the middle of August; but experience alone can make one perfect in this. The whole of the buds should, if possible, be secured by the middle of August, as any that form after this date are usually too late for the November shows.

HOUSING THE PLANTS.

The plants should, if possible, be safely housed by the end of September in light airy houses. Abundance of air should be given day and night until the plants become acclimatised. Avoid overcrowding, or the loss of foliage will be considerable, and this should be retained as much as possible until the plants have done flowering.



AMERICAN PERSIMMON (DIOSPYROS VIRGINIANA).

Arrange the plants in a pleasing manner, according to the shape of the structure. During the time the plants are unfolding their flowers weak manure water should be given at every second watering, and the plants should be thoroughly fumigated every ten days. Always water in the early morning, and the Chrysanthemum is much benefited if the hot-water pipes are kept just warm. This will prevent damping and assist the better development of the flowers and also the coloring. Fortunately, Japanese blooms require but little dressing to make them presentable on the exhibition stage. Damped or badly formed florets should be removed, and green eyes, if any, carefully taken out with a pair of forceps. Unquestionably the new and pleasing way of showing these in vases will before long be generally adopted. E. BECKERI.

Albion House Gardens, Elstree.

PERSIMMONS.

A LETTER FROM AMERICA.

I was surprised to see the Japanese Persimmon (*Diospyros Kaki*) referred to in a recent number of THE GARDEN (p. 29) as the Date Plum. It is not a Plum in any sense of the word, and not related to the Plums. This name is the more misleading, since the Date Plum is really a variety of the common domestic Plum, long known and cultivated in Europe, and described in nearly all the common works on pomology.

The Persimmon is not uncommon, though still not a popular fruit, in the United States. There are several varieties propagated by certain nurserymen who make a speciality of this fruit, and a few collections and small orchards are in bearing. Small offerings of these Kakis are generally to be found in the city markets during autumn, but they are sold at a somewhat fancy price, and there is no general call for them. The Kaki is a beautiful fruit and fit to grace any table. It is desirable, not only on account of its novelty, but for its intrinsic good quali-

ties, as a dessert fruit. It is well worth more general cultivation in amateur collections, and ought to make a larger market for itself at the fruit stands.

The native Persimmon is less often cultivated even than the Japanese varieties, though it has some points of superiority. The principal advantage which it enjoys is in its better quality. The fruit is richer and more sugary. Well-ripened Persimmons are very agreeable to many palates, especially to those cultivated somewhat to that taste. There are several named varieties of this native Persimmon (*Diospyros virginiana*) handled by American nurserymen. They are mostly propagated by grafting them on seedlings. The Japanese varieties also are often grafted on the native seedlings. The greater part of the Persimmons which are eaten in this country, however, are those gathered from the woods. The wild trees, too, are the principal source of supply

for the markets. A certain quantity—nothing very large, however—is always seen on the fruit stands. The photograph which I am sending you herewith is taken natural size from specimens gathered at random off the wild trees of Maryland in January. These fruits were just in condition for eating. To my taste they were delicious.

Burlington, Vt., U.S.A. F. A. WAUGH.

FALSE IDEALS.

Though I agree with much that your correspondent "S. W. F." writes on this subject, I cannot help feeling that he might have been a little less sweeping in his condemnation of the practice of clipping evergreens. It is quite true that excessive formality should at all times be deprecated, and that it is mere vulgar affectation on the part of the owner of a garden to endeavour, by the introduction of an abundance of evergreen balls, squares, pyramids, and peacocks, to impose on himself, or his friends, the absurd fiction that his garden was laid out in the reign of Queen Anne, and that it has remained so ever since; nevertheless, there is much to be said in favour of well-clipped hedges of Yew, Box, or Holly.

A garden after all is a garden, that is, an enclosure made by man, a place fenced in from wild Nature for a man's private use and enjoyment. It must have walls and hedges, or boundaries of some sort. It is a very delightful and commendable practice to naturalise beautiful flowers in meadows and wild coppices; it undoubtedly adds to their beauty and interest, but these places cannot strictly be called gardens all the same. In a garden, evidence of the work of man, *as long as such work is controlled by good taste*, is no detriment and need never be concealed. Lawns are none the worse for being kept smooth and velvety, paths for

being firm and free from weeds; strong comfortable seats are not eyesores, fountains are at times desirable; a pergola shade or a well-designed summer-house for tea or shelter does not necessarily injure the general beauty. And in the same way a well-clipped hedge *in its right place* adds not only a comfortable feeling of home to the garden, but assists much in the general beauty as a foil. Artists know well the immense value that broad masses of evenly-graduated neutral tints have in the composition of a picture. They carefully avoid cutting up this breadth with detail of positive colour, or light and shade. The detail and interest of the "jewellery" of the picture is enhanced immeasurably by the quiet relief of these breadths of even neutrality. It was well said of Macaulay that he knew how to adorn his conversation by occasional brilliant flashes of silence.

A well arranged herbaceous border never looks better than when it has such a quiet backing as the exquisite dark olive a clipped Yew hedge affords; much of the beauty is lost, escapes as it were, if the flowers are allowed to get mixed up with the background in a wild way, or if the background has a distracting effect by too much detail of colour, light and shade, or even beauty of its own.

I think that every garden of any size should have at least one dry sheltered path with a sunny aspect; a harbour of refuge for the invalid or the aged, for use in the cold spring or autumn, and nothing answers so well the purpose of such shelter as a hedge of well-clipped Box, for it has no overhanging boughs to injure the path by drip or falling leaves, and the delicious scent of the Box-leaves in the sunshine makes it, in my opinion, superior for this purpose to a wall, even though when beautified by age.

A wise little girl that I knew, when asked which of two nice things she preferred, invariably answered, "Both." And in this much vexed question of the natural *v.* the formal arrangement of gardens, surely the happy medium is the most desirable. A little more of the one or the other, according to the predilection of the owner, is quite right at all times, so as to secure individuality, which, after all, is ever most important, for a man's garden ought to be quite as much in keeping with his character and personality as his house and home. A man with no taste of his own who merely follows the fashion, no matter what the fashion may be, or who leaves everything to his gardener, cannot be said to have a garden of his own. He relegates the piece of ground to another, and then it all depends on what amount of taste his gardener has. In most such cases the results are commonplace and conventional. G. D. LESLIE.

A TOWN GARDEN.

Few things are more depressing to the average man than the dismal aspect of a neglected back-garden in a town of considerable size. Such a plot came under my notice not long ago, and under judicious management and careful arrangement it has in a very short time proved such a pleasure, that I think some details may be of use to those who find themselves possessors of such a potential "Eden." As is usually the case in all ordinary town gardens, the area is about three times as long as it is wide—in this case containing quite a third of an acre—surrounded by sooty brick walls devoid of any climber whatever. The ground is quite flat and the soil strong clay, which, however, had once been well worked. On the ground stand two dilapidated and dark old

glass-houses; one ainery facing south with a somewhat raised Vine border long disused; the other house, a span roof, near the eastern wall of the garden. A few poor trees outside at one corner give the only touch of greenness to the space within.

The first idea, to cut up the ground into three squares, one for flowers, one for vegetables, and one for reserve ground, was abandoned, both on account of its ugliness and also because it did not afford scope for a grass walk with flowers at each side and a seat in shelter, which was the cherished wish of the new possessor. At last it was decided to make a broad gravel walk across the width of the garden at the far end, and heighten the old Vine border so as to obtain a southern slope. The entrance to the garden is at the south-west corner, and the greenhouse stands midway on the eastern side, projecting into the ground. This afforded an opportunity to destroy the formality of the long strip by making a broad grass walk from the entrance diagonally across the ground into the angle between the greenhouse and the garden wall. This walk, 7 feet broad, was sunk quite 3 feet into the ground by the steps at the entrance, and rose gradually to the ground-level at the other end. The clay and soil taken out was used to raise the beds on either side and make an even slope to the path as it rose to the level. At a distance of about 12 feet from the grass path a hedge of *Olearia Haastii* and red and white double Japanese *Rosa rugosa* was planted to screen off the reserve and vegetable plots from the decorative part of the garden. By this means two broad borders were obtained having different aspects, and at the upper end a very warm and sheltered corner was formed for tender plants, while at the lower end by the door two fair-sized triangles were dug out of the clay to form a drainage to the sloping walk, and at the same time afford a moist and shady nook where some hardier bog plants and flowers might thrive.

Towards the upper end a narrow gravel path was cut through the bank round the end of the greenhouse which joined the broad terrace walk at the foot of the Vine border, and afforded on the side near the greenhouse a suitable place for a seat where the flower borders might be seen. Four Bay trees in tubs (which find shelter in winter in the disused inery) protect the seat from the neighbours by means of striped awnings tied from stem to stem.

After this rough blocking out of the flower garden the next thing was to plant it, and to harden one's heart against unsuitable things, however lovely and desirable they might be in themselves. I am not sure that in the long run there is not some advantage in being unable to grow many things, as the best effects are always attained by simple means.

Roses are forbidden in a town garden except the invaluable *Rosa rugosa* and its varieties, but the new and extra vigorous *R. Wichuriana*, which is not well known as yet, seems to promise great things. Its corymbs of sweet white little flowers in August and September are most delightful, and its glossy neat foliage an ornament to any garden. Conifers too are quite useless, and so is any evergreen that looks sooty and black like some varieties of the Holly.

On the other hand, Carnations and Pinks thrive extremely well, so broad masses of them adorn this walk, and a bed of seedlings in the reserve plot affords a long succession. Yuccas, Tritomas, Lilies and tall composites form a stately background to the usual semi-hardy bedding plants and annuals, and Sweet Peas, Mignonette and Sweet Geraniums afford, with *Ceropepis* and various composites, plenty of bloom for cutting, even though their fragrance

may not equal those grown in country air. Irises of all sorts, and especially Gladioli, are as happy as possible, and Dahlias are bright and useful till the sun gets hidden behind the tall houses near and causes an early collapse in autumn.

The walls of a town garden are always a trouble. In this instance they were so dimly sooty and black, that the only thing to do was to whitewash them all; and a precious business it was to obtain anything like a clean surface! But no sooner was it done than the way the plants responded to the increased light and lessened dry baking heat in the summer was wonderful, and proved it was the right thing. Trifles can make or mar, and I am inclined to think this trifle made a great deal of the success in this town garden.

There is one decided advantage in a town garden, and that is the greater freedom from frost, so that many shrubs will live there that would perish in frostier situations. So the walls where the sun lingered longest were planted with *Choisyas*, *Laurustinus*, *Jasmines*, variegated *Euonymus*, *Escallonias*, and many another flowering shrub and climber, including *Clematises* in variety, and they are all doing well and looking as they should do—ornamental.

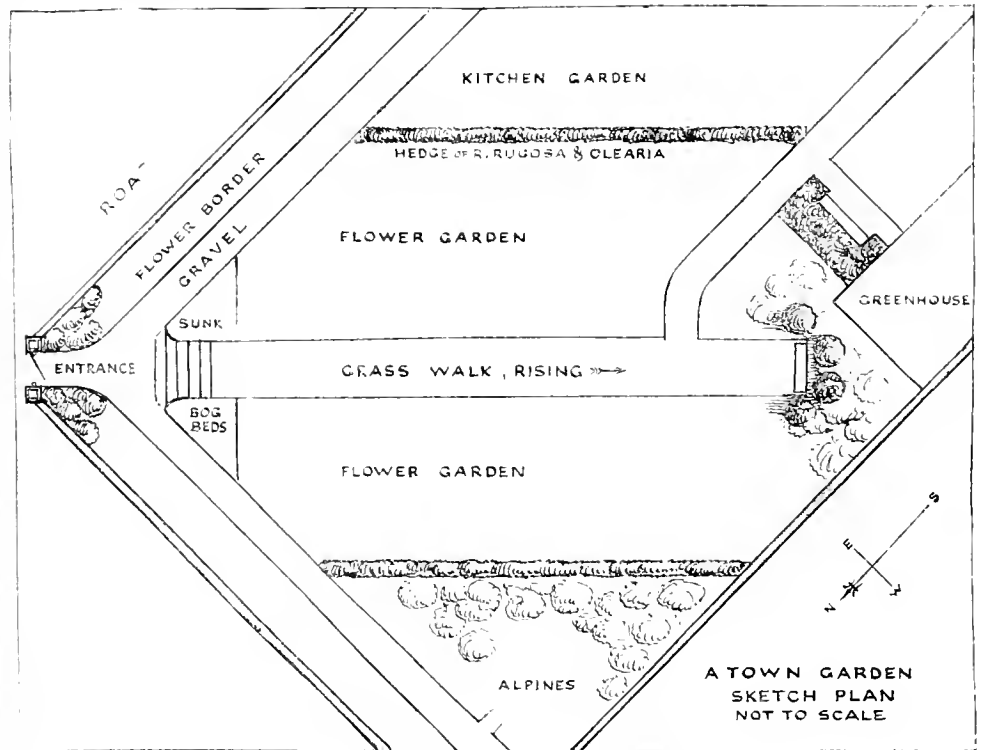
The plague of caterpillars so common in town gardens in the early autumn does not affect any of these. On the shady sides, the simple plan of planting tall Oval-leaved *Privet* and sowing climbing *Nasturtiums* to climb over and

THE FLOWER GARDEN.

GIANT MIGNONETTE

GARDEN AND POT CULTURE.

PROBABLY no greater disaster could befall our summer gardens did any unforeseen circumstance render necessary the expulsion of this beautiful, popular, and fragrant race of plants, as nothing else could replace it or fill the tremendous gap that its loss would undoubtedly cause. Too frequently we look upon these common ornaments of our gardens without adequately realising half their worth, and how much our gardens owe to such a unique and easily accommodated plant as Mignonette. The keenest gardeners and garden lovers of to-day are too often satisfied with a solitary spray of one of the several excellent forms of this giant strain. How unceasingly is the plant regarded with the greatest admiration, largely brought about by the fragrance that is itself unique. In many kinds of garden flowers the mere increase of size has not brought in its train an increased number of admirers, nor, indeed, has it enhanced the value of the plant. It is, however, quite the contrary in the case of these giant strains of Mignonette, some of which are quite a revelation when compared with the older types and forms, while, as judged by the standard of modern improvements, it would appear in size and uniformity at least to have come very near perfection. Happily, too, these larger forms present no greater cultural



between was of course adopted, and *Aucubas*, *Aralia Sieboldii*, *Megaseas* and *Frankias* formed handsome masses of solid foliage, till in two years' time this garden has become as full of interest and beauty as it was desolate and barren before, and a wonder to those whose knowledge was not equal to their love.

E. H. WOODALL.

Winter flowering of Yuccas. The flowering of *Y. gloriosa* in winter is not untimely. It is so much the habit of the plant, that when Evelyn described it he classed it with *Snowdrops* as a December and January flower.—H. ELLACOMBE, *Bitton Vicarage, Bristol.*

difficulty than the commonest types in vogue, and herein is a value not lightly to be estimated. As to the accommodating nature of the plant, and the almost endless variety of uses to which in any garden it may be put, none know better than those devoted to its culture. I say accommodating, not as the term is usually applied to many annuals, referring to the way in which they will readily transplant, being hardly affected by the operation, but rather from its quick responsive action when raised from seed. In this way, with knowledge and good seeds, it is possible to regulate its flowering to a very considerable degree, which is often convenient for various reasons. These giant forms, indeed all the kinds, may be sown at intervals from February till early in July, according to the needs

of individual gardens. As a mixture among the beautiful Tufted Pansies, as a sort of groundwork to many things, as a stop-gap here filling in odd corners, or there as a covering where spring bulbs have just held sway, the fragrant Mignonette is always useful. It has also a value in those places "where the honey bee sucks," and may, for purely economic reasons, be planted freely as a counter attraction, keeping the honey seekers from choicer things. A year or two since this had to be done to attract the swarms of bees that were bent on entering a big house containing some thousands of plants of the deep crimson Carnation Uriah Pike. Being a highly fragrant flower, the insects were quickly attracted, and in a few days such havoc was wrought by the swarms that came, and that increased day by day, that all doors, ventilators, and the like had to be covered with canvas screens. The following year the Mignonette saved much of this trouble and anxiety.

A moderately deep and good soil is suitable, and in heavy soils old mortar rubbish is very beneficial. Being largely tap-rooted, or in its early days inclined that way, Mignonette is not so readily transplanted as many things, but if transplanting is not possible, its equivalent must be found somewhere. It is most usual to sow it almost as thickly as Mustard and Cress, but in so doing the giant heads stand a good chance of being lost. A capital plan where isolated plants are needed is to put a couple of seeds in a 2½-inch pot and transplant boldly where they are to remain. This may also be done when very early bloom is required, as not infrequently the seeds perish or are discovered by mice. In sowing broadcast they should be sown thinly and the seedlings thinned early.

For pot culture the giant strains are those finding the most favour, one to four seeds being sown in each pot. Two-inch pots are the most serviceable, and the plants are thinned to the best one when large enough to handle. This one has its point taken out once, and the resulting five or six breaks that follow are allowed to carry one head each. In some instances the plants are sown in boxes and transplanted when quite small, half-a-dozen in a 5-inch pot, but in bad weather there is much damping of the stock so treated. Here again the single pot system has its advantages, for not only is the plant boldly transferred to the larger pot without loss of roots, but it has also been an isolated plant from the beginning. To attain perfection in pot culture of this beautifully simple flower, a rather long season with quite cold treatment is absolutely necessary, as anything approaching close, stuffy, or heated quarters quickly elongates the plants, and thereby minimises the chances of success. Cold, very shallow, and very airy frames are the best, with sowings at intervals. Good heavy rather than light loam, old cow manure finely sifted, and mortar rubbish from a good compost, and firm potting is advisable. E. JENKINS.

TUBEROUS BEGONIAS.

This beautiful class of Begonias has been so much improved both in habit and the form of the flowers—the colours, too, are so bright and varied that it seems almost impossible to make much further advance. It must, however, be remembered that to keep them up to the present standard of excellence great care must be exercised in selection for seeding and also in proving them. In some instances named varieties may be worth retaining, yet as such splendid results may be obtained from seedlings, these may be relied upon, except for the specialist. The great advantage of seedlings is that the second year they make better plants than those propagated from cuttings or those grown from old corns.

Seeds sown now will make nice plants by the autumn, and if planted out in the open they will flower early enough to make a selection of the best for growing the following season either for bedding or for pot culture. The very finest should be selected for pots, and those intended for bedding should have the colours marked, and as they vary in habit of growth, if some attention is paid in regard to height, &c., it will be a guide in planting out.

I was much surprised to find during the past season that many of the older and inferior type were grown by those who wish to display their skill in cultivation, as seeds or corns may be obtained at a moderate outlay, and if from a good source they are sure to be a great advance on the older types. Not that I wish to say the enormous flowers are to be admired most, but those with medium sized flowers and stiff erect flower stalks certainly show up better than those with long drooping flower-stalks; of course to some extent it is a matter of taste. Culture also goes a great way in regard to producing satisfactory results; I find so many growers give them too much shade and not sufficient air when growing them in pots. When under glass they require sufficient shading to break the bright rays during summer, but this should be only during the time that the sun comes in direct contact with the plants.

They like rather more root room than some other plants, yet it is not necessary to go too far in this direction. If a good rich compost is provided and a liberal supply of manure after the pots are filled with roots, much better results will be obtained than by over-potting. After they are well established they take up a good supply of water, but when first started great care should be taken not to get the soil too wet. Although varieties have been so much improved, the cooler and more exposed method of culture has done much towards developing the fullest beauty in this class of Begonias.

A. HEMSLEY.

NOTES OF THE WEEK.

Scilla sibirica under glass.—Pots of this charming little Scilla are just now very attractive in the greenhouse where flowers of a white or light tint predominate. The delightful blue of the Scilla affords a pleasing variety to the occupants of that structure, for although there are many blue Hyacinths, the particular pleasing blue of the Scilla is not represented among them. Like several other early-flowering bulbs, this Scilla must not be forced hard, but simply assisted with a little heat, such as the temperature of a greenhouse, in order to induce it to flower earlier than would be the case out of doors. T.

Fruiting of Euonymus japonicus.—I notice a paragraph on page 55 mentioning that in the Isles of Scilly and also on the southern shore of the Isle of Wight this Euonymus has fruited. This occurrence has not been limited to these detached fragments of our southern coast, for on the mainland, in South Devon, the same has been observable. Some years ago in the same locality these bushes showed fruit, but not so plentifully as during the present winter. *Pyrus (Cydonia) japonica* has also been unusually prolific, many specimens bearing quite a heavy crop of large, apple-like fruits. S. W. F.

Shrubby Veronicas. Many shrubby Veronicas of varied colours are flowering, and have a pretty effect drooping over a high retaining wall. In the severe weather of the early part of 1895 many of the old bushes perished, but the young plants grown from cuttings struck in the open ground some months previously, and which had not at that time been removed from the cutting bed, survived the winter without injury. With such subjects it is therefore advisable to strike a batch of cuttings every year, so that the places of any that may happen to be killed may be filled by the young plants. S. W. F.

Narcissus pallidus præcox. In answer to the suggestion in Mr. Arnott's note (p. 106) that others who grow this beautiful Daffodil should say how it does with them, I may mention that soon after Mr. Barr's first importation it was tried here, first in very light, but well-worked garden ground. But, in company with all the whiter trumpets, both of the species and the fine garden kinds, it showed only a steady deterioration. After seven years of growth and two shifts—we shift them every three years in this garden—the small stocks were so much reduced, that, as a last hope, they were planted out in the poor shallow

soil of the copse. Here the few bulbs of pallidus præcox seem quite happy, and are pictures of health. The whites, also, are doing well. The soil of the copse is thin and sandy, and only enriched by a skin of peaty leaf-mould 1½ inches thick, and covered with a sparse tussocky turf of wild Sheep's Fescue Grass. Below the upper 4 inches are beds of hard sand and rock for 200 feet down, where a water-bearing stratum occurs. G. J., *South-west Surrey.*

Acacia Drummondii.—Among the numerous Australian Acacias that are met with in our gardens this Swan River species is one of the most popular for growing into small specimens, for many of them will not display their beauty when grown only in a 5-inch pot. Under such conditions, if stopped freely during its earlier stages, this will form a neat, compact bush, whose somewhat ascending branches are clothed with pinnate leaves of a deep, yet pleasing, shade of green, while the pale yellow flowers are freely borne in drooping cylindrical spikes. It is by some cultivators grown as a standard, and has a decidedly pretty effect when treated in this way. *A. Drummondii* needs a soil principally composed of sandy peat, and the plants should in all stages be potted firmly.—T.

Mutisia decurrens.—This climber was figured in THE GARDEN many years ago—as well as *M. Clematis*—but is rarely spoken of. There is a plant of it growing at Kew, on the front of the museum facing the ornamental lake, which I have once seen in bloom. I should like very much to be able to grow it. Perhaps someone who possesses it may kindly give a few notes about it. The chief thing I can glean is from a note on it by the late Shirley Hibberd. He says it requires the least attention of any climber known. This sounds promising; nevertheless, I failed to keep one plant I obtained. There are few climbers with flowers of such a brilliant orange colour, and I feel sure that it would become very popular if it really can be managed as a hardy plant. T. J. W.

The Tasmanian Laurel (Anopteria glandulosa). For the sake of its foliage alone this greenhouse shrub is well worth growing, as its glossy deep green leaves are regularly serrated and very handsome. They are ovate in shape and about 6 inches long. The blossoms are borne in erect terminal racemes, and the earliest are just now expanding. They are white, cup-shaped, and about ½ inch in diameter, being in general appearance a good deal in the way of individual blooms of *Clethra arborea*, but larger. Though it can be obtained from most nurseries where a collection of plants is grown, this *Anopteria* is rarely seen in gardens. This is, perhaps, to be accounted for by the fact that it is by no means readily propagated, and its rate of growth is slow.—H. P.

Clematis indivisa.—The first of the pretty white-starry blossoms of this New Zealand Clematis are just expanding, and for a couple of months or so under favourable conditions a succession will be kept up. The long loosely disposed sprays when laden with blossoms form a most attractive feature in the greenhouse, and stamp it as one of the best dozen climbers for that structure. In the typical kind the thick dark green leaflets are quite entire, but in the variety *lobata*, which is more often met with than the type, they are distinctly lobed. This Clematis is rather liable to be attacked by mildew, to obviate which as far as possible care should be taken to have the border in which it is planted well drained, and this, together with a free circulation of air in the structure in which it is growing, will do much to combat the evil. H. P.

Forced Daffodils.—Accidentally I discovered a way to help to keep down the ever-growing labour bill and to get a better result with forced Daffodils, and probably some of your readers may be glad to follow my plan. Early in December a few years back I had to take up a lot of Tenby Daffodils, and, not wishing to throw them away, they were just crammed into boxes; the smaller clumps were put into 4-inch pots, and the whole lot placed in a warm frame. To my surprise they did not object to this rough treatment at all, but came on ahead of the others, which had been carefully potted in July, and gave a splendid lot of

bloom. Ever since then I have repeated the experiment, and am now satisfied that much better results can be obtained by this rough-and-ready treatment than by selection and potting the best single bulbs at the usual time. As I write I have before me a 4-inch pot containing a clump of *N. Harpur-Crewe* with nineteen expanded flowers and strong foliage; another pot of *N. princeps* has nine handsome flowers. Certainly this spring I shall mark many varieties for lifting in this way in November and December next, and I strongly recommend those of your readers who wish to steal a march on the Daffodil season to do likewise. — A. KINGSMILL, *Harrow Wood, Middlesex.*

Hyacinthus azureus. To one who has often referred to the charming little plant now known by this name it is a pleasure to see that Mr. Tillett is also able to speak favourably about it. It is one of my favourites among the earliest of our flowers, and it always seems incomprehensible to me why so few know it or grow it. Its great drawback in some gardens is the liking slugs have for it. This liking may be overcome with a little care by the application of the zinc or brass woven wire rings to which I referred in *THE GARDEN* a short time ago. As Mr. Tillett says, this plant seems to delight in being left alone—save, of course, with regard to the precaution suggested. It does not increase rapidly at first, but when left alone its multiplication by offsets becomes more rapid, and the grower is rewarded by the pleasure afforded by a clump of its little clustered heads of pale blue. I like, also, to look after it in changeable weather in winter, when successive rains, frosts, and thaws are apt to rot the flower-stems at the base. — S. ARNOTT, *Carssthorpe, by Dunfermline, N.B.*

Lachenalia Nelsonii. Those readers who have not yet grown this useful winter-flowering plant I would strongly recommend to do so. They are very effective in a mass of four or five 6-inch pots arranged in a rustic irregular vase with a very light plant of *Cyperus laxus* in the centre. Both these plants are fairly hardy, and will even stand in a cool hall where it would be unwise to stand more tender material. I have just removed such an arrangement from an entrance hall, which has been a great attraction for the past two weeks. The yellow bells are very showy at this season of the year. I pot up my bulbs in early August, using open turfy loam, a little leaf-mould made porous with coarse sand or small opening burnt material, adding a little dry cow manure rubbed through a $\frac{3}{4}$ -inch sieve. The bulbs are arranged in the pots about 2 inches apart if strong, and closer if small, covering them about 1 inch deep. The pots are nearly half filled with fine crocks and stood in a cold frame, and are only removed from there to other cool quarters when severe frost occurs. To get strong flower-spikes, do not coddle them. — JAMES R. HALL, *Fox Warren.*

Early bulbous Irises. A very large proportion of the best of the bulbous Irises are now in blossom here in open ground; they cannot be commended too much for this season of the year. I. Danfordie, I. Bakeriana, I. persica Vogeliana, I. Histrio, and I. histrioides. Iris reticulata will very soon put in an appearance. H. EWANK, *Ryde, I. of Wight.*

Stocks in flower now. Everyone appreciates Stocks, whether grown in the open or otherwise, and for pot culture in spring they have much to recommend them. They are far more precious grown in this way than many things that need a lot of heat to bring them on. Those who have unheated glasshouses should make a note of these and give them generous culture. They need little attention through the winter other than watering and giving air, and in the spring pots of sweet-scented flowers will be available for placing in rooms, conservatories, or to cut from for vases. Added to this they lend themselves for cutting to send away better than many things. Seed is sown in May, and the seedlings pricked out on an open site. In September they are taken up, potted three in a 7-inch pot or one in a 5-inch one, placing them either in a cold frame or on a shady border until established. They are

then removed to a sunny position and allowed to remain till severe cold comes, when they are placed in a cold frame or house for the winter. If they are removed at the beginning of the year into slight heat they soon bloom. At the present time (the second week in February) we have long sprays of the variety Princess Alice in bloom. These kinds, East Lothians and Intermediates are excellent for this purpose. I remember the fine scarlet Intermediate I used to see in London shops in April and May twenty-five years ago, also a Wallflower-leaved kind at Diddington Hall thirty years ago, grown in this way. — J. CROOK.

Winter Aconites. As a lover of the little Winter Aconite, I have read with much interest the note by Mr. G. D. Leslie on page 81. I have often thought it strange that no variation in the colour of *Eranthis hyemalis* existed so far as I could ascertain. This seemed to me rather wonderful in a plant which is so freely reproduced from seeds, and which one would have thought would have sported into a few shades of yellow long ago. I have a fairly good acquaintance with the works of the old writers on hardy flowers as well as some knowledge of the work of the present day among them, but until I read Mr. Leslie's note I was unaware of anything but one colour, or rather shade, in one of my favourite flowers. I hope your correspondent will succeed in his endeavour to increase the variety he has succeeded in raising. — S. ARNOTT, *Carssthorpe, by Dunfermline, N.B.*

Begonia Gloire de Sceaux. This is a grand Begonia for flowering during the early months of the year; indeed, it is in beauty just as the universally grown Gloire de Lorraine is in many instances past its best. The variety Gloire de Sceaux was sent out by Messrs. Thibaut and Keteleer, of Sceaux, France, during the year 1887. It was by them announced as a hybrid between *B. socotrana* and *B. subpeltata*, but its general appearance does not suggest that *B. socotrana* was one of the parents. Whatever doubt may exist as to the parentage, there can be no difference of opinion as to its great merit and value where a supply of flowers has to be maintained all the year round. It forms a stout, vigorous-growing specimen, well furnished with ample foliage of a thick texture and rich metallic tint. The flowers are of a pleasing shade of deep pink, and are profusely borne in large clusters. For the last few years it has been steadily gaining in popular favour. — T.

Erica Wilmoreana. This is one of the few Heaths that have remained popular as market plants for the last thirty or forty years, and such being the case, its ornamental qualities are of course of a high order. It is somewhat in the way of the universally grown winter Heath (*Erica hyemalis*), yet they are sufficiently distinct to be readily distinguished. *E. Wilmoreana* is, however, of a more spreading and robust style of growth than the other, while it is at its best as a rule in February and March, at which time *E. hyemalis* is nearly, if not quite, over. It is also rather less exacting in its cultural requirements than *E. hyemalis*, yet the cheap rate at which grand little flowering plants of both can be bought in the streets of London show that some cultivators at least can grow them with but little trouble. Both the above-mentioned Heaths are regarded as garden forms, yet their origin and early history seem to be unknown. They belong to what is popularly known as soft-wooded Heaths, which term is applied to those kinds that can be readily increased by cuttings of the young growing shoots. — H. P.

Deutzia gracilis. As a dwarf free-flowering shrub, particularly in sheltered spots in the open ground, this *Deutzia* scarcely has its merits recognised, probably owing to the fact that, being so generally employed for flowering under glass, any other method of utilising it is left out of calculation. Just now forced plants of it are very attractive among the many hardy shrubs subjected to the same treatment. By some cultivators it is for this purpose kept altogether in pots, and by others lifted from the open ground and potted during the autumn. Those that are confined altogether in pots respond more readily to an

increased temperature, so that for the very earliest they are decidedly preferable. If lifted and potted this operation should be carried out as early in the autumn as possible, even before all the leaves drop, as in this way the roots quickly become active, and they are at least partially established by the end of the year. *Deutzia gracilis* is also of special interest from the fact that it is one of the parents, *D. parviflora* being the other, of *D. Lemouinei*, which differs from *D. gracilis* in being of stouter, straighter growth, while the comparatively large pure white flowers are disposed in a more flattened cluster. It is a great acquisition to forcing shrubs, but unfortunately seldom flowers in a satisfactory manner in the open ground, being under such conditions generally a disappointment. After flowering, these *Deutzias*, whether grown in pots or in the open ground, should, like many other shrubs, have the old and exhausted wood cut out in order to allow the young and vigorous shoots to develop. — T.

Moræa iridioides var. Macleaii. — The superb form of *Moræa iridioides* which appeared in the last issue of *THE GARDEN* (page 123) as a drawing in black and white, by Mr. Moon, from a plant in Mr. Kingsmill's garden, deserves special mention as it is so far superior to the type plant, figured in vol. 19 of the *Botanical Magazine*, that it would appear to be a different plant, though to botanists it is identical. The size of the flower, brilliancy of colouring, and long continuance of blooming render it a precious gain for the cool greenhouse where plants other than the usually found occupants are appreciated. The type I have grown for nigh twenty years, but this lovely plant has only recently come under my notice. — J. T. BENNETT-POE.

Notes from Ireland. The weather for the past fortnight has been decidedly unpleasant. The sharp touch of winter will probably upset all forms of vegetation. Ten degrees of frost (Fahr.) were registered on the grass. In spite of this, one can occasionally discern the pendulous blooms of the Snowdrops under the shade of shrubs and trees peeping above their snowy vesture. The Christmas Rose, too, enlivens the scene. In the mountain gardens of Lord Massey at Killakee it, however, simply revels, being one mass of bloom. The modest Violet still lingers, and strives to bloom amidst the un congenial surroundings. The evergreen and deciduous subjects are in many situations clothed in the fleecy gown of winter; the Holly berries, too, have been bereft of their fruits by the flocks of thrushes and blackbirds. The Rhododendrons are likewise in a sad plight, the frost having destroyed the early flowers. — A. O'NEILL.

Crocus Sieberii and C. Olivierii. With reference to Mr. Arnott's interesting note on *Crocus ancyrensis* in *THE GARDEN* for February 10, I should like to mention two other early Crocuses which have been delightful here during the recent spell of bad weather, viz., *Crocus Sieberii* and *C. Olivierii*, both, I believe, from Greece. They have struggled nobly against the snow, and (mainly, I think, because they are dwarf) have at length been rewarded and are fully open to-day. The orange-yellow of *C. Olivierii* is extraordinarily rich and pure. *C. Sieberii* has a peculiar mauve shade, which I can compare with no other colour, and a distinctly silvery sheen. At the base of the perianth is a yellow patch. Another year I hope to grow these early Crocuses on a rock bed or a raised border under a handlight with a movable top, as I have done this year with *C. Imperati*. It has been a real pleasure during this last week to go out in the morning, lift up the glass, and find a brilliant patch of *C. Imperati* with the snow all around 8 inches or 9 inches deep. What a pity it is that one sees this *Crocus* comparatively seldom in gardens. Can you, or any of your readers, tell me whether this species (*C. Imperati*) varies to any great extent? I am puzzled by one now in flower, received last year from M. van Tubergen, jun., of Haarlem, of which the inner segments are much redder than usual, while the dark blue feathered stripes on the outer buff-coloured segments are absent. The style-branches are almost crimson and in much stronger contrast with the yellow anthers than is the case in the type. — F. N. A. G.

SEEDS.

As soon as the new year dawns, the thoughts of the gardener are turned towards another year's planting, and the question crops up in his mind, "What varieties of vegetable seeds shall I plant this year?" Catalogues are obtained, and he becomes lost in the multitude of the varieties of seeds, all of which, according to the account, are just the kind to grow in his particular garden. This stupendous task will not be so difficult to anyone if the facts are looked fairly and squarely in the face. There are two important points to be considered: first, the extent of the purse; secondly, whether it is intended to go in for prize-winning or not. Should the financial part not affect the question, then by all means go in for the best and latest varieties of seeds; more especially is this necessary when exhibiting is the aim.

Where economy has to be studied and exhibiting is not gone in for, there are plenty of seeds of what one may term "standard fame" which are excellent in quality, but having been introduced a few years are not the "latest up-to-date," and in consequence of this are much cheaper, and therefore suited to those of small means.

Most seedsmen supply an order list with their catalogues, which saves time and labour to the buyer; this should be filled up in ink and sent in early, as the best seeds go first. It would be better to put the items down roughly first, and if the amount totals up to more than the sum intended to be expended, it can be easily cut down where necessary.

As a guide I give a list of what I consider to be the best varieties of vegetable seeds both for ordinary and exhibition culture:

	STANDARD KINDS.	FOR EXHIBITION.
Peas	American Wonder (E.)	Little Marvel (E.)
"	Boston (M.)	A. I.
"	No-Plus Ultra	Centenary Marrowfat
"	"	Best of All (M.)
"	"	Eureka (M.)
"	"	Late Queen (L.)
"	"	Latest of All (L.)
Dwarf Beans	French No-Plus Ultra.	Perfection.
Broad Beans	Canadian Wonder	Veitch's Foreign.
"	Green Windsor	Exhibition Longpod.
"	Green Longpod	Green Giant.
Scarlet Runners	Old Scarlet	Best of All.
"	Champion	A. I.
Potatoes	Victor (Sharpe's)	Up-to-date.
"	Ashleaf (Myatt's)	Satisfaction
"	Magnum Bonum	Snowdrop.
"	The Bruce	Schoolmaster.
Beet	Bell's Crimson	Blood Red
"	Turnip-rooted	"
Borecole	Cottagers	A. I.
"	Dwarf Green	"
Brussels Sprouts	Aigbunth	Exhibition.
"	"	Matchless.
Cabbages	Earfield Market	Earhest (E.)
"	Early Market	Favourite (M.)
Savoy	Gen	Earliest of All
"	Drumhead	"
Cauliflowers	Early London	First Crop.
"	Walcheren	"
Carrots	James's Intermediate	Early Gen
"	Early Scarlet Horn	Favourite
Cucumbers	Telegraph	Favorite
"	Covent Garden	Improved Telegraph.
Celery	Superb Red	White Gen.
"	" White	A. I. (Red).
Lettuces	Bath Cos	Superb White Cos
"	Early Paris	Dwarf Perfection
Onions	James's	A. I.
"	Veitch's Main Crop	"
"	Lisbon	"
Radishes	Scarlet Turnip	Scarlet Globe.
"	French Breakfast	"
Tomatoes	Early	Earliest of All.
"	Large Red	Perfection.
Turnips	Early White Stone	Early Snowball
"	Altricham	"
Marrows	Green (long)	"
"	White	"

It is considered by a good many people economical to save their own seeds rather than to buy each year, but I doubt this, for the following reasons: That a seedsmen's vegetables are grown entirely to produce seeds and all the necessary properties for producing good plants are stored in such seeds, but in the other case the best are picked for consumption, and when the plant's strength is nearly exhausted it is then allowed to go to seed. Thus it must stand to reason that seeds from exhausted plants cannot possibly produce such fine crops or be so fruitful.

E. H. PORREN.
Bedford Road, South Woodford.

CORRESPONDENCE.

(The Editors are not responsible for the opinions expressed by their correspondents.)

THE STRIPED HELENUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR, "T. J. W." is not the only one who has been taken in by this plant. I had a plant given me four years ago without a name, and when it bloomed I never doubted for a moment but that it was a Rudbeckia, and I have shown it as a Rudbeckia with other perennials. This last year, however, I found out my mistake. The colouring of the flowers varies greatly according to the soil. Here I grow it on a dry bank in poor soil, and the flowers are for the most part dark crimson with a few yellow streaks. In a neighbour's garden, the soil of which is deep and rich, the flowers are of a pale washy yellow with crimson streaks. Of the two the former is the better; but, seeing that the plants in both gardens came from the same stock, the difference is remarkable.

Newton Abbot. B. DICKINSON WEBSTER.

DWARF POINSETTIAS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I am obliged to Mr. Hensley for his courteous reply to my remarks on the culture of dwarf Poinsettias (page 107). I have never tried keeping old plants in a house with a north aspect with a view to obtaining late cuttings, but suggested that the plan would be worth a trial. I have seen old plants from which early cuttings had been taken standing in quite cool houses comparatively early in the season, and breaking strongly from the base of the stems. It is gratifying, however, to learn that Mr. Hensley has succeeded in inducing young plants from which the tops were removed to be grown as dwarf plants—to break sufficiently strong to produce fine flower bracts. I have tried the plan over and over again, but my plants after being topped never produced really good bracts. I must confess, however, I did not prune the shoots back to a few eyes, as advised by Mr. Hensley, and, besides, the general culture may have been at fault. The Poinsettia is much hardier than many suppose. Many good growers stand their plants in frames during the summer months, airing them freely, and when living in Essex I used to stand old cut-back plants out of doors in a warm position. They grew vigorously, and were removed under glass at the end of September. The finest batch of Poinsettias I have ever seen were grown at Currow House, Norwich. They were planted out when quite small in a pit in good loamy soil. The pit was freely aired in summer, and the plants assisted with liquid manure. By autumn the stems of the plants were as thick as walking canes, and the foliage large, deep green and leathery. The plants were lifted and potted in September and placed in a close, warm pit till they became established. They retained their leaves, and eventually produced grand flower bracts. I knew one gardener who always grew some old cut-back plants in the Pine stove, potting them into 10 inch pots, and bending the growths down under the roof glass. They often attained the length of 5 feet, producing bracts 15 inches in diameter.

J. CRAWFORD.

THE HARDINESS OF TEA ROSES.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Does not the truth lie, as is usual in the case of somewhat extreme statements, between Mr. Fish and Mr. Grahame? Tea Roses are much hardier than is generally believed, but in occasional winters of extreme cold they may anywhere be killed. In the winter of 1894-95 I lost every plant, in spite of earthing up, and many of them were on their own roots. My garden is on a sunny hillside in North west Hampshire, and there is no lack of the circulation of air, which Mr. Arnott thinks desirable; indeed, my frame-lights and other movables are apt to circulate if not anchored. I write to

recommend a very simple and handy method of protection for Roses and many other plants. We cut a supply of Bracken while it is yet green, though mature; this prevents the leaf crumbling off. Then we tie it in ample, but light bunches to sharp-pointed sticks, generally using the split Hazel of triangular section which are used by the thatchers in our country-side, and go by the name of "spars." These are exceedingly cheap to buy or make, are tough and durable, and their shape prevents their working loose in the ground. If a little store of these of various lengths is made at leisure, they can be used most expeditiously and effectively by simply sticking them in upright or at any angle over or among plants. Heavy rain does not beat them down to a layer, as it often does loose Fern, and the fronds being held in their natural position are more effectual and in no way unsightly.

GEORGE ENGLEHEART.

PRUNING ROSE REINE OLGA DE WURTEMBERG.

[TO THE EDITOR OF "THE GARDEN."]

SIR, How should this Rose be pruned? I planted two on a pergola in March, 1898; they have made vigorous growth, but only produced about four flowers last summer, while Climbing Captain Christy, Aimée Vibert, Cheshunt Hybrid, &c., flowered well. The soil is good. E. M. D.

[This fine semi-double light crimson Rose is a most rampant climber, making annual growths some 7 feet to 8 feet in length. Any of these growths that are not soft and pithy should be retained almost their entire length, merely cutting off just the tips. They will then produce several laterals varying from about 6 inches to 15 inches in length. These laterals if cut back to three or four eyes will blossom freely. As your plants are growing upon a pergola you will have an opportunity to spread the growths out in a palmate manner, and thus facilitate the blooming. Very frequently the laterals do not blossom until the second year, and we are inclined to think that this is the case with your plant, but as it was planted two years ago, you should certainly have a good display this summer. In two or three years' time one or two of the oldest growths should be removed, thus encouraging the production of new wood from the base, which will tend to keep the plant in a healthy condition. We have seen this rapid-growing variety planted in a bed among garden Roses, which was a decided mistake, for, in order to keep it in bounds, it must of necessity be pruned in such a manner as to preclude all possibility of any blossom, but it is in pillar form or, as you have planted it, upon a pergola that its fine qualities are made manifest. Eds.]

ABOUT WILD TULIPS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Will any botanist among our readers who has observed and collected on the spot the wild Tulips that occur in the neighbourhood of Florence kindly name and describe them, and tell me to what degree they show variation in a wild state, and how they are related to their representatives in our gardens? T. R.

PROTECTION OF TEA ROSES.

[TO THE EDITOR OF "THE GARDEN."]

SIR, On page 76 of THE GARDEN, Mr. C. J. Grahame, writing on the subject of "The protection of Tea Roses," says: "We have not had a really cold winter since 1880-81"—a misprint, I presume, for 1890-91. He has apparently forgotten all about the winter of 1894-95, when the frost, whilst perhaps not quite so prolonged, was far more severe; and I fancy that Mr. Benjamin Cant and many other large growers of standard Teas will agree with me when I say that the losses were much greater during that winter than in any other season for which any reliable records are available. In the "Rosarian's Year-Book" for 1896, Mr. Mawley, in his very interesting report on the weather of the previous Rose year, refers to a paper read before the Meteor-

logical Society in April, 1895, which states that "the long continuance of frost, combined with its severity, points to the conclusion that during the past 110 years the winter of 1894-95 has only been exceeded by those of 1794-95 and 1813-14." The said paper further states that, given the imperfection of registering instruments at that time, it is quite possible that the winter of 1894-95 exceeded in severity the two others mentioned. B.

SOCIETIES.

READING GARDENERS MUTUAL.

NOTWITHSTANDING the inclement weather, a large attendance of members was present at the fortnightly meeting on Monday evening last to hear Mr. T. Neve, of Simdsham House Gardens, give a paper on "The Renovation of Fruit Trees, especially Apples." The lecturer dealt with his subject in an exhaustive manner, his remarks on pruning, manuring, watering, &c., being of a very practical character. These were made more interesting by a series of photographs of old fruit trees, which had been renovated, in full bearing. An interesting, and at times animated, discussion followed, in which Messrs. Chamberlain, Powell, Fry, Purkis, Parsons, Blake, Cretchley, Bryant, and Turner took part. A splendid collection of Apples was staged by Mr. R. Chamberlain, the well-known fruit exhibitor, of The Gardens, Crossingham. Although rather late in the season the fruit was in splendid condition, the exhibit including Golden Noble, Lane's Prince Albert, Wellington, Rosemary Russet, Royal Russet, Cox's Orange, Rymer, Gascoigne's Scarlet, the Melon, &c. On the proposition of the chairman, Mr. Fry, a hearty vote of thanks was tendered to Mr. Neve for his excellent paper, and to Mr. Chamberlain for his exhibit. Four new members were elected.

ROYAL HORTICULTURAL SOCIETY.

THE next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, February 27, in the Drill Hall, James Street, Westminster, 1 4 p.m. A lecture on "Some of the Plants Exhibited" will be given at 3 o'clock by the Rev. Prof. G. Henslow, M.A., F.R.S. Intending candidates may obtain all particulars of the examination in horticulture from the Secretary, R.H.S., 117, Victoria Street, Westminster.

NATIONAL HORTICULTURAL SOCIETY OF FRANCE.

FOLLOWING the example of our own Royal Horticultural Society, the National Horticultural Society of France has made a material alteration in the size of its monthly journal. The first number for the new year is now before us, and is indeed an improvement on the old issue in every respect. It contains 104 pages of well-printed matter, the leading article being a historical sketch of the society from its foundation to the present time. The article is illustrated with portraits of the society's presidents, viz., the Vicomte Héricart de Thury, Payen, Duc de Morny, Marshal Vaillant, A. Brongniart, Duc Decazes, Lavallee, Léon Say, Viger. The society's library is also being catalogued. One great feature of the library is the large number of other societies' annals, bulletins, &c., that are received in exchange. It is expected that the new catalogue will be published very shortly. C. H. P.

LINNEAN SOCIETY OF LONDON.

AT the evening meeting on Thursday, March 1, 1900, at 8 p.m., the following papers will be read: "Botanical Nomenclature," by Mr. C. B. Clarke, F.R.S., F.L.S.; "Some Foraminifera of Tithonian Age from the Limestone of Nesseldorf," by Mr. F. Chapman, A.L.S.

CONVENTION OF NOVA SCOTIA FRUIT GROWERS. NOTES ABOUT THE APPLE CROP.

THE 36th annual meeting of the Nova Scotia Fruit Growers' Association was held at Wolforth on January 29, 30, and 31. In his annual address President J. W. Bigelow said in part, "The past two years have been most profitable to the Nova Scotia fruit grower, from the fact that we have had fair crops of superior Apples and have obtained the highest prices in the history of the trade, owing to a scarcity in the world's Apple crop. This year our Apple crop will exceed 400,000 barrels, and as most of those have been sold at from 2 dozs. to 3 dozs. per barrel, the net proceeds may be fairly estimated at over one million dollars. Some idea may be formed of the immense profit of this business the past year from the fact that several growers have accepted or refused from 3000 dozs. to 5000 dozs. for this year's crop of Apples, and many orchards have paid this year 25 per cent. on a valuation of 1000 dozs. per acre. This is owing to the fact that Nova Scotia was the only Apple-producing country that had 90 per cent. of an average crop, the others ranging from 70 per cent. to 20 per cent., and all together averaging less than 50 per cent. The only drawback to this year's fruit harvest was the unusually warm weather during October and November, which prematurely ripened our early winter varieties and caused some of them to open "slack" and soft in foreign markets. I think that under our high cultivation, especially if autumns are warm, our early winter fruit, notably Blenheim, Kings and Ribstons, are maturing earlier each year. The complaint of excessive freight rates charged by subsidised lines to London has engaged our attention for the past ten years, and seems to nearer a favourable solution than at first. After a careful consideration of this subject, I am fully of the opinion that as this trade develops the only profitable means of transport will be by small fruit steamers from Bay of Fundy ports, much the same as Oranges are

exported from the Mediterranean and Bananas from the West Indies. Within the next five or ten years we must provide for an export of over one million barrels annually, and the steamship company which secures this business from Bay of Fundy ports at half the present cost will have one of the most profitable export trades from this continent.

In discussing the question "What varieties of Apples shall we propagate?" Mr. Robert W. Starr advised the testing of new or promising sorts, especially those of European origin, for more than one third of the standard commercial sorts now grown in Nova Scotia originated in Europe. English Apples especially seem better suited to our maritime climate than those which originate in the interior of continents. Admitting that we even now grow too many varieties, this does not mean that we have yet found the best, for all must concede that many of our so-called "standard varieties" have serious faults which lower their value to the grower. If, from testing one hundred varieties of carefully selected new and foreign sorts, we can find one only for the midwinter season that will prove as good as Gravenstein is for the autumn months, then we shall be well paid.

Dr. Wm. Saunders, of Ottawa, Ontario, in speaking of the exceptional quality of Nova Scotia Apples, said that he considered it largely due to climatic influences, for it seemed to be a law of Nature that the further north you can mature a fruit, the finer the quality and the better it will keep under the same conditions. He spoke also of the work that has been done in attempting to produce an Apple which will be hardy in Manitoba and the North-west Territories. Finding that *Pyrus baccata*, a species from Russia with fruit the size of a cherry, was perfectly hardy in the most trying situations, it was thought that by crossing it with our most hardy Apples a hybrid might be produced which would be sufficiently hardy to withstand the climate of Manitoba, and yet of such size and quality as to at least supply the home demand there. This was accordingly done, using pollen from Duchess of Oldenburg, Fameuse and Yellow Transparent. The resulting seedlings have made vigorous trees which fruited in four years, and the fruit was as large as the Siberian Crab, fully ten times the size of the original. Certainly this is encouraging, and one or two more crosses may produce an Apple that will be entirely satisfactory.

The question of the inspection of Apples packed for export was given a large measure of attention. While careless and fraudulent packing is believed to be less prevalent in Nova Scotia than in Ontario, due largely to the fact that the Nova Scotia Apples are for the most part packed and shipped by the growers themselves, yet it is feared that it is increasing, and that some step ought to be taken to check it. The following resolution on the subject passed by the Ontario Fruit Growers Association was discussed at length, and most of its provisions were heartily approved:

Resolved, that both the Dominion and the Provincial Legislatures be asked to consider the advisability of legislation to carry out the following regulations for the sale of Apples and Pears:

1. That all Apples and Pears packed for sale in closed packages shall have the minimum diameter of the fruit inside marked in plain figures on the top or face end of the package, thus, 2 inches, 2½ inches, 2¾ inches, etc., as the case may be.
2. That all such packages shall also be stamped with certain grade marks which shall be defined as follows:
 - (a) X A No. 1. Sound Apples or Pears of uniformly large size and high colour for the variety named, of normal form, at least 90 per cent. free from worm holes, scabs or other defects.
 - (b) X No. 1. Sound Apples or Pears of nearly uniform size and good colour for the variety named, of normal form, at least 90 per cent. free from worm holes, scabs or other defects.
 - (c) No. 1. Sound Apples or Pears of fairly uniform size, at least 80 per cent. free from worm holes, scabs or other defects.
 - (d) No. 2. Apples or Pears that are disqualified from being classed under any of the above mentioned grades, but which are useful for culinary purposes, and not less than 2 inches in diameter.
3. That all Apples and Pears packed in closed packages be subject to inspection by the government inspector.
4. That provision be made for inspection not only at the ocean ports of export, but also, at the request of the shippers, at local points of shipment in the case of ear lots.
5. That for local inspection a reasonable scale of charges be made of the shipper requesting such inspection, gauged according to the number of carloads to be inspected.
6. That in such latter case the inspector shall apply some distinctive inspection brand to show that the packages have been inspected and found to be honestly packed.
7. That the name of both packer and shipper be required to be placed on each package.

The only objection to this resolution was that it was not sufficiently stringent when it allowed of 10 per cent. of defective fruits in the two highest grades, and 20 per cent. in the third. A sufficient number of such specimens will find their way into these grades either intentionally or unintentionally without making direct provision for it. The resolution was therefore amended by striking out these clauses, and was then passed unanimously. E. C. SEARS.

ROYAL GARDENERS ORPHAN FUND.

LORD BATTERSEA has kindly consented to preside at the next festival, which has been fixed to take place on Tuesday, May 8, at the Café Monno, 46, Regent Street, W.

ANNUAL MEETING AND ELECTION.

It is most gratifying to find, at a time when great demands are being made upon the pockets of the people owing to the many war funds, that so much success has attended this excellent charity. This was conclusively shown on the occasion of the twelfth annual meeting at the Essex Hall, Strand, on the 16th inst. It is true the attendance was not large, but those present were all earnest supporters of and workers for the fund, and there was observed a general feeling of satisfaction with the report and balance sheet.

Mr. A. W. G. Weeks presided in the unavoidable absence of Mr. W. Marshall, and it could be gleaned from the report that the committee had been able to increase the amount of the year's aggregate allowances made to the orphans. Since the establishment of the fund 113 children have been placed on it, and the total amount paid on account of orphans during this period is £711 2s. 6d. There were 72 children enjoying the benefits of the fund, which the annual meeting added to by electing 14 others. Amid the satisfaction generally experienced by the supporters to the fund there is the regret that the gardening profession support it only to a very limited extent. An appeal to the large number of professional gardeners up and down the country barely pays the expense incurred in doing so. Were it not for outside assistance the benefits of the fund would have to be seriously curtailed. General donations are almost equal in amount to general subscriptions, and of these latter gardeners supply but a moderate proportion. During the past year the sum of £973 12s. 6d. was paid out on account of orphans.

The officers of the fund were re-elected and additions made to the committee. Mr. N. Sherwood was re-elected treasurer; Mr. William Sherwood was elected a trustee of the fund in the place of Mr. Sydney Courtland, deceased; Mr. B. Wynne was re-elected secretary; Mr. Martin Rowan as auditor; most of the outgoing members of the committee were re-elected and some new blood added. The names of thirteen candidates appeared on the voting papers, from which nine had to be elected. Of these, six were making a third application, two a second, and five a first. The scrutineers—Messrs. Alderson, Bates, R. Dean, Jones, McLeod, and Pompart—reported that the elected candidates were Hilda K. M. Rogers with 506 votes, Aaron Hall 470, Winifred Moxham 429, Charles A. Drantfield 427, John Baird 254, Edward White 237, George W. Stevens 153, Margaret M. Wood 148, and Sarah L. E. Langley 135. The foregoing were declared duly elected to the fund. Mr. R. Dean then proposed that Arthur G. Stephenson and Ernest S. Henderson, unsuccessful candidates, together with the following, whose applications had been received too late: Mary A. Wood, Fred George King, and Joseph G. Riddle, be placed upon the fund by a vote of the annual meeting, as the state of the funds justified that action, especially as some of the children chargeable to the fund would cease during the coming year to be a further charge upon it by reason of the action of the age limit. This was seconded and carried unanimously, and in this agreeable manner the proceedings came to a close.

GRAND YORKSHIRE GALA.

THE northern floral and horticultural *fete* will take place on the 13th, 14th, and 15th of June, 1900, in Bootham Field, York. The prizes, in all amounting to £750, are as follows: £300 for Orchids and greenhouse plants; £200 for Pelargoniums, Carnations, Begonias, &c.; £100 for Roses, cut flowers, &c.; and £90 for fruits and vegetables. Special attention is directed to classes 20 and 20 for pot Roses, for which large prizes are offered. The first prize for a table of Orchids is £12, the others being £10, £7, and £4. There are four prizes for a table of fruits arranged for effect, the first award amounting to £15. High-class floral designs and effective arrangements are also encouraged. There are no less than 100 classes. Schedules can be obtained from the secretary, Mr. Charles W. Simmons, The York Hotel, York.

KINGSTON AND SURBITON CHRYSANTHEMUM SOCIETY.

THE annual general meeting of the subscribers to this society took place recently, the chair being taken by Mr. W. Drewett. The report shows a balance in hand of £1 14s. 9d. To that has since been added two other sums, increasing the balance to £3 3s. 8d., and hopes are entertained that a little more will be recovered. We are pleased to know that the society has no debt, and the committee earnestly appeal for funds to make the coming twenty-fourth exhibition a success.

The report and balance-sheet was unanimously adopted, and hearty thanks given to Mr. W. Drewett, who as chairman of the committee had assisted greatly in making the society financially secure. Sir J. Whittaker Ellis, High Sheriff of Surrey, was re-elected to the office of president. Mr. A. W. Homershaw was re-elected treasurer. Mr. William Hayward, florist, Fife Road, was unanimously elected to the office of secretary, a position he will doubtless fill with ability and satisfaction. The election of twenty members of the committee was then proceeded with, and as twenty-three persons were nominated the voting was by ballot paper. On counting these it was found that Messrs. W. Drewett, W. J. Wells, A. Dean, Randall, Hawkes, Pitcher, Neave, Cusson, Blencone, Smart, Lane, Atkins, Dorsett, Holt, Jenkins, Gibbons, Watts, Bilton, McCormack, and Pead were elected. Of this number twelve are gardeners, representing Hampton Court, Tollydown, Kingston, Thames Ditton, Esher, Surbiton, Combe, and Kingston Hill. At a meeting of the committee held later Mr. W. Drewett and Mr. W. E. Wells were re-elected to the posts of chairman and vice-chairman. A meeting was held on the 16th inst. to consider the drafting of the schedule for the current year.

RURAL ELEMENTARY EDUCATION.

At the council meeting of the Royal Agricultural Society of England on Wednesday, February 7, presided over by His Royal Highness the Prince of Wales, the subject of rural elementary education was brought up by Mr. Martin J. Sutton. Mr. Sutton desired to ask Lord Moreton what steps the Education Committee were taking to fall into line with the present feeling in the country on the

subject of the education of the rural population. He was a member of a deputation recently received by the Duke of Devonshire, who assured them that measures in this direction would shortly be taken by the Education Department. But His Grace made it quite clear that, if anything effective was to be done, the department would require adequate support out of doors. This was a work which might very appropriately be undertaken by that society, which ten years ago had given to the world a most valuable text-book on agriculture, which still held the field. This book was, no doubt, too advanced for the children attending elementary schools in rural districts, but he put it to the education committee whether it would not be possible for them to prepare and publish simple reading books on subjects relating to agriculture, such as the different breeds of stock, farm implements, natural science, and the like. He thought that by interesting, and at the same time educating, country children in the farm life around them, something would be done to check the stream of migration from rural districts to large towns, which every year made it increasingly difficult for farmers to gather in their harvest, owing to scarcity of labour. Lord Moreton thought that council would agree that in the past the education committee had not been behindhand in doing what they could for agricultural education, and one of their most useful acts had undoubtedly been the publication of the text-book referred to by Mr. Sutton. The present demand appeared to be for agricultural education in elementary rural schools, and he undertook, on behalf of the education committee, that they would go thoroughly into the whole question raised by Mr. Sutton.

ANSWERS TO CORRESPONDENTS.

Names of fruit. B. J. 1, Lady Heniker; 2, Waltham Abbey Seedling; 3, Red Streak; 4, Lemon Pippin; 5, Warner's King.

KITCHEN GARDEN.

Seakale (H. E.). If you have no old Seakale roots which you can lift, and cut from them the side roots to make cuttings, or you cannot purchase root cuttings, then your best course will be to purchase 1 lb. of seed, for it is very light, and sow it. But that must not be done until the first week in April. In the meantime get a piece of ground, say a couple of rods in extent, trenched or deeply dug, working into it a good dressing of manure, so that it will settle down, and will be ready to sow the seeds in at the time named. The drills, drawn as for Peas, should be about 20 inches apart. Sow the seed thinly, so that when the young plants are up they can be thinned out to 9 inches apart. During the summer use the hoe freely, and in July hoe in a light dressing of salt. By the middle of November next you should have plenty of strong root fit to lift to force or blanch, and after you have cut from them all the side roots for making root cuttings, to plant out instead of sowing seed.

Mustard and Cress (HART). Whilst gardeners generally sow true Mustard seed with Cress for small salad, the market growers use Rape seed, as that is cheaper and the growth is much milder. Probably in private use Rape would be quite as acceptable as Mustard. It is less hot, that is all the difference. But the market growers practically exclude light from their crops, whilst private growers seldom do so. We have seen large frames in which the seed has been, after having been soaked for a few hours, spread all over the surface, gently watered, then covered with bast mats. As the growth proceeded the mats were bodily lifted, and in about six days removed, the Rape and Cress being quite ready to cut. Where seed is sown in pans or shallow boxes and stood in warm frames or houses, it should be covered up in the same way with paper, as quick blanched growth results, and that is tender and pleasant eating; it also helps to keep the salad clean. A stock of soil should be at hand for the boxes, quite one-half being manure, and sowings should be made very often at a constant supply is desired.

Early Potatoes (CELE). First early Potatoes are numerous, and differ comparatively little in respect of earliness to produce tubers, in productiveness or in table quality. A good stock of the Ashleaf Kidney, King Edward, Duke of York, Loates's Short-top, Harbinger, and Sharp's variety are all quite first early and of the best. These varieties all do well grown in 8-inch pots in a house or frame, or planted about 12 inches apart in well-manured soil on a warm border. If you can grow any under glass, then get tubers and plant out pot at once if you wish. But we should prefer to set the tubers on and close together in shallow boxes, to stand them in a warm house in the light to cause the eyes to sprout. Then to reduce these on each tuber to two at least before planting. Those to be planted outdoors will be best in the boxes until the first week in April. Nothing is gained by planting too early. In the meantime the tubers will be making better growth in the boxes in full light,

Outdoor Tomatoes (ANXIOUS). Nothing is to be gained by sowing seeds of Tomato for outdoor culture later too early. The plants would but become drawn and weak. Better to sow seed early in April, either in gentle heat or without. The plants should be strong enough to lift from the seed pots or pans by the end of the month to get singly into 3-inch pots, and then be kept on shelves near the glass or in a frame close to the light. In a couple of weeks shift the plants into 5-inch pots, still keeping them well exposed to light and air, as it is important they should be stout and well foliated. Gradually harden the plants off by ample day exposure towards the end of May, and then they will be about 10 inches in height to plant out early in June, when it is fairly safe to do so. Use for pot compost chiefly loam with a little old hotbed manure and some sand. Let the garden ground be deeply dug, but not freshly manured as the plants grow; rather mulch them with long manure.

INDOOR GARDEN.

Pyramidal Fuchsias (J. W.). Without doubt the pyramidal form of growth is natural to the Fuchsia generally, although some varieties have a spreading tendency. If you can take from such plants as you have nice young shoots 3 inches in length, and set them as cuttings into pots filled with sandy soil and well drained, then stand them in good warmth, they will soon become rooted and make rapid growth. Shift them into 3-inch pots, grow them on in gentle warmth and ample light, putting small sticks to support each plant. As soon as flower buds break from the leaf joints, at once pinch below these and compel new shoots to be formed. Shift the plants on into larger pots and keep them under glass. Another pinching will be needed, but each pinching will leave the plants 6 inches higher, until by the autumn they may be in 9-inch pots, and each one from 4 feet to 5 feet in height. Treat the same the following year, and you will get them over 6 feet in height, forming noble specimens. We have seen splendid plants fully 8 feet in height when in full bloom very beautiful objects.

FLOWER GARDEN.

Trimming Ivy (CHARLTON). Certainly there is no better time for hard trimming of Ivy on walls or fences than about the middle of March. In your case the climber having suffered from wind and snow and become somewhat ragged in appearance, it is best to cut quite hard in. That may be done with stout sharp shears or with a knife, but however done it is evident that the effect will be for a short time undoubtedly objectionable. But then by doing this hard cutting in March this objectionable feature is greatly minimised, as very soon new growth begins, and in a few weeks the surface is pleasantly green with young leafage. When Ivy is grown on tree stems or poles, or where forming pillars or covering arbours, &c., then the pruning should be done with a knife, so as to leave the bulk of the leafage unimpaired. Ivies as a rule bear hard pruning well, but still it is work that should be done judiciously, especially with variegated forms.

Hardy Fuchsias (TYRO). Few Fuchsias are really hardy, but in the south, and particularly in the Isle of Wight, such varieties as Riccartonii, globosa, corallina, and others seem to exist as ordinary bushes, but generally these varieties, as also Rose of Castile, excelsiensis, magellanica, gracilis, and others, have to be cut hard down in the autumn and the roots protected by heaps of leaves or ashes; then in the spring they break up freely and form most handsome bushes. No doubt where the soil is fairly porous, an occasional dressing of decayed vegetable matter or old hotbed manure is given, and the situation is a warm one, many of the ordinary greenhouse varieties would do as well. Subject to similar treatment, Fuchsias grown in large pots as half standards, that is, on about 3-foot stems, plunged in grass during the summer, make beautiful garden objects. Most varieties of Fuchsias are more largely used for summer bedding.

Early-flowering Chrysanthemums for the outdoor border (J. R. H.). By confining the selection to SIX, or possibly a dozen, sorts, these embracing some of the best pompons as well as the leading Japanese varieties, there should be little difficulty in brightening the garden in the early autumn. Those most suitable for this work are: Alice Butler, bright red suffused with orange, height 2½ feet, flowering latter part of September and later; Camari, lemon-yellow, very bushy and compact, height 1½ feet, period of flowering same as last-mentioned variety; Little Bob (syn.), Scarlet Gem, crimson-brown, fairly bushy habit, height 2 feet, in flower latter part of August and September, a splendid bedding sort; Mr. Selly, rosy pink, bushy and compact, height 1½ feet, an ideal plant for the border, flowering same as last named; and Mme. Jolivart, white-shaded pink, very bushy and free flowering height 1½ feet, flowering throughout September. Japanese are best represented by Mme. Marie Masse, lilac-mauve, and a chestnut-bronze sport from this variety named Crispin Marie Masse. They are both beautifully branching in their style of growth, also free-flowering, and possess a good constitution, height 2 feet, flowering throughout September. Comtesse Foucher de Cariel, bright orange, bushy, free-flowering, height 2 feet, period of flowering mid-October, one of the best; Ivy Stark, pale orange-yellow, bushy habit, good constitution, height 2½ feet; Noture Croz, nutmeg-pink, very free in growth and in its blossoming, should not be disbanded, height 4 feet, in flower first week in October; and Myelnet White, pure white, bushy habit, and free-flowering, height 1½ feet, flowers throughout September.

Tufted Pansies, half-a-dozen good bedding sorts (W. S.). You will be surprised to learn that the sorts mentioned in your interesting letter have long since been superseded by varieties distinctly ahead of them in point of colour, freedom of bloom, and habit. During recent years many charming kinds have been raised developing a perfect habit of growth. Unlike the old flowers with dark rays running into the eye, these newer sorts are absolutely rayless,

and many of them are fragrant. Those of a straggling, weedy growth are becoming fewer, and this is something to be thankful for. With the newer introductions, partaking as they do of a true tufted and compact style of growth, it is possible to have grand masses in our beds and borders carrying the most delicate blossoms of the most refined and chaste character on a groundwork or carpeting of rich green foliage. Commencing to blossom in the spring, the plants may be kept in good condition right through until autumn, provided they are treated generously and the spent blossoms are removed from time to time. The best six sorts are: Devonshire Cream, as its name implies, is a beautiful pale cream-coloured flower and rayless, and is also very free and tufted in growth; Pembroke, rich canary yellow, very free, not quite so compact as most others, but indispensable; Virginius, the very palest shade of bluish-lilac, almost white, splendid habit, and very free; Concessior W. Waters, a new shade of crimson-purple, free and compact, wonderful constitution; Kitty Hay, one of the most effective rich rayless yellows for bedding in existence and little known, good habit; and Florizel, a new shade, bluish-lavender, a most effective flower, rayless. Small pieces will ultimately develop into grand clumps. This selection is much too limited regarding varieties. You should increase the number of sorts.

Chrysanthemums of a crimson colour (P. W.). It is not long since Japanese Chrysanthemums of a crimson colour were very few, Jeanne Delaux at once being the most popular variety for exhibition as well as conservatory decoration. You will find the following varieties answer your purpose admirably, though to see some of them at their best the plants must be grown on strongly and second crown buds retained. First crown buds of most of them give rough flowers of indifferent colour, these also showing the reverse side of the petals. The selection of second crown buds should obviate all this, and provide neat refined flowers of good colour. Joseph Chamberlain, rich velvety crimson, bronze reverse, long drooping florets; S. W. Gilbert, deep rich chestnut-crimson; Edwin Molyneux, bright crimson, golden reverse; G. W. Childs, deep brilliant crimson, good for late displays; John Shrimpton, rich velvety crimson, a capital bush plant; Master H. Tucker, crimson-chestnut, bronze reverse, handsome flower; Matthew Hodgson, crimson-red, a grand plant, invaluable for rather late work; Nyanza, chestnut-bronze; Eastman Bell, bright crimson, of easy culture, resembling Edwin Molyneux; Royal Standard, rather dull purplish crimson; William Seward, deep rich crimson; Lionel Humphrey, rich chestnut, golden reverse, new; Helen Shrimpton, crimson, shaded rose, new; H. J. Jones, deep rich glowing crimson, a very striking flower, new; Lord Cromer, very bright crimson, rich golden reverse, new; Henry Weeks, rosy crimson, flushed carmine, of easy culture, new; Reginald Godfrey, light chestnut-red, shaded copper, with golden reverse; Sir Herbert Kitchener, bright golden chestnut, bronze, and amber, effective colour; and Richard Dean, deep chestnut-crimson, gold reverse, late buds only in this case. Others might be added, but for your purpose this selection should make a good display.

TREES AND SHRUBS.

Flowering shrubs (G. G.). Planting these charming hardy shrubs may be continued till the end of March, but they are best planted in the autumn. You will find a couple of the Daphne Mezereum, red and white, a couple of the beautiful yellow-flowered Forsythias, a couple of the red and white-flowered Cydonias, the same of the Flowering Currants, Ribes, Dentzia gracilis and crenata, Berberis buxifolia and Darwinia, Mahonia aquifolia, Cytisus (or Broom) albus, Scoparium, and C. Andreaus, Medysarum multijugum, with its pretty reddish pea flowers, Magnolia conspicua and stellata, Philadelphus (Mock Orange) grandiflorus and Lemcoinei, the Snowballs, Viburnum Opulus and plicatum, Spiræa in variety, Lilacs, double and single, Rose Acacia, and several varieties of Hibiscus to constitute a lovely selection of flowering shrubs that do well in ordinary soils, although there are many others that could be included did space admit.

MISCELLANEOUS.

The last cold winter (R. F. G. O.).—The last great frost occurred in January and February, 1895, and lasted for nine weeks, beginning at the end of December, 1894, and coming to an end on March 5. Nowhere was the effect of this frost so evident at a glance as on the commons, where throughout the length and breadth of the land all the Gorse, with the exception of a green shoot here and there, had been to all appearance killed. In most localities, however, a good many of the stems were afterwards discovered still alive, although all the spines on them had been destroyed. — E. M.

TRADE NOTE.

MESSRS. CARTER'S CHINESE PRIMULAS.

MESSRS. CARTER write that their Chinese Primulas are now in full beauty at their nurseries at Forest Hill. We shall have something to say about this beautiful strain next week.

CATALOGUES RECEIVED.

Edwin Seals, Manures, &c. Webb and Sons, Wordsley, Stourbridge.
Balls and Vegetable and Flower Seeds. Ait, Rosser and Son, Oswestry, Hawley, Huddersfield.
Farm Seeds. Troughton and Sons, Souththorpe.
Farm Seeds. Heird Bros. & Co., King Street, Perth.

Index and Editorial Notices will be found amongst the advertisements.

THE GARDEN.

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[MARCH 3, 1900.

FLOWER SHOWS AND THEIR INFLUENCE ON HORTICULTURE.

ROSE SHOWS.

WE desire to approach this subject in the most carefully thoughtful spirit, and it appears to us that the best way to arrive at conclusions useful to our readers will be to consider the aims and to observe the judgments of some of the most representative of the great annual shows. Of these the one that naturally comes foremost is that of the National Rose Society.

And we have to consider, at one glance as it were, the Roses and the rosarians, the queen of flowers, and all those of her assiduous cultivators, old and young, veterans and neophytes, who give ungrudgingly of their time, thought, money, and money's worth in their endeavour to do her honour.

Looking broadly at the whole question of florists and florists' flowers, we cannot but be struck by the very diverse treatment given to different flowers by their special cultivators. We hold that the best and truest object of the florist should be to develop the utmost beauty of which the special flower that is taken in hand is capable. And we see that in the case of the Rose this object is most faithfully followed, and at our premier Rose shows especially we see brought together the most perfect blooms of the most beautiful Roses. And though the teaching of the shows, taking one kind of show with another, of all that are known as florists' flowers is not by any means always the most practical teaching for the garden, yet when for instance year after year we see the same good Rose holding its own, we may well be assured that that is a good and trusty kind, and so we have distinctly learnt something.

Whether it is that in the cases of the veteran Rose judges it is because the men themselves are of a high order of refined and cultured intellect and as well as of sturdy and sober judgment, it would be invidious to attempt to say; but it would appear to be so, for in the case of the show Rose there is nothing false or unseemly in the development achieved. It is all for perfect beauty, and thus it is a lesson of right aim that the special cultivators of other of the so-called florists' flowers might well take to heart.

It is obvious that the chief objects of interest

at a Rose show should be the splendid flowers of the Hybrid Perpetual and Tea classes that have so long enjoyed the close attention of both English and foreign raisers, but it is pleasant to see that there is also a wide-minded recognition of the ever-growing interest in the best of the so-called garden Roses; and with a liberality of mind that cannot be too highly appreciated, the National Society is now seeking to widen its good influence in other ways equally helpful to our gardens.

We desire to point out for the thoughtful consideration of our readers a matter that strikes us as of great importance, namely, that those horticultural societies devoted to the culture and improvement of one flower or class of flower, whose shows, by their teaching and influence, bear helpfully upon gardens and do not stop short at the show table, are those that are doing the best and most righteous work; and we see with true pleasure that the National Rose Society seeks to encourage the improvement of many of those humbler, but in their own way scarcely less beautiful, Roses whose presence in our gardens has so direct a bearing on so much of simple and blameless human happiness.

And when we see what improvements are rapidly taking place in one class of Roses alone, and those, perhaps, the hardest of all, namely, the rugosas, we recognise how great an opportunity is in the hands of all such well-constituted organisations as the best of the Rose societies to encourage the efforts of raisers in this and other such worthy directions.

TOO MANY KINDS OF APPLES.

Wise words are written by Mr. Parker upon page 157 about the future of Apple growing in this country. Profitable fruit culture is an industry of the British Isles, but suffers from the inroads of foreign competition and our own peculiar apathy. The markets in winter are stocked with ruddy-cheeked Apples from over the seas, more brilliant in complexion than home productions, without, however, possessing generally the all-precious quality of flavour. The national palate surely needs educating to a better understanding of flavour. Apples with pretty looks, but as wholesome as a bag of sawdust, cover many rich acres in the various counties. This is unfortunate.

Our correspondent rightly points out the folly of growing so much fruit that ripens within a limited period, the effect of which is naturally to leave other seasons of the year, as important as October or November, without a nutritious and much-prized food. The worship, too, of size, as if bigness signified flavour, is

fatal. Size is not the only virtue treasured in an Apple or any other fruit; it may appeal to those unable to discriminate between bulk and exquisite quality and to growers for market anxious to satisfy an ever-increasing demand.

Orchards and gardens are overstocked with kinds of slight value; the grower seems loth to part with trees that spell absolute loss, and then sums up the whole business as profitless—an ill-considered judgment, the outcome of ignorant methods of cultivation passed on from generation to generation.

A hundred varieties are catalogued in books and treatises upon fruit cultivation in the British Isles; the chaff must be sifted from the wheat, and we hope our readers will support our efforts to effect this desirable consummation.

Much satisfactory work in the right way has been accomplished of late years, and the training up of young men in fruit culture will in the end achieve this object. Mr. Parker mentions late Apples rarely heard of, and in many districts good local kinds exist which fruit growers in other counties may find acceptable.

In studying fruit culture the question of soil is all-important. A variety that rarely fails in one soil may do so in another, and this matter applies also to stocks, pruning, and other essential details of cultivation.

The cry of "too many varieties" has been long heard in the land, and many regard the theme as worn threadbare through constant discussion. Whilst, however, facts remain uncorrected, it is necessary to pursue the subject with persistence, taking no heed of sensational descriptions of the possibilities of fruit culture. It is an industry that must be undertaken by men equipped with a knowledge of the work, and a great step forward towards profitable culture will be the reduction of an unnecessarily long list of varieties.

In our next issue we shall give a list of the best Apples, to which other varieties may be added by readers with practical experience.

SOME OF THE RARER SHRUBS AND CLIMBERS.

As you ask me for a list of names followed by a few words of description of some of the best flowering shrubs and climbing plants which I have in this garden, I will try to comply with your request. Tastes differ, so that what one person would put among the best, another would exclude from their number, but not much fault, I think, can be found with the following selection:—

Edwardsia grandiflora.—There is no difficulty about this beautiful shrub at all. In the Isle of Wight it blossoms with great regularity every year, and it is always admired. I think it comes from New Zealand, and it used to be called *Sophora tetraptera* because of the four wings which the seed-vessels have. How the name came to be altered I do not know. There are few more attractive sights in the month of

April than a large specimen of *Edwardsia grandiflora* if it is grown against a wall with a western exposure, and therefore is blossoming freely. The whole tree is thickly covered with pendulous bloom branches of yellow, and though it cannot exactly be said that they are of a golden colour, they come so near to it that no great distinction need be made. I do not find it at all tender in this part of the world, and I never think of protecting it in the hardest frosts we have. It is propagated in the easiest manner either by seed or by cuttings. Mine was obtained from seed, which I gathered a long time ago from a tree which has been grown for years and years against the south wall of St. Clare Castle in this parish. I soon had many more specimens than I knew what to do with, and some three or four of them have attained a great height against the walls of St. John's Church, or in my garden.

In near proximity to *Edwardsia grandiflora* is *Poinciana Gilliesii*, which I may safely assert to be the greatest success I have ever had in this place. One mourns over disappointments from time to time, and a run of them—which occasionally occurs—is against enthusiasm for a little while; but I think it should never be forgotten that our losses are balanced by our gains, and one great gain almost unexpected, and largely in advance of what had been imagined at all atones for a great deal of ill-success. Such to me has *Poinciana Gilliesii* been from the beginning, and such it looks as though it would continue to be. The origin of its being in my hands at all was a very casual one. A long time ago—considerably more than twenty years at least—I was talking to Canon Ellacombe about things in general, and plants in particular, and he happened to say to me, "I should not be surprised if *Poinciana Gilliesii* were to succeed in the Isle of Wight." I made a note of it at the time, and determined to try it as soon as I could get hold of the plant, but here was the great difficulty in the affair. It was not to be heard of at any nursery in the kingdom, and I did not then know so much about the Italian nurseries as I have come to know since. I was driven, therefore, to try and grow it from seed, and, luckily, Mr. Thompson, of Ipswich, was able to supply me with a packet of seed, which just gave me the chance I desired to have. It was the best investment of 4d. which I ever made in my life. Like most leguminous plants, it gave no trouble at all, and I soon had quite a crop of young seedlings, which was just what I required. I gave away some of them, and lost others through inevitable neglect, but I planted two or three in the open border to see if they would do in this way. Their success has been beyond all expectation, and no one ever sees them in the autumn but says it is quite one of the finest flowering shrubs we possess.

Poinciana Gilliesii—or, as it is otherwise called, *Cesalpinia Gilliesii*—comes from South America, and is abundant on the margins of rivers and in irrigated grounds about Mendoza. The foliage gives it very much the look of an *Acacia* at a little distance, and it is often mistaken for one of them. But no *Acacia* that I have ever seen has such splendid blossoms as this shrub has. The flowers are large and sulphur-coloured, in a terminal corymbose raceme; the stamens are ten in number, of which the filaments are bright red; the anthers are also red, and the style is rather larger than the stamens, and of about the same thickness and colour. Altogether the blossom has a most imposing appearance, and when it is understood that the foliage is also attractive in the highest

degree, there is not much left to be desired. My great surprise has been in the well-doing of *Poinciana Gilliesii* to such an extent in the open ground I have now no fear for it at all, and during the worst frost we have had here during the last twenty or thirty years it was entirely uninjured. A very great recommendation for it in my eyes is the time of year when it is accustomed to blossom. All spring things have gone by, and the wealth of flowering shrubs and trees has become exhausted when this very beautiful object rivets attention and makes full compensation for any loss that has been sustained. Moreover, it goes on for such a very long time—blossoming, it is true, in an intermittent sort of way—but still remaining an attraction in the highest degree in the garden for week after week. It is, I think, rather exhausting to the border in which it is placed, and for a year or two after it had become established it seemed to hang fire, if I may so say, for want of sufficient sustenance for its needs; but this was soon rectified, and now we give it every year a few barrowfuls of very good stuff, and the difference is immense in the crop of blossoms which follows. I am afraid it will not succeed everywhere as it does in the Isle of Wight; but *Poinciana Gilliesii* is so excessively handsome, that it should be tried wherever it is likely to have a chance. In Cornwall and Devon I should say it would be quite certain to prosper.

Mandevilla saxeolens is very well known, but more as a greenhouse climber than anything else. It comes from Buenos Ayres, and its pure white, trumpet-shaped blossoms which are highly fragrant are extremely desirable. As a greenhouse climber, however, it is liable to one very strong objection—it becomes infested with red spider, and, unless it is constantly syringed, it becomes almost a nuisance to other things. So at any rate I found it to be. It grew at a very great rate and took up a good deal of space, and when it became so difficult to keep clean I almost got tired of it. My gardener and I put our heads together and we determined to let it take its chance in the open; if it had to die it must do so, but if it could live and do well in the open air, it would be a clear gain from every point of view. We chose out the warmest corner we had at our disposal, and in the month of April *Mandevilla saxeolens* had to find a new home. To my immense satisfaction it prospered a great deal more than it had ever done before; that is to say, it grew immensely, blossomed profusely, and was very soon rid of red spider and other abominations to which it had been exposed. In the open border it may safely be said that in the Isle of Wight and other similar places there is not a single objection which can be made to it; on the contrary, it becomes an object of the highest admiration, and the abundance of my pure white flowers, which are produced in July, is truly surprising. I should perhaps say here that once only since its exposure, some twelve or fifteen years ago, has it got into trouble. In that very hard frost of the winter, I think, of 1881 *Mandevilla saxeolens* was cut down to the ground. I mourned over it as dead for some weeks, and was most agreeably surprised in the early summer to find that it was shooting out from below and beginning to grow vigorously. So vigorously did it grow, that it touched the roof of my house before the season was over, and though it did not blossom that year, it had the promise of great things about it, which has since been fulfilled. It is as strong now as ever it was, and as the stems are bound round during winter with bracken and straw, I think it is proof against injury. I

may almost engage to say that in the coming July this splendid climber will be a sight to see. So refreshing is it in very hot weather, that it arrests every passer-by, who at once is sure to exclaim, "It is one of the most beautiful things that I ever saw in my life."

Mandevilla saxeolens has found its way to Jersey and Guernsey, where it is plentiful enough, but there must be many other places which it would like very well where it is not as yet to be seen.

H. EWBANK.

St. John's, Ryde, Isle of Wight.

(To be continued.)

DEEP CULTIVATION.

As I anticipated, a somewhat lengthy and, I hope, beneficial discussion has followed my notes, and I trust, with the permission of the editors, others interested will see their way to give their experience. There is, of course, always two sides to a question. I am only anxious to impart to the many readers of your valuable paper what each of us believe to be the way of producing the greatest bulk of high-class vegetables on a given space. So far, the arguments for and against, I think, are pretty evenly divided. I will endeavour to the best of my ability to answer those which differ as briefly as possible.

Firstly, an "Old Hand" on p. 88. I am much obliged to him for the compliment he pays me on the quality of vegetables I have exhibited from time to time. Then he says he is sorry to differ from me on the treatment of clayey land. He says: "In every garden circumstances differ." Exactly; but the system remains the same. As I have before stated, I have had experience with chalk, gravel, and clay, and on each occasion I have adopted the same course, and with the best results. I know only too well what deficiency of labour means, and I fully sympathise with those placed in the same position.

Then, again, manure. I am aware in some cases there is much trouble in obtaining sufficient, but in all gardens there is a large amount of waste and refuse, sweepings of walks, &c., which can and should be liberally worked in, and I am perfectly convinced there is much more fertility in what many call inert clay than is generally supposed when opened up, brought to the surface, and exposed to the influence of the weather. Your correspondent also states that some soils are so poor at 3 feet, that it will take years to make them good, but my contention is that the poorer the soil the more reason there is for fetching it up and making what should be a good depth of workable soil in the kitchen garden, which has to be cropped and doubly cropped in many instances annually. I assure "Old Hand" that if I were placed in his position with only a foot or 15 inches of soil on a sandy gravel subsoil, I should endeavour to set about quickly and produce a better depth by the means I have set forth. Too many people imagine that after once the ground is trenched it is done with; but surely not so. Every season, if not the whole of the garden, as much of it as possible should be trenched or bastard trenched. Then, and then only, in my opinion, can the best results be obtained.

After carefully reading the comments of the Rev. G. Engleheart, I certainly think he travels very wide of the mark. My notes were intended purely for the kitchen garden, but I observe he feels justified in mixing up the farm, fruit garden, herbaceous border, and pot plants, and he brings forth science to bear out his argument, none of which I object to. He thinks the gardener will do well to take lessons from the scientific farmer. Perhaps in a few cases he may, but my opinion generally is just the opposite. I think the present-day farmer would do well to take a few lessons from the gardener.

Mr. Engleheart mentions the Raspberry, for instance, in support of his argument. Now everyone is aware that the Raspberry is a surface-rooting plant, but, assuming it is planted on a deeply cultivated piece of land, there is nothing to

prevent the roots from remaining on the surface, and the same applies to all other surface-rooting plants. I made my plantations of Raspberries on trenched ground with good results, but annually give them a surface-dressing of manure. When the time comes round to make a fresh plantation the quarter is again trenched, and the consequence is the first bottom spit is again brought to the surface. Then surely we have a better depth of good workable soil than would otherwise have been the case and fit to receive almost any kind of crop one cares to try. He then goes on to say: "Even the very school-children can now tell us how the rocks by the influence of the weather, &c., have been converted into the top spit of soil." Quite true; and this substantiates my argument. Take, for instance, chalk which is perhaps buried only a few inches under the soil. Bring it to the surface in the autumn, and what do we observe in the spring after being subjected to the influence of the winter's weather? Why, the first winter will pulverise and slacken a great portion; whereas, if kept beneath the sur-

face I determined to set about trying what could be done to improve matters, following my own ideas. I commenced one end by opening out a trench 3 feet in depth and the same in width, and I converted this into the rubbish yard, in which we buried any kind of rubbish generally to be found in the garden, including short grass from the lawns. As this became full up I opened out a fresh trench with which I covered the rubbish, and the beneficial results have so far exceeded expectations. Those first treated have grown and developed well. I have cropped between the trees with vegetables each year with the best results, but it is intended to lay down the whole with grass eventually. I cannot think that the argument respecting forest trees finding out tempting heaps of soil placed near them has much to do with deep tillage of the soil. I am sure that if a piece of ground is deeply cultivated and enriched near most of our forest trees they would find it out and revel quite as much in this, and with more beneficial and lasting results than if allowed to rise up unaturally many feet possibly above the

piece of ground in question, which had been, as he stated, trenched for the first time to a depth of 3 feet, and on which I had grown one of the best crops of Potatoes it has been my pleasure to lift since I have been at Allenham (nearly sixteen years). The ground was trenched during winter and left rough till planting time. Small trenches were taken out with the spade and a small quantity of leaf-soil placed in, on which the sets were planted. Over these a layer of the subsoil was placed, and I allowed a distance of 3 feet from row to row. Between these I grew a crop of Savoys. Nothing in the way of fresh material was given these, and I assure Mr. Hall a better piece of Savoys I have never grown. On the same strip of land I also had Lettuce, Turnips, Artichokes, and Carrots. Holes were bored for the latter, which were filled up with a fine compost; the rest were grown simply in the clay, except a little fine soil sown in the drills with the Turnip seed, and nothing could possibly have done better. I cannot see what draining has to do with land cultivated at a depth of from 2 feet 6 inches to 3 feet any more than it does at a less depth. I should say no one will dispute the absolute necessity of draining land under cultivation as a kitchen garden, especially so if wet and retentive.

I am distinctly at variance with Mr. Hall as to his treatment of clay soil. I, too, know something about the burning of this material—by no means a new invention—but never again will I advise or practise such a method. I consider burnt ballast the worst material one can introduce into a kitchen garden for the production of high-class vegetables. London clay, I am quite aware, is very different to a strong loam. Mr. Hall seems to lose sight of the fact that I do not propose to bury away the topsoil for ever. A practical gardener will always know where to find it when the trenching is again repeated, an operation which should be often carried out. My desire is to obtain a good depth of workable soil rather than a foot or 18 inches, and which I repeat can be done if carried out as I advise. Most of the vegetables I have exhibited have been cultivated on land as described by me, but no doubt he is also aware that for Carrots, Beet-root, and Parsnips I have to resort to boring holes and fill up with a suitable compost to produce my best specimens, even these are grown on the

E. BECKETT.

Abraham House Gardens, Elstree, Herts.

CLEMATIS PANICULATA.

It happens not infrequently that some good plant that might be of the utmost use in our gardens is in some mysterious way overlooked and is virtually unknown. Why so good a thing as this excellent Clematis has so long suffered this most undeserved neglect it is impossible to say; but though it is well known in botanical collections, and though it figures in the list of one of our best seedsmen, it is very rarely to be seen in gardens. Clematis paniculata will do for us in the shortening days of October what Clematis Flammula does in September. It does even more, for though it has not the delicate, almost nebulous, lightness of mass of C. Flammula, its masses of bloom are borne even more abundantly. The two plants have so much in common, that one may, for



CLEMATIS PANICULATA IN A BASKET.

face, it will for ever remain in the same condition, and we have only to notice our railway cuttings, &c., in support of this, and the same thing applies to clayey and other soils. Even for the flower garden or herbaceous borders I should advise deep preparation of the ground, but not to the same extent as in the kitchen garden. Now, as to fruit trees, does Mr. Engleheart mean to say to trench 2 feet or 3 feet for an orchard is a mistake? I do not wish to be misunderstood. I certainly do not, and never did, advocate deep planting. I know only too well that far too many fruit trees are planted at too great a depth, especially when holes are merely dug out and the trees planted therein. I will quote an instance. About twenty-five years ago a new orchard was planted, half of which was deeply trenched and the remaining half planted by simply digging out the holes. Now the difference was apparent. Those on the trenched part did well in every respect, making good growth and bearing freely, while the other half proved a complete failure, the trees being only about half the size of the others, and never once has anything like a crop of fruit been produced. Three years

surface. Then, again, Mr. Engleheart quotes the Narcissus. In dealing with this his favourite plant few can question his ability. He states that occasionally, when these have been buried with ashes too deeply, the young roots find their way to the top. Precisely; but I never advise planting or burying anything unaturally deep rather on the contrary. If anyone will turn out almost any kind of plant from a pot, the principal roots will be found near the bottom. Why are extra deep pots generally advised for many bulbs, Hyacinths especially? Why do many of our leading nurserymen go to the expense of deep trenching if shallow cultivation would answer the purpose? Not merely for the employment of labour, but because they are fully alive to the fact that there is hidden treasure below.

Mr. J. R. Hall on p. 129 questions Mr. D. B. Crane's remarks respecting a crop of Potatoes taken from deeply trenched ground here last summer. I will enlighten him as far as I possibly can on the subject. Mr. Crane paid a visit here some time during last autumn, and the question of deep cultivation cropped up. I pointed out to him the

garden purposes, describe *C. paniculata* as an October-blooming *Flammula*, but bolder and stronger both in mass and in detail. The flowers are alike in shape and in their tender tinting of warm white, but in *paniculata* they are stronger of texture. The leaves are also firmer and stronger, the leaflets rounded instead of pointed, boldly waved and brightly polished, of a full dark green colour, and of firm leathery texture. It grows afresh from the root every year, and although in training it to a bit of fence we remove quite three-quarters of the growth, yet by the autumn it is a dense bowery mass that would amply fill the body of a one-horse cart.

It is of great value for cutting. Quite a large quantity may be taken from one plant without any apparent diminution of its beautiful bloom-masses, and it lends itself most kindly to bold arrangements of table flowers. It is one of our many good garden plants that have come to us from Japan.

NOTES OF THE WEEK.

Hamamelis arborea. For considerably more than a century the only representative of the genus *Hamamelis* in our gardens was the North American Wych Hazel (*H. virginica*), till in 1862 *H. arborea* was introduced from Japan, thus forming another link between the flora of that country and that of North America. The Virginian Wych Hazel, which flowers freely during the latter part of the autumn and in early winter, is, when in full bloom, an interesting subject, but nothing more, whereas *H. arborea* takes high rank as a flowering plant. This is at its best during January or February, according to the season, and when the still leafless branches are thickly studded with their yellow starry blossoms, whose segments are so decidedly wrinkled, it forms, particularly when lit up by the sun, a very beautiful object. If lured out early by unusually mild weather, a severe frost will injure the expanded blossoms, but the unopened buds are seldom affected. Though it attains the dimensions of a small tree, this *Hamamelis* will flower freely when less than 6 feet high. The blossoms are particularly charming when closely inspected; hence in planting they should be so situated that this can be readily done. P.

Monstera deliciosa. I read not so very long ago that at a meeting of the Fellows of the Royal Botanic Society, the secretary, Mr. Sowerby, introduced to the notice of the company present fruit of *Monstera deliciosa*, which I believe it was stated never to have borne fruit in England except at the Botanic Gardens. Now I know that it fruits at Syon House annually, and also at my father's, where indeed a very beautiful specimen may be seen. The *Monstera* is one of the few climbers of the Philodendron family. The fruit is green in colour and shaped like an elongated Pine-apple and the leaves are serrated. After removing the outer coating the succulent part of the *Monstera* is of a most exquisite flavour, but when it has rested on the tongue or reached the palate, a sharp tingling sensation is experienced: this is due to the presence of myriads of needle-shaped crystals composed of oxalate of lime. The plant is indigenous to Mexico and the Straits Settlements, and if the fruit could be exported largely, it would in all probability supplant even such a dainty fruit as the Pine-apple. At present I am unable to write a fuller botanical description, but trust this will interest those who care for tropical fruits. A. GUNTER.

Some new plants in prospect. We receive from M. Max Leichtlin, Baden-Baden, his short but highly interesting list of bulbs and plants, conspicuous among which are some new developments of *Gladioli*. The list is accompanied by a coloured illustration of an individual bloom of one of these, an immense blossom 5½ inches wide, of brilliant scarlet, broadly feathered with white upon the lower petals. On the subject of this list

we have the following note from one of the most watchful and keenly appreciative of our many valued correspondents: "An unusually large number of most interesting new plants are now being offered by Herr Max Leichtlin, of Baden-Baden. Amongst them a new Honeysuckle from Afghanistan (*Lonicera Griffithii*), which he says is very handsome; a North American Aster named *A. Fendleri*; a new *Asclepias*, *A. Hallii*, from Colorado; a most interesting and ornamental plant from Pisidia named *Onopordon bracteatum*, described by Boissier; a beautiful white-flowered Californian labiate, *Monardella macrantha*; three new species of *Berberis*, one of them from Sikkim, the other two from Thibet; three new *Meconopsis*; and the first of a grand new race of *Gladioli* of his own raising which he names *G. hybridus princeps*, and of which he gives a coloured figure. I am getting all these from him, so hope to be able to say something about them some day in THE GARDEN."—W. E. G.

Skimmia Formanii.—A branch of the male plant of this was broken off by the snow on the 2nd ult., and the foliage being so handsome I took it into the house, with the result that it is now (after nearly three weeks in water) in full bloom. From the enclosed flowers you will see what a handsome flowering shrub this form of *Skimmia* is, and you will notice the strong Lily of the Valley scent of the flowers. Not only do the birds spare the berries, but the berries themselves are most persistent, and remain in good condition on the plant for a couple of years, and if grown in a cool house they remain in perfect health for even three years. A. KINGSMILL, *Harrow Wood, Middlesex.*

[The flowers of this handsome *Skimmia* are pleasantly fragrant, but Mr. Kingsmill has omitted to mention (though notice of the fact can scarcely have escaped so good an observer) that the surface of the stems and the crushed leaves have another and very agreeable aromatic odour of a Myrtle-like quality. The whole appearance of the bush is that of an improved *Skimmia ovata*. It was raised by Mr. Forman, of Esk Bank, N.B.—Eds.]

Billbergia nutans. This is certainly less showy than many bromeliaceous plants, yet it forms a decidedly pretty feature in the stove just now, and can be depended upon to yield a good display of its gracefully disposed blossoms at this season of the year. As with most of its associates, the long, slender, gracefully recurving leaves are arranged in a vasiform manner. The flower-spikes, which slightly overtop the foliage, bear a loose cluster of nodding flowers, accompanied by rosy-tinted bracts. The blossoms themselves have the segments prettily reflexed and of a pea-green colour, margined with blue—a striking and uncommon combination. The whole contour of the flower is suggestive of a small *Fuchsia*. This *Billbergia* is a native of Brazil, and was introduced over thirty years ago. Potted in sandy peat with just a little loam, and kept moderately moist at all seasons, it will be just at home. H. P.

Erica codonodes. Far better known by the above name than that of *E. lusitanica*, which is now regarded as the correct one, this *Heath* is valuable from the fact that, should the weather be fairly mild, it will in the open ground flower during the latter part of the winter. It is of a rather erect bush form, reaching a height of 3 feet to 4 feet, or occasionally more, while the upper parts of the branches are now for some distance crowded with little white blossoms, just touched with pink on the exposed side. During severe winters, even in the southern portion of England, this *Heath* is often severely injured, but it generally soon recovers. Anyhow, flowering as it does now, it is well worth a little extra attention, being the most valuable of the larger-growing *Heaths*. For the winter embellishment of a cool greenhouse it readily lends itself, as if lifted carefully from the open ground in the autumn and potted, the blossoms will open without check and form an attractive feature from Christmas onward. Well-budded examples of the *Laurustinus* treated in the same way are very useful, as they can be used in cool, draughty spots where more tender subjects would be severely injured. H. P.

Epacris in bloom. The *Epacris*es, which are just now so attractive, consist of two quite distinct sections; first, the greater portion of the garden varieties which owe their origin principally to *E. impressa*, and are all characterised by slender upright shoots studded for a considerable distance with flowers varying from white to bright red; secondly, those derived from *E. longiflora*, or *miniata*, as it is often called. The members of this section are altogether of a more spreading style of growth, while the individual flowers are longer and drooping, and on the almost horizontally disposed shoots are seen to very great advantage. They are of different shades of red and scarlet, tipped with white. *E. miniata splendens* and *Eclipse* are two good varieties of this section. There is a distinct *Epacris* with quite double blossoms, known as *E. onosma-flora plena*, which has been grown now for about twenty years, and during its early stages it was thought likely to be of considerable decorative value, but it is now rarely met with in a satisfactory condition. Much the same treatment as that accorded to the quicker-growing kinds of *Heath* will suit the *Epacris* well; indeed, these latter occupy much the same position in Australia as their near relatives the *Ericas* in South Africa.—T.

NOTES FROM NURSERY GARDENS.

CHINESE PRIMULAS.

MESSRS. J. CARTER & CO.'S fine strain of Chinese Primulas has for several weeks past presented a brilliant picture in their Forest Hill nurseries, the many fine varieties displaying a charming variety of colours. Among the many kinds we may mention a few that were especially beautiful. *Elaine Improved* is a delicate white, finer than the older *Elaine*; *Hercules* is a pretty carmine-rose flower, to which, as regards the flowers, *Rose* is similar, but is Fern-leaved; *Ruby*, which has crimson-rose flowers, has a unique appearance, owing to the presence of specks round the centre of the flower; *Carmine* is of a rich colour, and a form of this with variegated leaves has been raised, and is, apparently, quite a new departure; *Venus*, which has both the Fern and Palm-leaved forms, is white, variegated with rose. Other good varieties are *Holborn Blue*, *Vermilion*, *Salmon*, and *Rose Queen*, delicate pink. *Carter's Scarlet*, a brilliant kind, and *Princess May* are specially distinct, the latter having very large, handsome flowers of a delicate pink and of good substance. The above are all single kinds, but there are also some excellent semi-double varieties, among which are *Prince of Wales*, *rose*, *Carmine Empress*, and *Aurora*, pale pink.

Messrs. Carter have raised some very beautiful new forms. The crossing of *White Bouquet* and *Carmine* has resulted in two forms, a white and a rose-lilac, the latter of a somewhat more delicate colour than its carmine parent; the flowers are large and distinctly fringed. The result of the crossing of *Carmine* with *Elaine Improved* is a lovely flower, large, and of thick, leathery substance. This also is in the two colours of the parents, white and carmine, the flowers standing well above the foliage. The carmine form has a white halo around the yellow centre, which decidedly adds to the beauty of the flower.

To Messrs. Carter much of the perfection reached in *Primula* hybridising is due. In this nursery are masses of colour of many shades, and the blue forms of both single and double varieties become richer and purer each year. Visitors to the shows know the good work accomplished by the firm in the past, and many treasures are in store in the future. There is improvement all round in the form of the flowers and in the growth of the plant. The Chinese *Primulas* display the result of carefully conceived crossing of varieties to produce improved types, or quite distinct departures from anything previously in existence.

HOME-GROWN APPLES FOR WINTER SUPPLIES.

PROGRESS IN FRUIT CULTURE, BUT TOO MANY VARIETIES OF APPLES.

It is common no doubt with many other readers of *THE GARDEN*, I was greatly interested in the further impetus "W. R." endeavoured to give gardeners and garden lovers on page 51 under the forcible heading "Onward! not Back." Although, as stated, no attempt was made to go over the "whole ground," his remarks anent one section of horticulture, viz., the flower garden, could with equal truth, I think, be applied to other branches, and not the least to hardy fruit cultivation generally, and Apples in particular. There has certainly been an onward movement

Some years ago I remember there was a spirited correspondence in these pages under the heading "Too many varieties of Pears." A similar discussion at the present time might, without doubt, prove valuable on Apples, as the extremely long list of varieties makes it difficult to know which really to choose, there being generally some striking description connected with each to force its sale. If experienced gardeners are sometimes puzzled in making a selection, how much more difficult must it be then for the amateur. Sensational exhibits at different shows are not always trustworthy guides.

One certainly sees the size and appearance of individual specimens, but it is no criterion either as to their cropping or keeping properties, or whether they are suitable for various soils, &c. We have too many early

appear: we have plenty of well-tried ones to go on with that only require to be more freely grown for their full value and usefulness to be appreciated. Which, then, should we select out of the multitude of varieties? Other growers may add to or improve my limited selection. I trust they may, but I only furnish the names of those I have proved to be reliable when, of course, the bloom is not destroyed by late frosts.

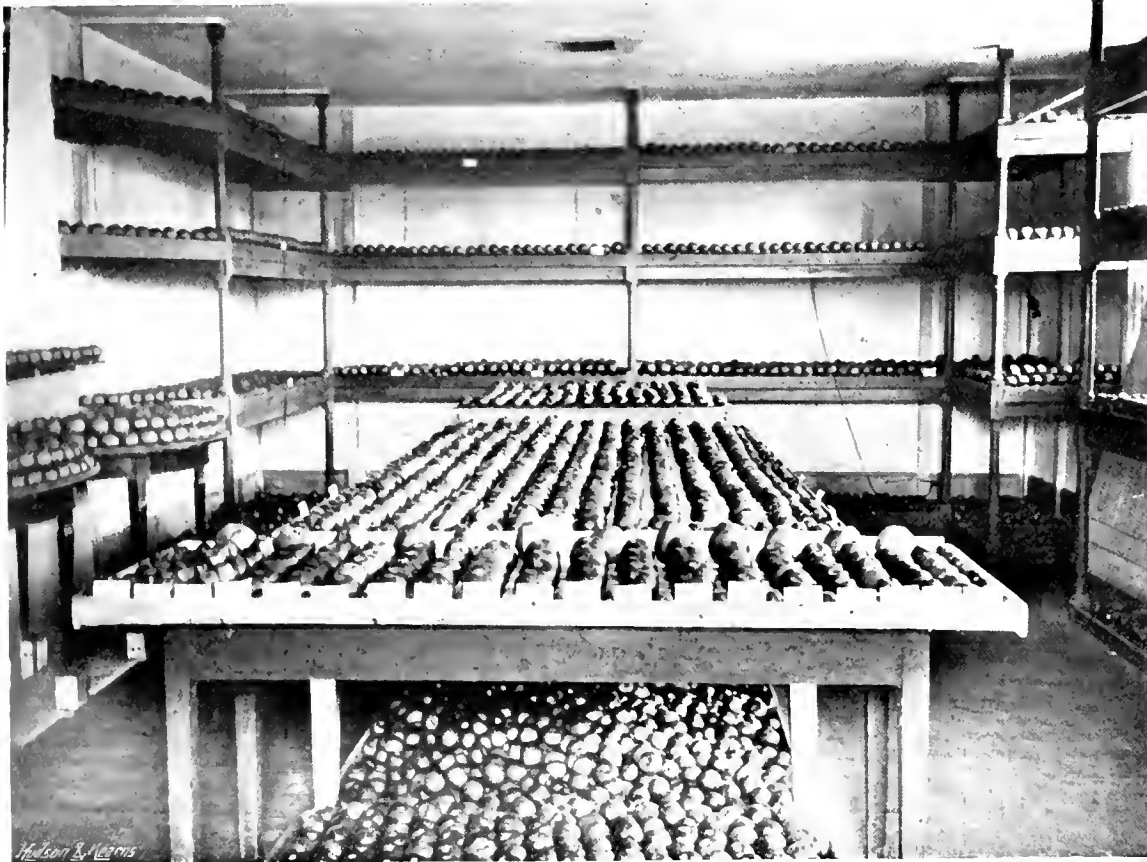
CULINARY VARIETIES.

If I were asked to name one good late variety it would be Norfolk Beauty. Here it always crops well, and I find no difficulty in keeping it in grand condition well into May. The same may be said of Northern Greening and Striped Beauty. Hambledon Deux Ans is also a very valuable late Apple, and should certainly be included and planted in all gardens and orchards. To these I would add Lane's Prince Albert and Wellington. Though probably the last two are not quite so firm in texture, they are both valuable for late use, and both are wonderful bearers. I have named sufficient in this short list to maintain the supply as long as it is reasonable to expect Apples to last. I have found them so, and can hardly wish for better fruits.

DESSERT VARIETIES.

In spite of the sharp lookout there has been for new or little-known old varieties of Apples, there still remain in some counties and localities varieties possessing sterling merit, yet their cultivation is to a great extent limited to the district in which they were raised or found, and the country generally (from a fruit-grower's point of view) is the poorer by their not being better known and more frequently planted. As an instance of this I may ask, in how many gardens or orchards outside Worcestershire (or at least the adjoining counties, but Worcestershire in particular) is that valuable late dessert Apple known as Russock Pearmain met with? I do not place this first on my list as being the best, but it is certainly entitled to be classed with them. With late-

keeping dessert Apples we cannot expect to have so large or highly-coloured specimens as seen in autumn, but are the latter always the best as regards quality? They are not, neither are large Apples always appreciated on the dessert table. Who has not eaten a well-preserved Wyken Pippin in the month of March or April and thoroughly enjoyed it, although it is classed below medium size? This variety should certainly be planted more freely or more generally. Then there is another small, but delicious Apple—Nonpareil—seldom planted now, but it would be a pity should such an old favourite go out of cultivation. If we turn to larger fruit of high quality, we have in Claygate Pearmain all that one could desire, and it is in use from November till March. It is a good substitute for the much-prized Ribston Pippin, and the tree is more robust and healthy and less prone to canker. In



APPLE ROOM AT GOODWOOD IN FEBRUARY.

during recent years with fruit culture, but I cannot help thinking that the progress made has been confined in a way to grooves, and that, too, so valuable an article of food should reach far greater development. I refer specially to the Apple.

During the autumn and early winter months there is no scarcity of home-grown Apples as a rule; indeed, there is often a glut; but much of the produce is undoubtedly of an inferior quality. As the season advances first-class samples are none too plentiful in many private gardens, while that on sale has practically been grown beyond our shores. In penning these notes, however, we are more concerned with the productions from medium-sized gardens and a continuous supply for the household over as long a period as possible, and with this there is room for much improvement in most gardens and orchards.

varieties of soft texture, especially in the culinary section. They have also been planted too freely in the past, while more valuable keeping ones have been neglected.

The scarcity of really good winter Apples is no fresh complaint. It has been recognised for years, but somehow the apathy—what else can it be termed?—continues, and after Christmas it is not home-grown fruit which supplies the chief portion in our markets. In this respect we have not made any appreciable progress or onward movement. What have we been waiting for? Certainly not suitable varieties. Favourable soil and climate we also have, while undoubtedly we should feel indignant to be thought less skilful growers than those of other countries. Turning to varieties, we shall always welcome new ones that will stand the test of storage and turn out bright, fresh, and crisp. But there is no need to wait for these to

Margil we have few new ones to surpass it for quality, and it is recommended for planting as bushes in small or medium-sized gardens. Probably the most prolific and one of the best Apples we have in Sussex is Cackle Pippin. Heavy crops are obtained annually, and it is fit for table between January and April. In this list we have not included such as Cox's Orange Pippin, Ribston Pippin, and others that are well known, and which are to be found in most gardens, but selected those which form a succession to them.

I am aware that hardly any I have named would find much favour with the exhibitor, as their size is against them; but I am not dealing with that question at all, but hope to draw attention to some of our oldest and best varieties, which bid fair to lose ground or public favour owing to the introduction of larger and more showy ones; while, again, it is with a view to filling our gardens and orchards with really serviceable kinds rather than with those which may win prizes, but fail to give satisfaction in the most important form, viz., for general use.

Those who require Apples for home consumption during the winter or spring months may rely on those I have named, as a visit to our Apple room at the present time would amply testify.

RICHARD PARKER.

Goodwood, February 19.

RIVIERA NOTES.

ANEMONE-TIDE.

THE time of Anemones has come, and the Riviera is in the full glory of *Acacia dealbata*. The stalls in the market are heaped high with bundles of Anemones gathered to deck the carriages or the bouquets of the combatants in the *batailles des fleurs* that rage the length of the coast from Hyères to San Remo during the Carnival days.

It is hard to believe when one looks on the varied races of cultivated Anemones that they all spring, or are said to have originated, from *Anemone coronaria* and *A. stellata*, for the fulgens section is quite absent from these shores, unless the large gold-eyed "Soleil" Anemone, whose gorgeous scarlet petals used to adorn the terraces near Mentone so abundantly, be considered as the development of the smaller and hardier Pyrenean *A. fulgens*. Be this as it may, the foliage of the "Soleil" Anemone is much more like *A. fulgens* than anything else; it is broader, bigger and stronger, but similar in shape, while much paler in colour. The flower is as large as any *A. coronaria*, but with narrower petals and more of them and is unsurpassed in brilliancy. It is the only Anemone that is not generally hardy in England. I have only heard of its thriving in some sheltered Irish garden.

The chief types, then, of the wild Anemone on the Riviera are the *coronaria* section, with scarlet, purple and lavender petals, the parent of our common garden Anemones; then the Anemone I know as "Soleil"; and lastly, the *A. stellata*, which is the commonest, most variable, and the smallest. Curiously enough, there are many wild hybrids between *A. stellata* and *A. "Soleil"*, while wild hybrids between *A. coronaria* and *A. stellata* are unknown to me.

To my fancy these wild hybrids between the gorgeous *A. "Soleil"* and *A. stellata* are the most delightful and beautiful of all Anemones. The shades of colour vary from richest crimson through shades of rose, salmon-pink and softest creamy-pink to pure white, always with the leaf and eye that show their origin; and for the first time to come across a little valley full of

these exquisite shades of colour is an experience few will forget who love flowers and Anemones in particular. The little valley I possess is full of these shades of colour, and until the later flowering *A. "Soleil"* appeared I was quite at a loss to explain the fact that, while at one end of the valley the *A. stellata* were typical in their shades of lilac, red-mauve and white, the other end, near the groups of the large-leaved *A. "Soleil"*, was rich in shades of rose-salmon and richest crimson. But the puzzles are mending, for who that knows the soft pink Anemone *de Nice*, with its green centre, could believe it to be a form of *A. coronaria*, which its leaves declare to be the case.

The prettiest and most modern forms of garden Anemones are the *Coeur-deau*, with the outer petals broad and generally white, while the centres are fully double, with narrow richly-coloured petals of crimson-rose, purple or green, but these all come much later and are certainly not generally hardy in English gardens. What, I wonder, is their real origin? It would require to be traced back to the Dutch florists, whose earliest triumphs are seen in many a Dutch flower-painter's floral group.

Nice.

E. H. WOODALL.

NOTES FROM IRELAND.

STRAFFAN, CO. KILDARE.

LATE last autumn I had the privilege of visiting these beautiful gardens. It was admittedly not by any means the best season

have been nearly all planted within the last two or three years, and under the ordinary conditions which obtain in most gardens would not have been half the size they are at the present time. Particular note was taken of *Bambusa palmata* in most luxuriant growth; others of special note were *B. japonica*, *B. nitida*, *Phyllostachys viridi-glaucescens* and *P. amra*. These Bamboos are only 1 foot or so above the water-level, whilst at times they are flooded; this fact points strongly to the necessity of an abundance of moisture for their well-being. *Gunnera manicata* amongst these Bamboos is an immense specimen, this fine-foliaged plant finding here an ideal spot. Straffan is noted for its Daffodils in grass; these have been considerably extended, and comprise many of the best and most popular varieties. That fine Snowdrop, *Galanthus maximus grandis*, is also planted extensively in the same natural manner, whilst *Iris reticulata* is planted in thousands, finding here a most congenial home. In walking round the grounds one could not fail to be impressed with the complete absence of all formality, the natural beauty of the position being made the most of. The rainfall at Straffan is somewhat phenomenal. For the year just ended it was 31.89 inches, rain having fallen on 185 days. Under these conditions many of the conifers luxuriate in a remarkable degree, there being fine well-furnished specimens of *Wellingtonia gigantea*, of *Thujaopsis borealis* (a distinct form having the side growths pendulous), with varieties of *Cupressus* and *Junipers*. Deciduous and ever-



FLOWERING PLANTS IN STONE WALL AT STRAFFAN

of the year for inspection, but to the garden-lover there was an abundance of good things to be seen and taken note of. The gardens at Straffan are beautifully situated upon the banks of the Liffey, which river takes a meandering course upon the western side, dividing into two channels nearly opposite the mansion. The island thus created forms part of the pleasure grounds, and is an ideal spot for semi-wild gardening. Bamboos are to be seen thriving here in the wildest luxuriance. These

green trees and shrubs are found here in great variety. The Tulip tree is a remarkable specimen, better furnished than many examples; it is also extremely floriferous, almost every point of growth bearing a flower. In a sheltered nook is to be seen *Magnolia purpurea* Lenné, the finest specimen probably to be found in any garden. *Pernettyas* are perfectly at home in well-prepared beds, producing their berries in many colours and the greatest profusion. Another fine specimen is *Cotoneaster*

frigida, some 20 feet or so in height. *Azara microphylla* is perfectly at home, and so are the brilliant forms of *Acer palmata*. Of *Choisya ternata* there are dense bushes. The Wych Hazels (*Hamamelis arborea* and *H. japonica*) thrive well, and the same can be said of the *Cydonias*, notably *C. japonica rosea*. Amongst other evergreens, the Weeping and Silver Hollies are fine features. By the banks of the Liffey the Willows and Dogwood produce a most beautiful effect. Both spring and summer bedding is done extensively; but for once, after many years, the beds are for this

"IN A SMALL WAY."

NOTES FROM AN OBLONG GARDEN.—II.

February 1.

DEEP snow! and very seasonable, too. Last year everything rushed out all through a beautiful warm February, and suffered terribly from six weeks of east wind a little later, with the result that my Roses were a miserable first crop. This year I see *Clematis Jackmani*, both *alba* and the *blue superba*, have fat green buds in their joints, all ready to burst and be nipped, for they were foolishly produced quite early in



A GROUP OF A HARDY LADY'S SLIPPER (*CYRIPEDIUM SPECTABILE*) AT STRAFFAN.

spring to have a rest. Note was taken of some Dahlias with their stems quite bleached which were cut off by frost early in September, so liable is this spot to early autumn and also late spring frosts. In spite of this, however, both Apples and Pears are finely grown; better coloured examples we have never seen, or tasted finer flavoured Cox's Orange Pippin. Of Pears, Marie Louise is one of the finest, other good kinds being Beurre Rance, Winter Nelis, Josephine de Malines and Thompson's; these are all grown upon walls, chiefly facing south. Peaches are very fine under glass, without heat, and are well-balanced trees. The ranges of glass are extensive. Orchids and other choice plants having been features here for many years past, but owing to the death of the late proprietor several of the finest specimens have been removed to another seat of the family. One can fully sympathise with Mr. Bedford in thus having to part with plants that he had made especial favourites for years past. It will not, however, be very long before their places are again filled, as gardening in all its varied phases is carried on with spirit at Straffan. Writing of Orchids reminds me of the superb mass of *Cyripedium spectabile* which thrives there to perfection. A good example is afforded, too, of how to clothe a wall with alpine plants. This is done by forming ledges upon the side of the wall, the plants chosen being evidently quite at home.

JAMES HUDSON.

Gardeners' Royal Benevolent Institution. We announced lately that the Duke of Bedford would take the chair at the next anniversary dinner of this deserving charity, but it should have been the Duke of Portland.

January. So has the Montan Peony, which grows in front of the *C. alba*. Of course it has had several pinkish plump noses ready all through the late autumn and winter, but during the last week or two it has unfolded them a good deal. It is not planted in the best of situations, for it is in the sunny border, which gets the full benefit of his majesty from the earliest of his uprising, and all the books warn us against planting Peonies where night-frozen buds and early leaves will be too quickly and fiercely thawed. There is the Lord Suffield Apple tree in the lawn close by though, and I hope this will be some slight protection, though I feel myself as foolishly sanguine as the *Clematis* is premature. What a pity it always seems to cut down the summer and autumn-flowering *Clematis*es to the regulation five or six eyes in the winter before they sprout! I confess I have not done it to mine, as although, when left unpruned, the growth retreats upwards to some extent, leaving a certain amount of bare stem below, some of the new shoots can always be tied down to cover the nudity, even supposing the plant does not see to this itself, as I find it usually does with a perfect mantle of wealth. I had *Clematis montana* planted last year against the half-shady wall where a group of Lilac bushes grows in the next-door garden; they are old and very tall, and have been kept strictly to their own side, so that the side next us presents a very suitable position for my *montana* to climb upon and wreath itself round the Lilac branches. Close by I put *Clematis flammula*, as I thought they might grow up together, and then our eyes would be blessed with sheets of starry white blooms both in spring and autumn. Although the *Clematis flammula* is only a

baby, between 3 feet and 4 feet high, it bloomed most profusely not long after it was turned out of a pot into the ground in late September. It smelt most deliciously, and then I thought no more of it, until November—quite at the end of the month I noticed it looking filmy and smoky, with a gleam of red; it had covered itself with the same delightful grey-feathered seeds as the common Traveller's Joy, but more beautiful, because the seed itself among its plumes is crimson. There is no such country as this for Traveller's Joy: it hangs in vast masses, and drapes all the dear untidy high hedges like the smoke of battle, and as it flourishes so exceedingly, so I hope may its near relations in my garden. This is a good month for planting them, and I have ordered new plants of Princess of Wales, which is a most lovely deep mauve late bloomer, and the two doubles, respectively lilac and white, Countess of Lovelace and Duchess of Edinburgh, of the Florida section. I have always failed with these, for in our damp winter they will die off, apparently near or about the graft, but I cannot buy them on their own roots. A friend of ours has a superb Countess all over the front of his house, and every year when I drive past and see it, I mentally devote another 1s. 6d. or 2s. 6d. for a specially large plant to a fresh purchase and trial. One thing I have established—none of these tender kinds will grow here on arches. I am going to try them on the little shady recesses where the small buttresses are that support the walls of the oblong; if I put them in on the side where the sun cannot get at their lower stems when they are wet, but where the shoots can go over and get all they want of sunshine, perhaps I shall do better. The effect of these things by themselves on a wall is not quite satisfactory, so I am giving them a background of small-leaved Ivy, a kind of which I am ashamed to say I do not know the name, but it has a pink and silver leaf, with a little faint green about the midrib, and is a *peevish* grower in most places, though it seems happy here. The aurea spectabilis Ivy is beautiful over the side of a house near, but I am afraid the one I have planted in the half-shady wall as a background to the yard and a half of border devoted to Iris germanica will not show enough gold to deserve its name. The soil is too good, and nearly all its new leaves are green.

The snow has come at an annoying moment, for one thing—my plantation of pardalium Lilies now in making. I have never seen them growing, for about here no one seems to go in for Lily culture, but a coloured picture of the Tiger Lily-shaped blooms, rather more slender and graceful, with the green-tipped petals, all spotted like a newt's stomach, fired me with desire of them, and I ordered a dozen, to receive which we have made a nook at the very far end of the shady border. A Laburnum tree, quite an infant, bends over a little here, but if it interferes I shall have it taken away. The angle is full of Ivy, and the wall at the back is covered with a white rambling Rose, which goes over the top to get sun. I had a hole dug 2 feet deep and about the same square. As the drainage seemed good, we put a little old hotbed manure and fibry loam at the bottom, and then filled in with peat and loam and just a sprinkle of sand. It is never very dry down here, and I have a wee plantation of Trilliums close by, which like the same kind of life as the Panther Lily, and the big old Apple tree will shade them. The pardaliums are to come from my favourite nurseryman, who will charge a little more than advertised prices and pick them out for me. He says that the Lily disease is now rampant among all the Japanese imported bulbs, and advises me to get auratum, &c.,

either home-grown or from Holland, where they are not troubled as yet. The English-grown *auratum* will often grow perennially in the garden, whereas foreign bulbs seldom or never survive their first season, so it is well to be economical here by being extravagant to begin with.

M. L. W.

Bathwick, Bath.

ZYGADENUS MUSCÆTOXICUM. (FLY POISON.)

THE *Zygadenus* are not very widely known to growers of hardy flowers, nor is it surprising that this should be the case. They do not appeal to those who like bright colours, and nurserymen are apt to fight shy of such flowers, as not likely to make profitable stock. Thus they do not often meet the eye of those who visit nurseries or flower shows. They have, however, beauties of their own which commend them to the increasing number of those who can see that bright colour does not constitute the only charm of a flower. Their synonymy is rather difficult to follow, as *Anianthum* and *Anticlea*, with some of the genus *Helonias*, have become merged in *Zygadenus*. They belong to the Lily family, and, with the exception of one species, which is found in Siberia, are natives of North America. They have rhizomatous or bulbous root-stocks, long, linear leaves, and simple or paniced racemes of flowers, which are mostly tinged with green.

The species shown in the accompanying photograph of *Zygadenus muscætoxicum* is generally found under the name of *Anianthum muscætoxicum*, and will probably be more easily procured under the latter name. It is a very ornamental plant with its fine racemes of white flowers slightly tinged with green. It has not the best reputation for hardiness, but I think this is largely owing to its being destroyed by slugs when making its young growth. It is usually advised that it be grown in moist soil, but I think this a mistake in damp districts.

The plant here figured was grown in the garden of Mr. John Maxwell, Maxwelltown, Dumfries. It shows what can be done with hardy flowers in the gardens of country towns. That of Mr. Maxwell is almost surrounded by houses within a short distance, and is quite close to works whose chimney-stacks emit a good deal of smoke daily. This plant was placed in a bed of fresh soil about 2 feet deep,

and composed of sandy peat to which bone-meal was added. The first winter it was protected with a hand-light, and came away well and flowered. The following year it was left unprotected, and produced the flowers shown in the photograph. In the same district several other growers of hardy flowers have also been very successful with this *Zygadenus*, but I have not seen any finer than that of Mr. Maxwell.

S. ARXOTT.

Carsithorn, by Dumfries, N.B.

HOW PLANTS CLIMB.

THE questions naturally arise, why do some plants climb? and how have they acquired their climbing properties? A possible origin or cause may be suggested by overcrowding, when certain weaker plants, utilising the common property of circummutation, and



FLY POISON (ZYGADENUS MUSCÆTOXICUM) IN SCOTLAND.

acquiring a greater degree of sensitiveness, become stem-twiners, leaf-climbers, &c. Circummutation and sensitiveness are universal properties in plants in varying degrees; thus, they both may be seen in germinating roots. The former is exhibited by germinating roots which bend to all points of the compass as they elongate. It is well seen in the terminal shoot of a Fir tree, which, if observed from time to time, will be noticed to have changed its direction, until it finally straightens itself below and remains erect, the apex, however, still continuing to mutate. This shows that there is a certain antagonism between lignification, or the consolidation of tissues, and circummutation, so that as soon as a stem becomes rigid by strengthening itself,

circummutation tends to cease. Consequently, if stems be weak when overcrowded, they might continue to circummutate when growing to greater lengths, and perhaps such conditions might be favourable for an increased sensitiveness, but of this we know nothing.

Climbing lianas in tropical forests often take the forms of ropes and bands, which completely invest the trees in an inextricable network, and a feature which has long been observed is the anomalous nature of the woody stems of such climbers. They belong to several families of plants, and, generally speaking, their peculiarities are characteristic of their families respectively. Thus, in the Malpighiaceae the tendency is to make the wood deeply lobed by excessive growth at certain points on the circumference instead of uniformly all round. Then, as the twining stem becomes twisted, a result of continued growth after the stem has become linked to another, it now exactly resembles, and, indeed, acquires the strength and flexibility of, a stout cable of many strands. It is difficult not to entertain the suspicion that Nature has been following the example of man in making a strong rope out of what would be when isolated a number of weak materials. As the lianas are necessarily subjected to all sorts of strains, the cable-like form is admirably suited to their requirements.

The genus *Bauhinia* of the Leguminosae and its allies are like broad ribbons, as the stem increases only on the ends of a single diameter; but besides this flattening out the ribbon bulges alternately first on one side, then on the other, thus affording great additional strength, while in some cases, like the so-called Monkey's Ladder (*Cantolretus*), wing-like appendages are added to the sides. In others, though the stem may be round, on a cross section being made, the wood is found to take the form of a cross, with large medullary rays of softer tissue intersecting it. However anomalous the wood may be, certain common features prevail, in that there is always a feeble lignification of the wood fibres, with which are associated very many and large vessels or long tubes. The usefulness of these two features is, in the former, excessive flexibility, and in the latter an easy means for water to be conveyed with great rapidity to the enormous lengths over which it must necessarily run to reach the foliage.

English climbers are mostly herbaceous, *Clematis Vitalba*, or the Traveller's Joy, and *Honeysuckle* almost alone possessing anything of the nature of a woody stem; but these, as also a six-year-old stem of the Bittersweet (*Solanum Dulcamara*), exhibit just the same features in being excessively flexible and provided with many vessels.

Climbing plants may be grouped as follows: Those which climb by their stems or twiners, by branches and by leaves. (1) by petioles, (2) by leaf apices, (3) by midribs modified as tendrils, (4) by peduncles and pedicels as tendrils; hook climbers—(1) as branches, (2) as leaflets, (3) as peduncles, (4) as cortical prickles, (5) as epidermal acicular processes; lastly, there are aerial root climbers.

As a great variety of these are described by Mr. Darwin in his work on "Climbing Plants," it is unnecessary to give details here; but what one wishes to suggest, if possible, is the cause of the production of these different structures.

The old idea was that they, as indeed all adaptive structures in both the animal and vegetable kingdoms, were designed, *i.e.*, in anticipation of their use. This view cannot now be entertained, and we must look to the reverse process for their origins. That is to

say, instead of a climbing organ being made before the plant climbed, we now regard it as a result of having, if not actually climbed, of at least of having come in contact with some foreign body. To show the tenability of this view we have first to observe the extreme sensitiveness to contact which exists in plants. Thus, a loop of thread weighing a quarter of a grain is sufficient to cause the petiole of *Clematis montana* to bend; and when an organ has caught a foreign body and remains in contact with it, this sensitiveness compels it to develop extra tissue to an extraordinary degree. Thus, the petiole of *Solanum jasminoides* has three fibro-vascular cords on the lower side, but after clasping, the wood forms a complete zone as in an ordinary stem. Similarly, hooks, if they catch anything, thicken and enlarge out of all proportion to the size attained by non-clasping individuals. Thus one arrives at the conclusion that sensitiveness causes a climbing organ first to twist round its support, and secondly to thicken. From these facts one deduces the origin of the form of the organ, say the tendrils of the Pea. It consists of the midribs only, which are now highly sensitive. As a leaflet acquires this property, so in compensation the power to make the flat blade ceases. An intermediate condition is seen in *Corydalis claviculata*, described and figured by Mr. Darwin, in which the leaflets exist in all stages of passage, from a full-sized and non-sensitive blade to nothing but a highly sensitive midrib.

The course of development, then, seems to be as follows: First, by circumnutational contact is maintained, then supersensitiveness is excited; adaptive growth and development, with alteration of structure, follow, and the climbing organ is finally produced in the course of generations. When once formed, the organ, with its properties, becomes an hereditary feature.

As good illustrations of this last result are the two commonly grown species of *Ampelopsis*. *A. hederacea* (the Virginia Creeper) has a tendril constructed out of a flowering branch. It makes the feeblest attempts to climb round any foreign support; but as soon as the little hook-like extremities of the branchlets of the tendril can catch any roughness in a wall, the effect of contact is soon seen. Not only do they swell into little pads, but secrete an adhesive substance, while the branchlets curl up like irregularly-formed corkserews and thicken greatly. That all this is the actual result of contact is seen by the fact that if any tendrils fail to secure a hold they soon fall off.

In *A. Veitchii*, the Japanese species, the tendrils have their pads already partially developed in an immature condition before any contact is made at all, so that the one species throws light upon the other, in that not only is the power to produce the pads hereditary (as in *A. hederacea*), but the actual result has become anticipatory in the latter species—just as an eye is formed before it can feel the effect of light.

The climbing property, having become inherent in the constitution and hereditary, may be held in abeyance, but be still potentially there. Thus dwarf French Beans make strong stems and have no need to climb; nevertheless, they occasionally throw out a long shoot which twines round any support. *Convolvulus arvensis* (the Lesser Bindweed) climbs up the stems of wheat in a cornfield, but makes no effort to do so when crawling along the ground on a sunny bank. Perhaps the most remarkable case is a tree called Hiptage. This is grown in gardens in Cairo. It has a fair-sized trunk, with thick branches. Suddenly a long

whip-like shoot appears and twines up anything it can come across. As it belongs to the order Malpighiaceae, which has several climbing lianas, it is a tree whose ancestors evidently were accustomed to climb, and has retained the power, though it is quite useless, for the tree is perfectly well able to support itself.

GEORGE HENSLAW.

THE KITCHEN GARDEN. FORCING TURNIPS IN SPRING.

THIS vegetable was not forced much years ago, the chief reason being that when similar treatment was given to it as to other vegetables it failed, and the return was not equal to the time and cost bestowed on the plants. Another difficulty was the want of a variety, as some of our older varieties do not force well under glass, as they run to seed badly if much heat either at the root or otherwise is employed. Turnips are always valuable in the spring, as the roots of last year's crop, no matter how well kept, lose their flavour and grow out badly, so that young sweet roots are in demand at that season. Now is a suitable time to sow under glass for a spring supply. This vegetable forces very quickly, as the seeds in a warm soil germinate so readily. If possible, I advise sowing in frames, as grown thus the plants are so much nearer the glass and suffer less, as they draw badly and come weak and spindly if needing light and air. Free ventilation in favourable weather is an important point in their culture, as any coddling of the plants will probably end in failure.

Many may think the Turnip not worth forcing, but when it can be grown with so little trouble and there is no great choice of vegetables at the season named, they are profitable and most useful. As previously stated, excess of warmth at any time is not advisable. In our own case we rely largely upon fresh leaves as the heating agency for the roots, but bottom-heat is not a necessity if the plants are grown in a frame that is heated so that cold and frost may be kept out. With a mild bottom-heat the seeds germinate more quickly, but there is more care needed afterwards to prevent running to seed. Excellent roots may be grown in a cold frame without fire-heat or manure if a little extra care is taken at the start, covering the glass at night to exclude frost, and closing early in the afternoon in mild weather. Sown at the end of February or earlier, there will be roots fit for use in less than ten weeks, and with the aid of a hot-bed at the start growth is rapid, but care should be taken to prepare the heating materials so that the rank heat and steam are got rid of before sowing the seed. The soil should be light and good and should be made firm when sowing, and when once growth is active, moisture and air should be given freely on all favourable occasions.

I have referred to the newer types as most suitable. Carter's Early Forcing is reliable, and differs from our ordinary roots in being of a long, oval shape, a rapid grower, and less likely to run to seed than the round roots. Another variety is Sutton's White Gem, a beautiful root, oblong in shape and of splendid quality. This I have forced in heat with greater success than most kinds, and few are more valuable for sowing in an early border in the open for first supplies. The Extra Early Milan is the best of the flat-rooting, round varieties, but the quality is not equal to White Gem, and the latter is a specially good variety in light soil in a dry summer. There are some good French varieties; the one named *Naveet a forcee long blanc* is a splendid forcing root more like a large, long Radish than a Turnip. The *Naveet Marteau a collet rouge* is equally good, but needs a little more time; so also is *De Frenense*, a thin, tapering root and very early. All the above force freely, and are reliable when grown under glass or given protection in early borders.

G. WYTHES.

TURNIP CARTER'S NEW EARLY FORCING.

This valuable Turnip, introduced for the first time last year by Messrs. Carter and Co., is the finest variety for frame culture that I know. If sown now and onward on mild hotbeds in frames, splendid young Turnips may be had in a very short time. Its great value over other early kinds which I have tried for this purpose is that it remains fit for use for a much longer period than others. Young Turnips are generally much appreciated in most establishments, so that this when well known should prove a great gain.

F. B.

NEW ZEALAND SPINACH.

This distinct and useful vegetable should find a place in every kitchen garden. Few things will stand a continued spell of dry weather better than this, and its true value must have been proved over and over again during the past dry summers, as it makes a tasty dish and a first-rate substitute for the real Spinach. It thrives best on an open south border where it can enjoy plenty of sunshine, and a light porous soil suits it best. It is very tender, and may either be raised in heat and planted out, or sown in the open towards the end of April. It is a very robust-growing plant, and should be planted or sown in rows 3 feet apart, allowing a distance of 2 feet 6 inches between the plants. A good bed of this is very pleasing to look upon when growing, and also very prolific.

E. BECKETT.

SAGE.

AMONGST herbs, Sage is one of the most frequently asked for. It sometimes happens that a fresh supply is wanted, and must be obtained from someone in the trade, or it may be from seed, as this is a good method to obtain a strong, vigorous stock. In this case, there is a danger of obtaining a bad variety. Two distinct kinds are met with—the red, or narrow-leaved, and the broad, whitish-green-leaved kind. The former is not worth growing compared to the latter. A few years ago, when I took charge of this garden, I had to resort to obtaining a fresh stock from seed, and by so doing used the red, or narrow-leaved. It grew away and was planted out and allowed to make big bushes. Never growing it before, I was not hasty to condemn it. During this time I obtained cuttings of the broad-leaved, rooting them in spring, and we have now an abundant supply. Now I have resolved to destroy the red, as the leaves droop in early winter, except a few at the tips of the shoots. Everyone should strike cuttings occasionally to maintain young stock.

J. CROOK.

CHINESE ARTICHOKE.

(*STACHYS TUBERIFERA*.)

SINCE the introduction of this distinct vegetable about ten years since from North China—it was then looked upon as a mere luxury—it has steadily become more popular, and is now to be found in most well-ordered kitchen gardens, and when properly cooked it forms a most delicious dish during the winter months. I have found it to succeed best on a west border which has been thoroughly trenched and manured the season previous, and the most suitable soil is a light sandy loam. The tubers should be planted during March, allowing a distance of 1 foot between each set and 18 inches from row to row. Plant with a suitably-sized dibber 3 inches deep. Hoe frequently as soon as the growth is above the ground, which will greatly assist the vigour of the plants, as every inducement should be afforded them to produce tubers as large as possible. Frequent drenchings of both clear and manure water in dry weather will also greatly help to this end. By the beginning of October the crop should be fully matured, when they may either be lifted and stored in sand or taken up as required; but sufficient should always be stored by in case of a spell of frost, or they will be found very troublesome to procure.

E. BECKETT.

AN ARTIST'S NOTE-BOOK.

IRIS DANFORDLE.

THIS is one of the most beautiful of all the early Irises; the bright yellow flowers with their quaint green markings at the base of the falls present a most distinct appearance. When established on the rockery with *Iris Bakeriana*, *Histrio*, *persica*, *reticulata*, &c., and those of a similar nature, it forms a perfect picture in early spring. This species is quite hardy, and is a native of Asia



IRIS DANFORDLE.

(From a drawing by H. G. Moon.)

Minor. Though introduced, however, some ten or twelve years ago, it is rarely seen, but of late it has become more plentiful and easily procured; it does best in a light, well-drained sunny position. It was first shown by Mr. R. Wallace, of Colchester, before the Royal Horticultural Society in 1891, when it received a first-class certificate. The drawing was made from a flower selected from Mr. Wallace's group at the last Royal Horticultural Society's meeting in the Drill Hall. These early bulbous Irises are very easily grown in pots for conservatory decoration. The bulbs should be potted in early autumn in light rich soil, plunged in a cold frame, and introduced into a cool greenhouse early in the year; they soon come into flower, and do not want much fire-heat. After flowering, replunge or plant them out if the weather is not too severe.

BRODLEA SELLOWIANA.

This new and distinct bulbous plant has recently been introduced from Uruguay, and has been in flower for some weeks past in a cool greenhouse in Mr. Worsley's garden at Isleworth, and also at Kew. The plant altogether is not more than 6 inches high. It has narrow, deeply-channelled grassy leaves 6 inches to 8 inches long, all more or less recurving, and

with the channelled side turned under, a position somewhat difficult to account for. The blossoms are about $1\frac{3}{4}$ inches across and of a uniform bright golden yellow, with the exception of a green keel on the outer surface of the ovate-acute perianth segments. The flowers are borne singly on the scapes and are sweetly fragrant. Unfortunately, however, they only expand about the middle of the day and when the sun is shining. At other times the segments approach each other, and remain in a more or less closed condition.

Although it has not yet been proved by experience, it is possible that this species may prove as hardy out of doors as the well-known *Triteleia multiflora*, of which it may be taken as a yellow-flowered counterpart. To prove effective it would have to be planted in large patches, and if grown side by side or mixed with *Triteleia multiflora*, would make a charming spring picture in the flower border or on sheltered sunny banks. J. W.

CAMELLIA LADY BULLER.

Not many years ago the Camellia was one of the most popular of garden flowers, but of late years flowers of more graceful form have taken its place. Probably, as fashion is as changeable as the weather, the Camellia will again be grown in English gardens. Certainly such varieties as the one portrayed in the accompanying sketch will help forward to this end. It was shown by Messrs. Sander and Co. with some other kinds, two beautiful flowers being Lady White, white with red splashes, and Lady Roberts, pink with white edge. The variety Lady Buller is a handsome flower, large, with broad petals of a pleasing rose colour.

NOTES FROM SCOTLAND.

A WINTER GARDEN IN GLASGOW.

THE corporation of Glasgow is about to erect another winter garden to be located in the Springburn district of the city. While thus providing the purest of human pleasures for its teeming, toiling people, the second city is at the same time not unmindful of the wants of the gardeners to whose skill and industry the success of its parks and gardens is due. The superintendent, Mr. Whitton, has been entrusted with the formation of a library of books devoted to gardening and pursuits of a kindred nature for the use of his staff. The collection is not being confined to modern books, and already a selection of early works on gardening has been brought together. Glasgow's record in gardening of late years has been altogether praiseworthy.

THE SUPPLY OF YOUNG GARDENERS.

During the last few years the supply of young gardeners in Scotland has barely met the demand, but never previously have they been so scarce as at the present time. At the November term nurserymen were compelled to

advertise for men to send to their clients. The scarcity is due largely to economic causes, there being a constant demand for unskilled labour at big wages in the iron districts. This draws young men away from the garden. But that is not the only cause; a distinctly less number of apprentices than formerly being now kept in gardens also exerts a marked influence on the supply.

APPLE LADY KINLOCH.

MESSRS. R. B. LAIRD & SON inform me that Messrs. Pearson, of Chilwell, have taken over the stock of their Lady Kinloch Apple. This is a late dessert variety of Ribston flavour which was raised in 1878 by Mr. John Brunton, Gilmerton, East Lothian. It received a first-class certificate at the Edinburgh Apple Congress in 1885, and since then has been on trial in gardens in different parts of the country. The late Mr. Dunn, of Dalkeith, thought highly of its qualities, and if, like James Grieve, it proves in the south as satisfactory as that splendid early-eating variety, Scotland will be prouder than ever of her Apples.

THE TRUE WHITE-FLOWERED EAST LOTHIAN STOCK.

This is now difficult to procure. I remember it twenty to thirty years ago, with long compact spikes not unlike the equally scarce Scotch Rocket, when it commenced flowering in July. Now it is a not uncommon experience to be supplied instead with a variety that does not bloom till the second year. Scotch readers who possess the true variety ought to cherish it and secure every seed possible.

"A the months o' the year,
Curse a fine February."



BRODLEA SELLOWIANA.

(From a drawing by H. G. Moon.)

This Scots "saw" will not apply to the present "February," and the outlook for the garden is decidedly gloomy, not only now and in the immediate future when the effects following zero temperatures come to be realised, but still later when the crops that cannot be sown or planted are missed. It is not too late even now to sow emergency crops of Peas, Beans, Lettuces, and Cauliflowers in cutting boxes which, placed in a warm temperature, will germinate quickly, and planted out when sufficiently strong will yield at the usual time, or perhaps earlier. Early Potatoes may also be arranged in flat boxes with the growing eye upwards, and good progress effected while waiting an opportunity to plant in the open.

Even such unlikely subjects as Carrots and Turnips sown now and transplanted into the open ground in April will not only grow, but will prove extremely useful where no means exist of producing them under some protection. Peas and Beans may be sown, the seeds touching each other so that sufficient to provide for a full early crop takes up comparatively little space. They must, of course, not be in any way forced, and if the soil in the boxes is preserved in a somewhat dry condition, the seedlings suffer no check when lined out singly. The others must be sown rather thinly.

WOODLAND AND FOREST.

LOWLAND FIRS.

WHAT a lot of nonsense has been written from time to time about the Scotch Fir producing excellent timber in the Highlands of Scotland only, and being worthless everywhere else. Now-a-days one feels as if they could not believe anything but what they can see and feel themselves. It is a foregone conclusion with most planters that the timber of the Scotch Fir, grown in England or the Lowlands of Scotland, is next to worthless, or at the best only fit for the roughest estate purposes. Hence the reason why the tree has been so sparingly grown in England, while it has been planted to the exclusion of more valuable trees in the Highlands. No doubt climate makes some difference to trees. Where the climate is wet and the sunshine least the texture of the wood of timber trees will be inferior, comparatively, but nowhere in these islands is the difference so great as to convert a good timber tree into one quite worthless. The Germans and the Dutch regard the Scotch Fir as a tree of the plains, as thriving best in warm exposures in mountainous countries; and in Holland, where it is extensively planted in the rising forests there, the plantations are not much above sea level.

In England at one time the Scotch Fir must have been plentiful and of fine quality. Some years ago I saw taken out of an old church tower that was undergoing repairs a beam of Scotch Fir about 15 inches square that must have grown in the neighbourhood some 250 years ago.

It was still sound in the heart, although worm-eaten at the outside. The beam had not been sawn, but only squared by the axe roughly, the bark being still on the corners at some places. In Worcestershire the other day I found examples of the same kind. Some very fine old Scotch Fir trees are to be found in that county resembling in leaf, colour of the bark, and general appearance some of the finest examples to be found in the Highlands of Scotland. Coming in contact with a country builder, I inquired if the timber was ever found in old houses in the neighbourhood, and was assured that he had often removed very old beams of Scotch Fir from old houses, both joists and rafters, and he told me of some old inns where I could see the same for myself. Oak predominates, but the extent to which timber has been used in building in Worcestershire in former times shows that the supply must have been large and run upon till exhausted. In such towns as Droitwich, in villages, farmhouses, and mansions, timber has been extensively employed, in many cases the entire framework of the building, including the walls, consisting of timber, and apparently home-grown Oak and Fir were principally employed. The Scotch Fir is certainly at home in Worcester and Hereford, and timber from 40 to 100 years of age might be a profitable crop.

As might be expected, the Larch is at home in the same places, for where the Scotch Fir will succeed so will the Larch. Both love a well-drained soil and a not too moist climate. There

are some fine Larches in Hereford and neighbouring counties—old trees—and the young plantations up to thirty years of age are the healthiest I have seen for a long time—just at the stage when the disease is usually worst, but quite free from it. The Larch may prefer hills and elevated aspects, but it is also a lowland Fir. For many years back, to my knowledge, some of the large collieries in South Yorkshire have been wholly supplied with Larch from the Lincolnshire flats where the soil is favourable. This is fine red-hearted stuff used for strong props and a variety of purposes in collieries where the Norway props cannot be relied on. Larch is still being planted in Lincolnshire extensively, the Earl of Yarborough being, I believe, one of the most extensive planters—a rather singular thing when one considers that Larch planting is almost being abandoned in its once favourite region, the Highlands of Scotland, for fear of the disease.

Where the Larch and Scotch Fir will grow, the Corsican and Austrian Firs and Japanese Larch will do equally well, but the two first might be the most profitable to plant. In Leicestershire I have known plantations of Larch, on a loose, pebbly soil, in which the annual growth of many young trees exceeded 4 feet. I sent one leading shoot, 4 feet 4 inches long, to a friend in Edinburgh who had been writing about a Douglas Fir shoot not quite so long. I have often seen Larch one-year-old leading shoots 3 feet long, but 4 feet is exceptional, and I think 3 feet is seldom obtained at high elevations.

J. SIMPSON.



A NEW CAMELLIA (LADY BULLER).

(From a drawing by H. G. Moon.)

ORCHIDS.

TWO INTERESTING
CYPRIPEDIUMS.CYPRIPEDIUM SCHLESINGERIANUM VAR. MONS.
DE CURTE.

THE original cross between *C. Boxalli* and *C. insigne* first flowered in the nurseries of Messrs. Seeger and Troppat Dulwich, and was described in THE GARDEN for January 24, 1891, under the name of *C. Schlesingerianum*. Since that time many crosses between *C. Boxalli* and *C. insigne* have flowered. Owing to the many variations of these species, the different offspring have proved still more variable. Many have been considered sufficiently distinct to give names to, but on the Continent, in America, and also in our own country they have been christened without regard to the original name of the *C. Boxalli* and *C. insigne* cross. Many eminent botanists consider the species *C. Boxalli* as a variety of *C. villosum*. I have no doubt that botanically they are correct, but the scientific view and the practical sometimes disagree. Although it may only be regarded by the specialist as a geographical form of *C. villosum*, it is sufficiently distinct for garden purposes to merit a name. *C. Boxalli* and *C. villosum*, it must be remembered, are both used for hybridisation, and distinct features have been derived from the use of each, whilst a larger proportion of superior forms have been procured from the use of *C. Boxalli* than in the case of *C. villosum*. Anyone interested in the results may soon satisfy themselves on this point if the various lists of hybrids are consulted. I will only take the cross between *C. villosum* and *C. insigne*. This has been effected with many of the better forms of *C. insigne*, and resulted in distinct forms of *C. nitens*. But none of the flowers are so finely spotted and of such great substance as those from the *C. Boxalli* and *C. insigne* crosses. The subject of the accompanying illustration, *C. Schlesingerianum* var. *Mons. de Curte*, is derived from the intercrossing of *C. Boxalli* and *C. insigne* Chantini. It was raised in the establishment of M. Vervaeet at Ghent in 1893, and has since been raised in several instances in this country. I recently noticed one of the best forms of this section I have seen in the garden of Mr. W. Cobb at Dulcote, Tunbridge Wells, the dorsal sepal measuring nearly 3 inches across. In these, as in most *Cypripedium* hybrids, there is considerable variation. In most of the forms the dorsal sepal is broad and of fine substance, white at the top with some purple spottings, the basal portion being green, sometimes suffused with brown and thickly covered with large dark brown spots. The finely-shaped petals have a greenish yellow ground colour suffused with brown and

sometimes spotted with a darker shade. The highly polished lip is deep brown, shading to greenish yellow. These hybrids retain the free-flowering characteristics of the parent species, and are also of vigorous constitution, whilst they are useful for their winter-flowering character, lasting a long time in perfection. The plants can be easily accommodated under cool house treatment, where a temperature of 50° is maintained at night during the winter months of the year. The flowers are altogether finer when grown under cool conditions. Our illustration is taken from a photograph kindly sent by Mr. G. W. Law-Schofield, Newhall Hey, Rawtenstall, taken by him from a plant in his own collection, Mr. Law-Schofield having one of the finest collections of *Cypripediums* and other Orchids in the north of England.

CYPRIPEDIUM MONARCH.

This interesting hybrid is the result of intercrossing *C. Spicerianum* and *C. Lathamianum*, the latter being a hybrid derived from *C. Spicerianum* and *C. villosum*, and is one of the few successful hybrids that have been procured from the use of *C. villosum*. As might be expected, *C. Monarch* has much of the character of *C. Spicerianum*. The fine-shaped dorsal sepal is white, suffused slightly with rose, with a small area of green at the base. The characteristic brown-purple band of the *C. Spicerianum* hybrids through the centre is most pronounced. The fine-shaped petals are greenish yellow suffused with brown, the highly-polished lip deep yellow, with a light suffusion of brown. This photograph was also kindly sent by Mr. G. W. Law-Schofield. H. J. CURRYAN.

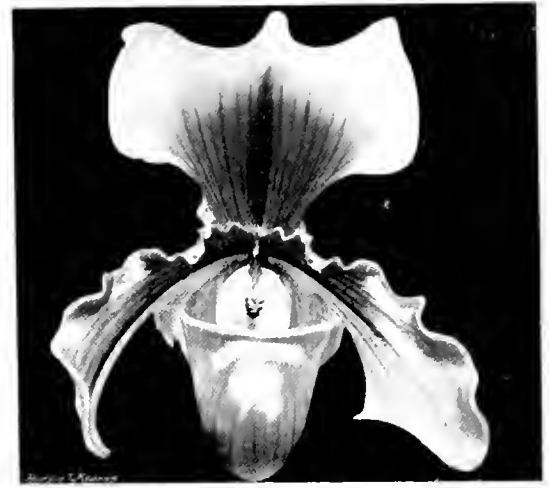
THE FLOWER GARDEN.

CARNATION GROWING IN
AMERICA.*

SO extensively is the Carnation grown in the United States, and to such a state of perfection has its cultivation developed, that a few remarks on the system there practised may be of interest perhaps of service—to British growers of that beautiful flower.

The American Carnation varieties are, of course, descended from plants imported from Europe, though they have developed into a perfect American type. The cultivation there does not date far back, for only during the last twenty years has it been really pushed. Judging from the accounts older growers give of the quality of blooms produced fifteen years ago, one marvels at the rapidity with which improvements have been effected. The main feature in the culture is the planting out on elevated stages. These stages are so constructed as to hold 4 inches to 4½ inches of soil, and are of a width and elevation which allow the work to be performed comfortably. The houses are of a light and cheap construction, with plenty of top and, where circumstances allow, side ventilation. The system of heating is by means of hot water or steam, the pipes being as far as possible laid under the stages.

There is only one method practised for the propagation of the stock, and that is by cuttings; layering is never resorted to in America. Propagation commences in January, and the cuttings are taken from the flowering plants. At the base of each flower-stem there are generally to be found plenty of side shoots. At intervals the houses are gone over and some of these shoots are removed, only a few being taken from each plant lest it suffer. The cuttings are broken out sideways so as not to break the flattened base of the shoot. The length of the cutting when



HYBRID CYPRIPEDIUM MONARCH.

taken varies from 2 inches to 4 inches; nothing is cut off unless the leaves be very long, when they are shortened. The small leaves at the base are not interfered with. It will thus be seen that the preparation of cuttings is a very simple process.

The cuttings are struck in sharp, clean sand, on a stage similar to those on which the plants are growing, but placed closer to the glass. No bottom-heat is afforded, and the same temperature is maintained as for the flowering plants, perhaps rather higher (55° to 60° by day, and 50° to 55° at night). They are kept on the dry side, and shaded from the sun with newspapers, and in this way root in about four weeks.

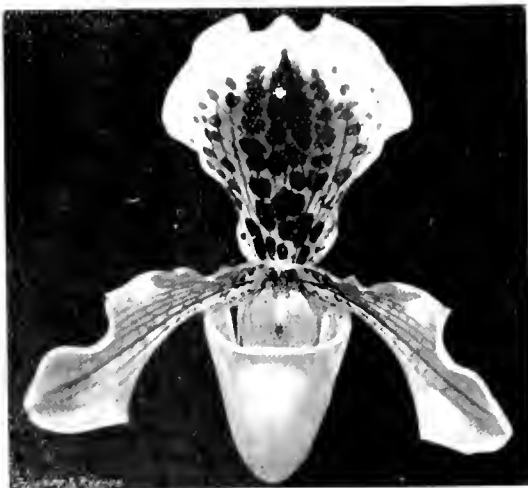
When ready the cuttings are planted out in the houses somewhat closely together, for which purpose one of the flowering stages is cleared off. In a large nursery there will by this time always be found one or several stages which for some reason do not pay well. Such a stage is chosen; all the old soil is cleared out and fresh brought in, a depth of 2 inches being ample. Any light rich soil may be used; if necessary, it is fertilised with artificial manure. A temperature of 50° by day and 45° at night is generally recommended. The beds are kept rather dry. It is, of course, impossible to water without wetting the leaves, and as this is an evil, water must be given seldom and thoroughly. Too much water is likely to produce certain diseases.

The next stage in its cultivation is the planting out in the field. Of late years a tendency has shown itself to do away with the field culture altogether; in fact, in many of the best nurseries the plants never leave the houses. To this indoor culture we shall again refer more fully.

The field in which the Carnations are grown in summer has been richly manured the year before. A rich loam with plenty of natural drainage is best, this being a warm soil, and, therefore, accessible early in the spring, and not likely to become too wet if the summer be rainy. It cannot be too strongly pointed out that too much water is the greatest evil in Carnation culture. The soil may be as dry as powder several inches down, but this does not kill the plants; it only stops the growth; whilst superfluous water produces diseases which cannot be cured.

The planting out near New York commences about the 10th of April, as slight frost does not harm the Carnations in the least. The work is extremely simple; the ground is ploughed, harrowed, and roughly levelled with a rake. The plants, which are lifted in the houses with as little disturbance to the roots as possible, are then placed 10 inches to 12 inches apart both ways. No more land is prepared at one time than can be planted the same day, the idea being to keep the natural moisture in the ground; no watering after planting is then necessary.

After planting, the field does not take much working other than general cleaning. The topping



HYBRID CYPRIPEDIUM MONS. DE CURTE.

* Carnation Growing in America. An essay read before the Kew Gardeners' Mutual Improvement Society by A. E. Cassie.

of the plants is most important. Three topplings are generally required, of which the first is often done in the houses. The aim is to form a short, sturdy plant with many branches near the base. All flower-shoots are, of course, removed. Watering is seldom resorted to in the field, as special arrangements would have to be made, or it would prove too expensive. Much speculation has been devoted to this question, and different systems of irrigation have been proposed, but as far as I know none have proved satisfactory in practice. The summer is often very hot and dry, the night temperature near New York being sometimes for a week together not below 75°. The Carnations under such conditions make no growth, not so much from lack of water as from excess of heat, and if one waters the plants during such a hot period, little benefit accrues. In August and September the nights are cooler, and the plants benefit from a rich dew and progress rapidly even when the days are equally hot and dry.

When indoor culture is adopted, the plants, instead of being placed in the field in spring, are replanted directly in the houses where they are to flower. This system has many advantages: firstly, the perfect control of the water supply which is possible; and secondly, the saving of the autumn shifting, which costs much labour and must necessarily check the plants. One disadvantage is that the old stock must be cleared out of the houses early so as to have them ready for the young plants in May or June, which means the loss of the summer crop. The plants which have been flowering all the winter are by no means exhausted, and when carefully attended to they may flower profusely all the summer, and at times fetch very good prices, as first-class flowers are not produced in the open. Another disadvantage worth mentioning is that the plants by this system will have to remain all the winter in the same soil in which they have been growing during the summer, thus requiring more feeding.

We return to the plants in the field. The housing of these is carried out in August and September. The houses are cleaned thoroughly, whitewashed and painted, and fresh soil is placed on the stages. Good loam mixed with manure the preceding winter or autumn, and supplied with some bone-meal and chemical manure, is generally recommended. It is very important that all natural manures should be thoroughly decayed, as the Carnation does not develop healthily where fresh manure is present in the soil.

When the plants are lifted in the field all the soil is removed from the roots, this operation being best performed with a digging fork, one man lifting the plant whilst another gently shakes the soil off. A few years back the general practice was to shift the plants with a ball, but this method is now entirely abandoned. It does not pay to carry a quantity of old exhausted soil inside. If the houses be well shaded, in the course of a few days the plants look as if they had never been disturbed. In the newly-planted houses great care is taken as to watering and frequent syringing is practised.

The first full crop of flowers is borne about twelve weeks after planting, although many flowers may be cut even a month after. As the plants make their best growth in the field in August and September, late planting has its great advantages, and planting in the latter part of September gives the best crop for Christmas. No good prices can be expected for Carnations before the Chrysanthemums are over.

Attention in winter is simple. When days get shorter all syringing is discontinued, and the water, which is given with the hose, is carefully applied between the rows. The temperature is kept at 50° by day and 45° at night. It is a good plan even in mild weather to keep the fire going and to open the ventilators, as the Carnation likes a dry atmosphere, and fresh air tends to open the flowers well.

Most varieties need some support, which is always given by means of galvanised wire rings placed one over the other, and attached to stakes in the soil. The use of these wire rings is much preferable to tying with strings; it gives a tidier appearance, and, whilst keeping the plants together,

permits of a free natural growth, and, what is an important point, makes the cutting of flowers easy. The wires are, of course, rather more expensive in the first instance, the best costing 27 dols. per 1000, but they last seven to eight years and are extremely easy to put up.

A very important item is the feeding, especially where the plants have been grown on the stages all the summer. To apply liquid manure with a watering-pot would not pay, as it would take too much time. It is generally distributed from a main tank with a steam pump and hose. The stages are frequently top-dressed, a mixture of natural manure, wood ashes and chemical manure being used.

One of the most important operations is the dis-budding, as each flower-stem can only develop one good bloom; all the other buds must be removed early. It is work which, of course, takes much time, but it pays to do it. It does not require any special knowledge or judgment, as it is always the top bud which is the best; in large nurseries girls are often employed for this work.

Anyone who has worked among Carnations will have noticed the bursting of the calyx which so often occurs and makes the flowers unsaleable. Some varieties are more liable to this bursting than others. When selecting seedlings one may at once throw out all those which show short thick buds, as these always burst and are absolutely valueless, no matter how fine the colour may be. But it is not in all cases the structure of the bud which controls the calyx-bursting, and in the good established varieties the percentage of bursting calyces varies greatly from day to day. It is evident that exterior conditions, chiefly temperature and light, have great influence in this respect. I believe that sudden change of temperature is one of the main causes, as also is lack of light. On dark days, and when the houses have been covered with snow for a day or two, almost all the calyces burst. Excess of moisture in the air may also play a part.

In American nurseries the Carnation is often used to replace the Chrysanthemum when these have done flowering, the latter often being grown on similar stages to those used for Carnations. At this time of the year it is, of course, a question of great economic importance to have a continuous crop of flowers from the houses. For this purpose the Carnations are, in the beginning of October, planted in boxes with removable sides, and of a length and depth which allow of their being fitted into the benches. These boxes may be kept in cold frames. When the Chrysanthemums have done their duty they are cleared out and all the soil removed from the stages, and the Carnations are then easily fitted into their place, and in a short time give a fine crop.

The gathering of the flowers is always done some twenty-four hours before they are sent to the city. The transport is generally by railway, as the nurseries are mostly situated far away from their market.

The number of varieties is very large, and is every year being increased through the introduction of many more or less valuable kinds. Few of them stay in cultivation for any length of time, as they soon begin to deteriorate, or when attacked by diseases prove absolutely unable to resist. The deterioration is shown in the decreasing size of the flowers, the bursting of the calyces, and the decrease in general vitality. A good deal has been written in the professional press about the possible causes of the deterioration, but I have never seen anything like a satisfactory explanation. Most experts seem to believe that over-propagation is the main cause. The Carnation is very sensible to changes of environment, climate, and soil. Because a variety does well in one locality, it does not follow that with similar treatment it will prove satisfactory in another.

The Carnation, as are all other cultivated plants, is subject to a great many animal pests and fungoid diseases. Mice, slugs, red spider, and green fly need no mentioning. Of fungoid diseases, black spot, rust, and dry stem rot are most destructive. When taken in time black spot and rust can easily be cured by the application of Bordeaux mixture.

By far the most destructive disease is the dry

stem rot, which every year causes thousands and thousands of dollars' loss to the nurserymen. Most frequently it appears in the houses shortly after the planting in autumn.

The first visible sign of the disease is a fine reddish stripe running along one side of the stem and extending to one or several branches. This marking, the cause of which must evidently be sought in the tissue next to the epidermis, becomes more and more prominent, and the leaves commence to die off till the plant becomes entirely dry and withered, the stem ultimately breaking off at the root-stock. On examination the tissues here are found to be quite destroyed, and only a mass of dry fibres remains; the roots, however, seem unaffected.

The plants may be attacked by this disease both when planted in the houses and when in the field. A few individuals scattered in the beds may become affected and die slowly, or large lots may die off with astonishing rapidity. The disease seems to get better hold when the beds have been lately treated with organic manure; virgin soil fertilised with chemical manure seems to be safe. Again, plants placed a little too deep in the soil are often attacked before the surrounding plants, and such individuals regularly succumb to stem rot even where it does not appear on those properly planted in the same bed. Superfluous moisture also seems to play an important part. I do not say that this simple system results in the very highest development of plant and of flower in themselves.

When cultivating plants in pots one has without doubt far better control of the wants of each individual. Even with as many as a thousand plants in a house one can, to a certain extent, give each a special treatment according to its individual requirements. On the other hand, when one has them all in the same soil they must needs all be treated in the same way; the requirements of each individual cannot be considered. For raising specimen plants or fancy flowers there is no doubt that pots are indispensable, but there is never a large and permanent market for such stock, and it is difficult to make it pay.

As a paying industry I believe the American style of producing cut flowers from plants planted out in the houses and flowered at a low temperature, giving a continuous supply all through the winter, is a decidedly good one. I may add that the same system is practised in the case of Roses, Chrysanthemums, Mignonette, Violets, and, in fact, all florist's flowers except bulbs, and the flowers sold in New York are in no way inferior to those sold here. Most likely the American style will in time be practised also in Europe; in fact, in Southern Germany many large Carnation nurseries are already carried on on American principles.

LILIUM SPECIOSUM IN POTS.

WHERE a greenhouse or conservatory has to be kept gay at all seasons the different forms of this Lily are very useful, as they bloom just at the time when many of the summer occupants of such structures have lost their freshness, and a change is then particularly welcome. With the bulbs of this Lily now arriving from Japan in such good condition this is a good time to pot them for greenhouse decoration, though those that have been kept over from flowering last year should have been potted long ago. These newly-arrived bulbs from Japan can be depended upon to flower well, whether potted singly in 6-inch pots or grouped as fancy dictates in pots of larger size. A mixture of two-thirds loam to one-third leaf-mould or well-decayed manure and sand will suit them well. After potting they should be plunged in ashes or cocoa-nut refuse in the open ground, and, unless the weather is exceptionally severe, no covering will be needed. As the season advances, the pots get full of roots and the flower-buds develop, when occasional doses of liquid manure will be of service. Just before the blossoms expand they should be taken into the greenhouse, where for a month or so they will form a pleasing feature. A good feature of this Lily is that aphides rarely give any trouble, while the scent is not overpowering, as is that of many Lilies.

H. P.

WORKERS AMONG THE FLOWERS.

MR. WILLIAM PAUL.

NO worker in the world of flowers so richly merits a place in our gallery of notable horticulturists as Mr. William Paul, the veteran rosarian of Waltham Cross. He is one of the leading Rose raisers and growers of the present day, and in his beautiful nursery, stretching from the high street of the town to the Great Eastern Railway, masses of Roses—new, old, and seedlings—perfume the air through the summer and early autumn months. It is a lesson of no small value to wander amongst the Roses upon a sunny July day, when the nursery is coloured with the flowers of a hundred kinds, here the rich apricot of W. A. Richardson, there the tender Mme. Hoste, whilst by the edge of grass walks climbing Roses tumble in delightful profusion over pillar and arch.

The work of Mr. William Paul is revealed in all this glorious mass of England's queenly flower, for here is the record of a life well spent for horticulture and in the allied branches of this industry. For upwards of fifty years this renowned rosarian has lived and worked amongst Roses, having commenced business with his father, the late Mr. A. Paul, whom he ultimately succeeded. To enter into details concerning Mr. Paul's life is impossible on this occasion, but we know that some reference to his work will be interesting to readers of *THE GARDEN*.

Mr. Paul's name is closely associated with raising and introducing new plants, not of the Rose only, but of zonal Pelargoniums, Hollyhocks, Phloxes, Camellias, and other flowers; and with regard to fruits and hardy trees and shrubs, collections of unusual interest and importance have been formed at Waltham to add to the cosmopolitan nature of the nurseries. The writer enjoys a visit to Waltham Cross more thoroughly in the fulness of Rose-time than at any other season of the year, and of course this is natural. There is something satisfying in the burdens of odorous blossom. Some new Rose, perhaps, is flowering for the first time, and one learns much about its habit and freedom; or a large group of one of Mr. Paul's own seedlings is in beauty, maybe the delicate lemon Tea Medea, the varied-lined Corinna, the China Rose Duke of York, Queen Mab, or one of the latest of all Tea-scented Roses, Enchantress, which has already entered the gardens of all ardent rosarians.

But we are wandering from the path. It is Mr. Paul himself that must be written of now, and the good work he has accomplished for English gardening through a long and happy life. Of his success as a raiser we have already spoken, but Mr. Paul possesses considerable literary gifts. A list of excellent works has been written by him at various periods of his life. "The Rose Garden" was first published in 1848, and this has reached its ninth edition, evidence of its popularity and usefulness as a treatise upon the history and culture of the flower so entwined around the life of the author. Other books upon horticultural subjects have been written, and various gardening journals

have from time to time received the benefit of his wide experience and mature judgment. Much could be written of the papers read before the Society of Arts, the Royal Society of Literature, the British Association for the Advancement of Science, the Royal Horticultural Society, and kindred institutions, as the subjects are varied, interesting, and instructive, but the principal lectures and papers are embodied in "Contributions to Horticultural Literature, 1843-1892," from his busy pen.

In 1858 the National Rose Society was formed, and that year marked an epoch surely in the history of horticulture in Britain. Among those who joined round the Den of Rochester in starting this interesting association of Rose amateurs and professional growers was our friend. The year after, whilst holding part

and long established in our gardens forming a group of flowers of wonderful colour, and drenching with their perfume the spacious tent.

With such a record it is not surprising to know that Mr. Paul is a Fellow of the Linnean Society, and one of the oldest Fellows of the R.H.S., besides a member of many other associations at home and abroad.

It is interesting to read in his contributions to horticultural literature an article written to *The Florist* of May, 1869. In those days many flowers were in the hands of men who considered that floricultural beauty was displayed in petals patted upon green boxes at the exhibitions. This was distorting Nature in no undecided fashion, and to write against such a travesty of everything that was beautiful in

the flower was to incur the heavy wrath of the school of florists of that day. In his article called "Floriculture and Millinery," Mr. Paul writes the following words, which may be applied sometimes even in these days of supposed greater refinement in the use of the flowers of garden and field: "We are free to admit that a plant must be tied up, and this is better done neatly and with taste than in a careless or bungling manner. Flowers, too, should be so placed in their stands that they may be well seen, and the colours should be so assorted and arranged that they may enhance rather than detract from the beauty and effect of its neighbour. Thus far we concede, may, consider necessary and commendable. But the flattening of Pansies by pressure to meet the florist's canon that Pansies should be flat, the gumming and brushing of the petals of Pelargoniums, the artificial packing of the petals of Carnations, the building up of Dahlias, the pinning of Hyacinths—all these practices are in our judgment of questionable taste, and of even more questionable honesty. By the use of them we may approach more nearly to the florist's ideal, but we are reaching that ideal by trickery and deception rather than by horticultural skill and honest labour." This is pleasant reading.

We might write more about this great rosarian, but the descriptions of new Roses from time to time in our pages ever remind us of his work. It is our earnest hope that he may be spared many years to labour amongst the flowers which have scored his path through life.



MR. WILLIAM PAUL.

of the original nurseries, he founded the now world-famous establishment in the quiet Hertfordshire town. Those who remember the International Horticultural Exhibition in London in 1866 will recall the glorious Roses from Waltham Cross, flowers which won many prizes for their freshness and beauty. This was probably the most important exhibition of plants, flowers and fruit ever held in these isles, and we shall not easily forget the rare evergreens and plants from Waltham Cross at the special exhibitions at Regent's Park (Royal Botanic Society), the Crystal Palace, and elsewhere, a reputation that has been strengthened by the displays of recent years. The exhibit of pot Roses at the Temple show of the Royal Horticultural Society last year was an instructive representation of the Rose as a pot plant and otherwise, varieties modern

THE ROSE GARDEN.

ROSA RUGOSA.

THIS charming plant has given me so much pleasure and satisfaction in its growth and beauty of late years, that I have often wondered whether its many good qualities were as widely known and appreciated as they deserve. It is, of course, well known to florists, having been introduced very many years ago from the northern portion of Japan, I think. But there is reason to believe that it has never been planted by amateurs nor used to any extent in the adornment of either public or private grounds in this country at least. Amid all the puny and tender hybrids in the boundless

realm of the Rose, what a treasure is this most beautiful and vigorous shrub. With bugs, mildew, insects and fungi of every name and nature on every side, there stands the rugosa, unassailed and unassailable, luxuriant and beautiful in leaf and flower. What a vigorous plant it is with its wealth of leafage, dark green, glossy, crumpled and leathery. What a profuse bloomer, early, late and continuous, scarcely ever without flowers in the growing season. And such attractive Roses as they are: lively rosy-crimson petals, with their abundant bright orange anthers. I scarcely know of a more attractive corolla than that of the rugosa rubra Rose. Mine are large, often 2 inches in diameter. Then, too, what a beauti-

grow anywhere under any conditions. The red globular fruit which sometimes succeeds the flower also adds to the decorative value of the plant. It is said to grow true from the seed contained in these hips or pods, though a better and quicker way to propagate it is by suckers and off-shoots, which are freely produced. What a charming hedge it would make impenetrable by reason of its abundant thorns, and beautiful in leaf, flower and fruit at all times.

This Rose seems to have been introduced into European countries from Japan nearly a hundred years ago. Professor Lindley has an etching of the plant in his "Rosarium Monographia," published eighty years ago, although

original plant undiluted in my garden. If I am correctly informed, the first named hybrid of this kind was produced in this country by my friend Elbert S. Carman, formerly for many years editor of the *Rural New Yorker*. This he named Agnes Emily Carman, in honour of his wife. That is now over twelve years ago. He said it was a cross with Harrison's Yellow as the male parent. Even then he had some sixty or more similar crosses with various Hybrid Perpetuals and Teas. They were a strange progeny in appearance, and he found that very few of the rugosa characteristics were reproduced in any of them. The Carman hybrid was sent out soon afterwards to some extent and elicited considerable praise for



THE ROSE WALK AT WALTHAM CROSS.

ful setting it has, surrounded by a crowded cluster of pointed buds in various stages of maturity, some just bursting through the perianth, with bits of colour here and there, the whole nestling in a close bunch of fresh young leaves. Verily a bonnet in itself is just one blooming sprig of this charming Rose—Nature's arrangement. How much of Nature there is in this decorative shrub—its flowers and buds and its simple, robust habit. I like it the more for this reason: all untouched by the botanical skill of man, and devoid of abnormal features so prevalent in the modern floral world—just a single Rose with five large petals and delightful fragrance. Nature makes it all, and we have only to plant and admire it.

the picture is crudely drawn and far from accurate. Just how long it has been grown in America I do not know, but it is rarely met with even now in the average garden. Who will give its history, with the facts regarding the time and manner of its introduction so far as known? I feel sure that among the many well-informed gardeners and florists reached by THE GARDEN there are those who can give this information.

The species has been found valuable as a subject for crossing with other sorts having less constitutional vigour. There are now, perhaps, some twenty or thirty such hybrids which have been dignified with names and a host of others on-coming. But while conceding the value of these productions to the commercial florist, as a true lover of Nature I must prefer the

awhile. But later accounts of it were less favourable, and now little is heard of it. The next hybrid of this class to achieve name and notice was, I think, Mme. Georges Bruant; this came out the year following, if I mistake not, and it attracted much attention also at first on your side of the water where it was produced. Afterwards came Mrs. Anthony Waterer, a very fragrant red flower, and this was followed by several others; but so far as I know none of these hybrids have ever been grown to any extent, although Mme. Bruant, a pure white semi-double Rose, and the Carman crimson, which is also semi-double, are now listed by our leading growers here. The former is a cross between rugosa alba and the Tea Rose Sombreuil. It has the delicious fragrance of both parents and some of the desirable features

It is in all respects ironclad, and it will

of the rugosa stock. Both ought to prove valuable to growers if as hardy as they seem, because of their greater endurance by reason of being partly double. H. HENDRICKS,
Kingston, New York, U.S.A.

WANTED SOME GOOD DARK COLOURED ROSES.

BECAUSE Hybrid Teas and Tea-scented Roses are popular and deservedly so it appears that raisers are concentrating all their efforts towards increasing the already prodigious collection of these and kindred classes. I think I can safely affirm that a good very dark Rose has not appeared for some years. The various groups, if carefully cross-fertilised, would produce some worthy additions to the at present meagre collection of real dark Roses. Everyone loves a rich dark-coloured Rose, but so many are very disappointing. Either their flowers burn, fade off to purple, or refuse to expand, and in addition most of them are very shy-flowering. We want a Rose with the form of Mrs. W. J. Grant (perhaps a little more double) and the rich intense colour of a Victor Hugo, Xavier Olibo, or Charles Lefebvre. Some are expecting great things from the new Rose Liberty. Unfortunately, Roses that are good under glass do not always behave well outdoors. May we then entreat our raisers at home and abroad—and especially abroad, where their opportunities are so manifold to give this matter careful consideration. It is only reasonable to presume that if chance seedlings gave us what we already possess in this direction, that thoughtful cross-fertilisation will achieve even better results, especially as dark Roses seed so freely.

PHILOMILL.

STANDARD TEA ROSES.

MR. C. J. GRAHAME, who is as a writer on Roses invariably trenchant, may be left to the mercy of that older writer on the subject, Mr. D. T. Fish. But when he tells the readers of THE GARDEN that he has disposed of all his dwarf Teas and grows only standards apparently because dwarf Teas are so tender and subject to injury by frost, for no other reason is given, he naturally startles all those whose faith in dwarf Teas or standards, either for garden purposes or for the production of exhibition flowers, is great. But Mr. Grahame must be assumed to know his own business best, and if he prefers standards to dwarfs, no doubt he can justify his choice. I trust he will give full details of the way in which he protects his numerous standard Teas. He tells us he has 3000. Verily, what a spectacle for the gods all the winter must those standards be if their heads be tied up close and enveloped in Fern, or hay, or straw, or some other covering. When dwarf Teas are grown, nothing is simpler or less offensive to the eye than having them earthed up, for ridges of soil are even more picturesque than are flat areas, and what protection is there artificially furnished that is so efficient as soil, how easily added, how easily removed? Then how plump and fresh is the wood that has thus been buried when it is exposed to the light and air in the spring. What good growths result when the shoots are hard cut back to the submerged and healthy wood. After all, there can be little doubt but that Rose wood, Teas especially, is soft or hard according to the season that has produced it, hot summers producing hard wood, and wet summers soft, sappy wood, and hard winters more commonly follow on cold summers than on wet ones. D.

Lachenalia Nelsonii from Gunton Park. We have received a boxful of noble spikes of this Lachenalia from Mr. Allan with the following note: "These fine spikes of bloom were grown from medium-sized bulbs. The largest bulbs do not produce the finest flowers, but have a tendency to split, producing more foliage and flower-stems, but not so fine individually. Just now we have a very great display of them. For a large conservatory in February that has to be kept bright with flowers this Lachenalia is unsurpassed. It may be grown in pots, baskets, boxes, or pans, and, however grown, is most attractive and pleasing."

CORRESPONDENCE.

ALPINE PRIMULAS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I am desirous of growing some of the hardy Primulas on my rockery this year, but I am not quite clear as to the soil they should have. I enclose you a photograph of the portion of the rockery which I think will suit them best; it faces nearly due north and is shaded from mid-day sun. If you can give me a few hints I shall be much obliged. The present soil of the rockery is the best loam I could procure. The rocks are yellow sandstone from Norfolk. I could incorporate peat and sand with the soil if necessary. The following are some of the Primulas I have on order: *Capitata*, *denticulata*, *cashmeriana*, *japonica*, *luteola*, *marginata*, *nivalis*, *rosea*, *Sieboldii* in variety, *sikkimensis*, *viscosa major*, and *verticillata*. In any of the above are not worth growing, will you kindly say so? H. E. MOLYNEUX.

Bulham.

[So far as we can gather from our correspondent's description as well as the photograph, we incline to the opinion that the position is in many respects a good one. Many who set to work to grow these and similar plants too often erroneously assume that because they are alpine, a position not only dry, but one embracing only the merest scrap of soil is the one thing at which to aim. To act on this principle is courting failure. Not only are many alpine great rooters, though of small stature, but they delight to send down their root-fibres to great depths in search of the cool uniform conditions that are so much to them and go so far to make them succeed. We trust, therefore, provision has been made in this case for their needs, and we cannot too strongly emphasise this point. So many small rockeries, by ill-construction become so many veritable death-beds, that we cannot refrain from a word of warning. We have known good soil simply deposited on a bottom as hard as a road, spread out a few inches deep, with a few stones interspersed, regarded as a fitting home for choice alpine that would have been safer—infinity safer—and would have stood greater chances of success had they been planted on an ordinary level soil bed. It is not so much a question of the quality of the loam as the amount of it at disposal and the position. Deep fissures or crevices are frequently more suitable than more ample superficial space. Indeed, it should be borne in mind that a niche 18 inches deep and perhaps only 9 inches across would accommodate several little tufts of any of the Primulas of the *viscosa* group or nearly allied forms, and by planting tightly against the sides of the stones, that one essential to success is conceded at the very outset.

The soil may be composed chiefly of loam, with an admixture of clippings of sandstone, grit, and charcoal. If manure is employed, it should be old, so that it will readily pass a ½-inch sieve. Peat is not at all necessary for any of the Primulas of our acquaintance. Taking your list in order: *P. capitata* should be planted in the above mixture without manure, and in a cool spot where a stone block would afford shelter. *P. denticulata* and *P. cashmeriana* require similar care, and thrive best in a deep bed of rich soil, the strong fleshy roots descending quite 2 feet; give partial shade and moisture freely in the growing season. *P. japonica* is never truly happy unless its toes are in water, or, what is next best, some shade and a strong moisture-holding and rich soil. In the former position we have had its giant rosettes of leaves 2½ feet across, and whorls of crimson blossoms in proportion. *P. luteola* is a lover of rich loam with plenty of grit. *P. marginata* often planted in open spots is far happier when snugly nesting at the base of a stone block, while *P. nivalis*, assuming *P. viscosa nivalis* is the intended plant—and *P. viscosa major* will be happy in similar places. *P. rosea* is a moisture-loving species, but its success with much moisture in England is quite conditional. Some of the grandest clumps we have seen were grown in constant shade, that of a 10-feet wall, and in deep,

very sandy soil, liberally dressed with old cow manure. Plants in quite a wet position have failed to reach one-third the size. It is easy to grow and vigorous. *P. Sieboldii* may be treated in exactly the same way, only it should be moved when too crowded. With liberal treatment these attain a diameter of 18 inches and are superb. *P. sikkimensis* must be regarded as a semi-bog plant and a biennial. It may not always be strictly the latter, but it must be this if you wish to see a spike worthy of the lovely class it represents. *P. verticillata* is an Abyssinian species, and too tender for the outside garden. It will be necessary to raise *P. capitata* from seeds to keep up a succession of flowering plants. We would also suggest raising from seed such as *P. denticulata*, *cashmeriana*, *japonica*, and *rosea*, particularly to enable you another year—or even this season if the plants are large enough—to plant small colonies of each rather than solitary examples. The plants should be secured without further loss of time.]

PROPAGATING POLYGONUM BALD-SCHUANCICUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I have been interested in this charming plant since the day some two or three years ago when I first saw it flowering so grandly and profusely in the herbaceous garden at Kew. After reading the note on page 89 of THE GARDEN and the quotation from *Le Jardin* concerning its propagation, I am led to suggest the following: I notice it is suggested in *Le Jardin* to take the eyes for propagating after the manner of Vine eyes. In this species of Polygonum, however, many of the eyes or lateral buds do not remain dormant, as in the Vine, but spring into lateral growth quite freely, such growth resulting in breaks of 1 inch to 3 inches long. Now, if the single eye or bud of this plant will, as in the Vine, both emit root and growth when detached, it would appear feasible that the young shoots to which I refer, if taken from the parent stem with the old-fashioned heel attached, would root in even greater proportion than the older and certainly more wiry wood. This wiriness of stem is a point of great difference as compared with the Vine eye, usually of a prominent and well-matured nature, quite apart from the material support which the eye must receive from the wood itself. In the Polygonum there is no such store of elaborated sap to fall back upon. Still, if the stems root at all when detached, as is apparent by the note referred to, it is more than likely in our own climate that success may be obtained by layering the stems after the method of the Lapageria, either by the ordinary method of layering, or taking out a small V-shaped niche on the inner side of the stem quite close to and a little below the joint. By placing a few boards lengthwise, and filling in 6 inches deep of sand or this and cocoa-nut fibre in equal parts, the rooting would be quicker than in the much colder soil. A spare light or some squares of glass should also be employed for throwing off wet and for other obvious reasons. For choice I would prefer September for the operation either by cuttings or layers, yet in so exceptional a case there is no reason for not doing the same now, and also for treating the stems as in the French case. In this latter, the time selected would also appear to have been late autumn or winter, so that little time is lost. A simpler plan for those having good plants, at least for the time being, would be to train the stems thinly against a warm wall and endeavour to obtain good seeds: even if by fertilising the labour would be well repaid. The plant is such a charming addition to good climbers, that no effort should be spared to secure the supplies for which many owners of gardens are only now patiently waiting.

Hampton Hill.

E. H. JENKINS.

EARLY FLOWERS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, A box of flowers from the garden at Wisley is, I think, worth sending you on account of the early frises. We treated some of the plants to a cold frame, which was fortunate with the late

weather. Iris Vartani, I. Histrion, I. histrioides, I. Danfordiae, I. alata, I. Bakeriana. The snow has left its mark on Oakwood, big boughs of Rhododendrons having been broken off. The worst sufferers are a large fine Tree Ivy and a tall double Furze, which are smashed. G. F. WILSON.

[With this note came some charming flowers, among them the finest-coloured *Anemone blanda* we ever saw; also *Hepaticas*, *Lent Hellebores*, white and red, *Spring Snowflake*, *Violets* and *Crocus Imperati*. But in this delightful gathering of early gems those of the greatest interest and beauty are the *Irises*: the large and beautifully fringed *I. alata* of the Algerian hills, the clear-cut yellow *Danfordiae*, the well-coloured and marked *Histrion* and *histrioides*, and for colouring most remarkable of all, *I. Bakeriana*, in which the fall ends in a thick wedge of velvet-like purple-blue, so dark that at first it looks black, and all the blacker because it is approached by a region of white ground spotted and pencilled with the same.—Eds.]

A FLORAL CLOCK.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—During the coming season I desire to make a "floral clock," i.e., to plant a collection of flowers which open at various times from morning to night, thus giving an approximate indication of the time. Will you kindly give me a list of suitable plants? Keighley. A. K.

[Perhaps some reader of THE GARDEN can furnish such a list. Eds.]

LOBELIA TENUIOR.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Can any reader of THE GARDEN help me to get some seed of *Lobelia tenuior*? I saw two plants of it in the Cambridge Botanic Gardens last summer, and have never seen a more lovely thing. I have applied to our best seedsmen, and so far without result; but it may be that someone may see this who knows where seed may be got. Mr. Lynch writes me that the plant has been grown for some twenty years, and this being so, it seems strange it should be practically unknown, as it would seem to be. B. DICKINSON WEBSTER.

Newton Abbot.

MISTLETOE FROM SEED.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—I shall be pleased to send "Medway" seeds from a growing Mistletoe either next month or when he pleases later. About one in ten of ripe seeds start very freely on the under side of a branch glued on by its own viscosity without injuring the bark of the branch. But when started the seed should be wired on, as I have found, and have also heard from another source that the young plants are very liable to being blown off during the second year before they have got sufficient hold. If he will send his address to the editor it will be posted to me.

Ambleside.

H. B.

ROMNEYA COULTERI.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—This lovely plant, at any rate down in South Devon, seems a most capricious bloomer. I have been watching four or five plants in neighbours' gardens and one in my own to find out what the plant requires to be a success. My own plant, now 4 feet through, makes luxuriant growth, and does everything one would expect but flower. It seems to be quite indifferent to cold; in fact, it has not shed all its leaves this winter, and we have had rather more frost than usual. It never seems to flag for water in summer, which, being a native of California, one would not of course expect it to. It does not seem to be particular about soil, or at any rate it makes equally clean growth in my light soil among rocks and in a neighbour's garden on the level where the soil is heavy. Apparently it is indifferent to food, for a plant heavily watered with manure two consecutive years bloomed well the first year and had one single

flower the next. What does it want? Perhaps some of your readers will give us their views. When I bought my plant I was assured a position on rockwork in full sun was all that was needed, but it seems there is something more wanted. The only thing I have left to try is the removal of last year's wood, and that I shall try so soon as the new growth shows, which may be any time now, I suppose. Hitherto I have kept the one-year-old wood, and only removed that of the preceding year. B. DICKINSON WEBSTER.

Newton Abbot.

MUTISIA DECURRENS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—In reply to "T. J. W." I beg to say that I have had this plant for six or seven years, doing well and flowering every year. It is growing against a south wall with a projecting balcony above it, and to this I attribute its success, as it is kept dry in winter and spring, and thus neither frost nor wet hurts it. This overhead shelter is, I feel sure, valuable for many tender plants. In a similar situation *Daphne indica* has been growing for many years, flowering beautifully every winter. The *Mutisia* runs much underground and sends up suckers freely, but I find these very hard to remove safely. A. R. W.

Parkston, Dorset.

WINTER ACONITES NOT FLOWERING.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Can you explain this? I have plenty in full leaf, but very few flowers. It was so last year also. Richmond, Surrey. W. P.

[We have heard other cases of *Winter Aconites* refusing to flower, though in most places they flower abundantly every year. It may be that the roots are overcrowded and require replanting. You do not say what is the nature of your soil.—Eds.]

GARDENING OF THE WEEK.

KITCHEN GARDEN.

ROUTINE WORK.

MUCH of the work advised during the past two weeks will have been delayed owing to the heavy snow-fall and frost, and the forcing department will have been in greater demand to eke out the daily vegetable supply. Such seasons as we are passing through show the value of winter roots such as *Salsafy*, *Scorzenera*, and *Celeriac*, as these when stored are got at readily, and even in mild winters, with plenty of green vegetables at command, they give a welcome change. The snow will have preserved choice vegetables, such as winter *Broccoli*, but it is well to lift and shelter any that have heads, as frost soon affects the flavour, and in the case of green vegetables it will be well when frozen through to cut them a day before they will be required, and thaw slowly indoors previous to using. Forcing pits will need replenishing to keep up constant supplies, but this will be done more readily if some long litter is placed over the forcing roots in the open, as in most cases the latter are lifted early in the season and laid in thickly for use as needed. Much during this weather may be done in the way of clearing up odd corners removing rubbish, and preparing for spring cropping by writing labels, sifting soils and preparing manures, also affording protection to vegetables needing it.

SPRING ONIONS.

As soon as the ground is in condition for sowing there should be no delay in getting in the seed. I am aware that in some seasons sowing is at times delayed well into March, but I am in favour of early sowing in light well-drained soils, as the plants will stand more cold at the start than many imagine. There are several advantages in sowing at an early date, as the plant gets a longer season's growth, and I find that the earlier sown plants are

less troubled by the dreaded grub or fly than when later sown. As regards the sowing and varieties, few words are needed. The plants need a rich, and at the same time a well-worked soil, trodden firm on the surface before sowing. Where there is the least fear of maggot, now is a good time to prevent its ravages, and a good dressing of lime or soot will be advantageous, though it is only fair to add that the soil would have been better if prepared some time in advance of sowing. It is well to give the seed as good a chance as possible by not sowing on land that has grown the same crop for some time. Wood ashes form a valuable aid in poor land. Failing this, burnt refuse may be used; this used freely in the drills will keep the seedlings healthy. It is not necessary to use stable manure in land that was well manured for a previous crop, but one may rely on the above aids and feeding freely during growth with fertilisers. The latter may with advantage be sown in the drills with wood ashes or soot.

Varieties are becoming numerous, and such kinds as *Carter's Record*, *Ailsa Craig*, *Excelsior*, and *Sutton's Improved Reading* are all excellent and give very fine bulbs, whilst for keeping purposes the *Bedfordshire Champion* is one of the best.

Syon Gardens, Brentford. G. WYTHES.

INDOOR GARDEN.

CALADIUMS.

THESE should now be shaken free from the dry soil in which they have been wintered and potted up in small pots, varying, of course, with the size of the corm. The soil used at this potting should not contain any manure, this being reserved for the next potting, when the roots are active and able to assimilate extra food. For the present a good mixture will consist of equal parts peat, fibrous loam, and leaf-mould. With this mix in silver sand freely and let the base of the corm rest on a good sprinkling of the same material. After potting, place the pots in a temperature of from 60 to 65°. Keep the pots and the surface on which they stand moistened freely with the syringe, but do not water the soil until growth commences, as if fairly moist when used for potting, it should retain sufficient moisture to carry them through to the growing stage. If it is thought necessary to increase the stock, this may be done by dividing the corms carefully into pieces, each of which contains at least one fairly prominent bud. These pieces must not be potted right away, as bleeding in moist soil would be sure to induce decay; they should be sprinkled with dry powdered charcoal and flowers of sulphur and placed on a dry shelf in a warm house until the cut surfaces have quite dried up and hardened.

TUBEROUS BEGONIAS.

The pots of these should be looked over, and any that show signs of starting should be shaken out at once and repotted in the pots in which they are to flower, this being a safer plan than shifting them on into bigger pots later. A good mixture for these consists of two parts of loam, one part each of leaf-mould and decayed cow manure, using sand freely. Keep the tubers well beneath the surface, so that the collar of the plant is covered with soil when the shoots push through. Water carefully to begin with, and fumigate the house once or twice with XL. All soon after the first leaves show to get rid of thrips which may be lying dormant now. A house with a temperature of 50° by night will suit these *Begonias* well, and it is not necessary that it should have the south aspect so needful to many things.

SOWING SEEDS.

The time has now come when there are many seeds that require to be sown. Among others are *Greivilleas*, *Acacia lophantha*, *Fuchsia*, *Celosia*, *Coleus*, *Myrsiphyllum*, and *Cyclamen*: the latter only if we cannot afford to wait until August for plants raised then, which will certainly be best, though a season is lost in flowering them. As a rule the conditions and time for sowing are printed on the seed-packet, but a word of caution may be necessary, for I find it better to delay sowing as a general rule for a week or two later than the dates given. Another thing is to avoid the mistake of

sowing all seeds in strong heat. This has the effect of checking rather than forwarding the vegetation of seeds of those plants which require cool treatment when growing, and only seeds of warm house plants should be sown in strong heat. One of the most useful stove plants of which to sow seeds now is *Cherodendron fallax*. I mention this particularly, as seedlings are better than cuttings, and, again, because it often fails to germinate when sown singly in small pots; while, if sown thickly in pans, the seeds germinate with great freedom, and the young plants may then be potted off singly while quite small.

J. C. TALLACK.
Shipley Hall Gardens, Derby.

FRUIT GARDEN.

PEACH TREES OUTSIDE.

PRUNING, nailing, and tying being deferred to the last, so as to retard as far as possible the opening of the flowers, cannot much longer be continued. The work must be completed before the buds have swollen. Prune out wood that bore fruit last season, strong gross shoots of last year, very weak unripened wood, also old snags, leaving the tree furnished throughout with medium-sized well-ripened wood, not too close in any part, and less so amongst the more extended branches. There is some difference of opinion whether fan-trained Peach trees should have a centre leading shoot or not. In my opinion they should not. The centre shoots grow too strong to be fruitful, and they draw away the sap from the lower side branches, making them too weak to bear fine fruit. The central leading shoot of trees with two or three years' growth from the time of being worked and planted last autumn may be cut out. Begin nailing the largest main branches, fixing them at the same angle on each side as far as possible, so that both sides appear to balance.

If dressing of the trees has not already been finished, take the earliest opportunity of syringing thoroughly with a proved reliable insecticide for the purpose of killing green or black aphides, either of which is sure to be present in crevices of old bark or other hiding-place ready to attack young leaves. By the time the flowers begin to open have coverings ready for use on frosty nights.

In growing Peaches out of doors it is important to avoid overcrowding of the wood. Keep the foliage clean and healthy throughout the growing season. Good foliage results in ripened wood, and in the season healthy flowers.

STRAWBERRY BEDS.

Carefully look round each plant and remove runners. Afterwards, if manure was not applied in the form of a top-dressing at that time, let it be done forthwith. Give a liberal layer of farmyard manure and feed the plants, as this serves as a mulching, which is equally valuable.

ALPINE STRAWBERRIES

are very useful for supplying fruit after the large varieties are past. This section has been much improved of late years by the introduction of varieties bearing fair-sized fruit. Now is a suitable time to plant. Select from existing beds young, strong, well-rooted crowns, plant them in rich, deeply-cultivated ground, putting the plants 1 foot apart in the row and 2 feet between the rows. Also the plants may be raised from seed sown at this time and brought on in gentle heat. Prick off when large enough and plant out when strong and well hardened off.

LOOKING OVER FRUIT IN THE FRUIT ROOM.

Take advantage in time of bad weather to look over Apples and Pears in the fruit room to pick out the decaying fruit. To prolong the season as far as possible, use first those kinds that show signs of decay.

Good free-bearing fruits are, of Apples, dessert: Wyken Pippin, Adams' Pearmain, Cockle Pippin, Court pendu Plat, D'Arcy Spice, Lord Burghley, and Sturmer Pippin. For kitchen use: Lane's Prince Albert, Wellington, Dutch Mignonne, Rymer, Mere de Menage, and Round Winter Non-such. Pears for dessert: Josephine de Malines, Knight's Monarch, and Bergamotte d'Esperen. For stewing: Yverland and Uvedale's St. Germain.

The Gardens, Hatfield House. G. NORMAN.

SOCIETIES.

NOTES FROM THE SCIENTIFIC COMMITTEE (R.I.S.). FEBRUARY 13.

ELM BARK WITH LARVAE.

MR. W. BROOKS, of Weston-super-Mare, forwarded a piece of bark of an English Elm tree, with the following observations: "The Elm trees are attacked by an insect which is destroying them. Some of the trees are fine, nearly 100 feet high, and in their prime; others are smaller. The larger trees are attacked more especially on the north side, but the smaller all around the stem from bottom to top. One of the largest trees shed all its leaves in August, and it looks as if the whole of the trees will die."

Mr. McLachlan sent the following report: "The Elms are attacked by the larvae of a beetle. No perfect beetles are to be found in the bark sent, but there are numerous larvae, each in a small cell, in which it will undergo its transformations. So far as can be judged from these larvae, they are those of *Scolytus destructor*, so common in many places. In order to destroy them it was suggested, more than forty years ago, by the late Capt. C. J. Cox (who probably took his idea from the French), that all the old outer bark be pared off by a spokeshave or some similar instrument (the scrapings being of course collected and burnt), taking care not to injure the inner bark and wood. Dressings of dilute petroleum, repeated at intervals in dry weather, might also be of service. But the subject opens up a wider question—viz., whether the beetle is the cause of the condition of the trees, or only steps in where these latter are in a moribund state from some other cause. The writer of these remarks is inclined to think the beetles come as scavengers. At any rate in the case of tall old trees, probably already 'stag-horned,' it is practically useless to employ remedial measures, and the best thing is to cut them down and burn them, or at any rate cut them away at once from the vicinity of trees not already attacked. The bark of such old trees is usually riddled by the larvae from base to top. When the trees are younger and less tall, remedial measures, such as those suggested, might be tried. Even supposing the trees to be in an unhealthy state from some other cause, the attacks of the beetle must aggravate that state and hasten decay, and if these attacks could be lessened or averted, there might be a chance of the trees recovering from the other conditions whatever they may be. But as a rule disease or decay have already proceeded too far before being discovered."

FERN ROOTS ATTACKED BY GRUBS.

MR. BURT, of The Gardens, Caeuwood Towers, Highgate, sent a specimen of soil and grubs with the rhizomes of *Adiantum cuneatum*. Mr. Hudson observed that he was not unfamiliar with them. The specimen was forwarded to Mr. McLachlan, who reports as follows: "The grubs at the roots of *Adiantum* are those of a species of weevil, probably *Sitona*, but I cannot commit myself to anything more precise without seeing the perfect insects. I should think the best thing to do now would be to turn out the plants from the pots, shake the old soil from the roots, and repot in clean earth, taking care to burn all the old with the grubs. When the foliage shows signs of being attacked go over the pots at night, turn each pot gently on its side, and shake the foliage over a sheet of paper. By this means multitudes of the perfect insects may be collected and destroyed, and the deposition of eggs prevented."

OROBANCHE ON PELARGONIUM.

A plant in flower was shown by Frances M. Cooper, Forest Road Gardens, Wokingham, described as having "established itself in a pot of *Geranium*." The latter at first showed no sign of diminished vigour; but now the specimen has come into bloom its host-plant seems to be weakly and its leaves are turning yellow. The plant does not seem quite like any wild species. The *Orobanchae* was of a purple colour throughout, but not agreeing closely with any true British species.

SHROPSHIRE HORTICULTURAL SOCIETY. ANNUAL MEETING.

THE annual meeting was held recently in Shrewsbury, when a large number of members were present. The Mayor (Mr. R. S. Hughes) was in the chair, and he congratulated the members on the extraordinary success which attended the society's last show, and on the fact that the receipts for the past year exceeded any previous record by considerably over £200.

Mr. H. W. Nanton (one of the hon. secretaries) presented the annual report of the committee, which is as follows: "It appears to be the general opinion that the horticultural display in the Quarry, on August 24 last, was the finest and best ever seen there, and it is satisfactory to report that the attendance was the largest on record, and that the receipts on that day and the profits on the year exceeded all previous returns. The collections of Grapes, which included exhibits from many of the best known Vine growers in the kingdom, were undoubtedly a success, and the results should encourage the society to continue their experiment of introducing novelties in future exhibitions. It is proposed this year to offer large prizes for collections of British-grown fruit, which will probably attract a large number of competitors, and which, in consequence of the great variety in form and colour of the exhibits, will, no doubt, meet with general appreciation. Our hearty thanks are due to our president (the Rev. T. M. Bulkeley-Owen), not only for his acceptance of that office, but for his long-continued co-operation with the society and the interest he has always taken in its success. The report would be incomplete if it failed to express the very deep regret felt by the committee on hearing a few weeks since of the death of Mr. Outram, one of their judges. He had acted in that capacity for many years, and the society had benefited not only from the careful manner in which he discharged his judicial duties, but also from his ready-given advice in all matters, and they were numerous, on which he was consulted by the committee."

The assistant treasurer presented the statement of accounts, and pointed out that the total receipts for 1899 amounted to £4739 10s. 11d. The profit on the summer show amounted to £1050 13s. 5d. The balance in the bankers' hands on December 31, 1898, amounted to £1808 15s. 3d., and on December 31, 1899, to £2149 9s. 10d. The actual receipts on two days of the summer show (excluding subscriptions) amounted to £4154 3s. 2d., and the actual payments to £2648 13s. 7d. The society's total receipts for twenty-five years amounted to £65,197 10s. 8d. The donations and gifts made by the society amounted to £5840 10s. 6d., and, in addition to the balance of £2149 9s. 10d. in the bank, the society owns land situate between the Quarry and the Friar's Bridge (purchased from the town), which cost £5500. The prize money given during the year amounted to £1059 17s. 3d.

BRISTOL GARDENERS' ASSOCIATION.

THE fortnightly meeting was held at St. John's Parish Room on Thursday, 22nd ult. Mr. Chas. Lock presided over a good attendance. The paper was supplied by Mr. A. Moore-Sara, of Elmside, Stoke Bishop, on "The Pollen Grain and its Functions." With the help of black-board diagrams he made the subject very interesting, tracing what is known of the sexuality of flowers from the time of Herodotus down to the 17th century, when, in 1676, Dr. Grew, in a book on plant anatomy, laid down in definite terms the law of vegetative impregnation, accepted by botanists to-day, and in a greater or less degree understood by all present-day gardeners. Dealing in detail with the subject, he described the formation of the pollen, some of the many methods of distribution, and the processes through which it had to pass until fertilisation was complete. A short discussion followed, chiefly on the advisability of forming a botany class in connection with the association.

HAMPSTEAD HEATH PROTECTION SOCIETY.

THE following is the report of the past year of this excellent society:

The committee have pleasure in submitting their third annual report, together with a statement of accounts to December 31, 1899.

Since the date of the last meeting the committee have been actively engaged in promoting the objects of the society, and are glad to find that the interest of the public in their work has been sustained.

It will be remembered that your committee have all along advocated the appointment of a ranger to preserve the amenities of the Heath, and they desire to record their appreciation of the assistance they have received from the Metropolitan Public Gardens Association to this end. At a meeting of that association on January 4, Lord Meath in the chair, the following resolution was passed unanimously: "That this association approach the London County Council asking that body to appoint some responsible and experienced person to superintend all work carried out on Hampstead Heath, and asking that such work shall be for the preservation of the natural beauties of the Heath, its Gorse, trees, shrubs and ponds, and the views from the same in accordance with the provisions of the Hampstead Heath Act of 1871."

This action resulted in the appointment in the month of March, 1899, by the London County Council, of a resident superintendent ranger (Mr. George Palmer) for Golder's Hill, Hampstead Heath, and Parliament Hill Fields, and the anticipations formed by your committee of the benefits that would result from such an appointment have been fully realised up to the present time.

Your committee have been in active correspondence with the London County Council during the year on various subjects, among which may be mentioned the damage done to Furze, Ivy, and shrubs by the sheep which are allowed to graze on certain parts of the Heath.

The council have so far met the views of your committee by passing a resolution to restrict the area upon which the sheep may graze to the lower portion of the east Heath, where they are less likely to do damage.

The committee trust that the areas from which vegetation has disappeared will be temporarily fenced out where necessary, and measures taken for renewing the natural vegetation, such as grass, Fern, Broom and Gorse.

Another point to which your committee have asked the attention of the council is the shooting of cinders on the Heath, and they have expressed their strong opinion that if any cinders must be brought on to the Heath for the repair of roads, they should not be shot on the grass, but kept as far as possible out of sight.

The committee have also asked the council whether the time has not arrived for allowing the public at least partial access to the grass enclosures near the Hampstead Heath Railway Station, but the council consider that nothing need be done in this direction at present.

With regard to the over-planting of trees which has been referred to in previous reports, your committee are still pressing the council to take action, and hope that when the matter comes again before the council, regard will be had to the often-expressed wish of the public and of the society. One of the members of the council, in whose energy and discretion the committee have full confidence, has put himself in communication with the chairman of the Parks and Open Spaces Committee, and will, as soon as convenient opportunity arises, take care that the views of the society on the question of the over-planting, with special reference to the trees on the north-east side of the Spaniard's Road, are again brought fully before the council.

The committee have co-operated with the Northern Heights Footpath Association in their suggestion to the London County Council to purchase the small strips of ground adjoining the Heath at North End, which have been marked out by small posts as private property.

The committee are gratified by the interest shown by the chairman and vice-chairman of the Parks Committee in visiting the Heath and conferring with some members of the society as to the preservation of the small rain-pools and other picturesque features of the Western Heath.

SHIRLEY GARDENERS' SOCIETY.

An interesting meeting was held recently, when Mr. E. T. Melton, of Hartley College, Southampton, gave an interesting lecture upon "The Composition of Manures and their Applications to Various Soils," illustrated by lantern slides and diagrams. Several plants were exhibited at the meeting. The chair was taken in the absence of the president by Mr. B. Ludhams. The secretary of this prosperous society is Mr. H. J. Hobbs.

UNITED HORTICULTURAL BENEFIT AND PROVIDENT SOCIETY.

The annual meeting of this society will take place at the Caledonian Hotel, Adelphi Terrace, Strand, on Monday, March 12, at 8 p.m. Mr. S. T. Wright, superintendent of the Royal Horticultural Society's Gardens, Chiswick, has kindly consented to preside.

NEW AND RARE PLANTS.

IRIS STENOPHYLLA.

THIS is a very beautiful bulbous Iris, one of the early-flowering group, and quite as interesting as any other species in bloom about this time. The flower is as large as that of *I. alata* and richly coloured; the standards a full deep purple, relieved with a lighter colour at the base, spotted purple, and an orange line runs into the throat. We shall give a further description, and also an illustration of this charming flower. A pamphlet was shown by Messrs. Wallace and Co., of Colchester, at the last meeting of the Royal Horticultural Society, and given a first-class certificate.

PRIMULA KEWENSIS.

An interesting and important new garden plant, which has been flowering at Kew since October of last year. It is a hybrid between *P. floribunda* and *P. verticillata*, and possesses the best attributes of both parents. The plants bloom with wonderful freedom, being covered with a mass of rich yellow flowers which remind one strongly of those of *P. floribunda*, but are larger individually. It is a bright, handsome and welcome addition to the list of indoor Primulas. Several plants came from the Royal Gardens, Kew, to the last meeting of the Royal Horticultural Society. First-class certificate.

AGAPETES BUNIFOLIA.

This is a very old garden plant, but so rare that it comes to us now as almost a novelty. It is a native of Northern India, evergreen, and its leaves remind one in texture and form of those of the Box. The bright red flowers appear on the ripened growths of the previous year, and the tubular corolla, about 1 inch in length, has five pointed tubes, followed by milky white fruits. It requires much the same treatment as the greenhouse Azalea, but, as already mentioned, is very rare now-a-days. This is a pity. These beautiful hard-wooded plants are too interesting to entirely neglect. Nuttall first found this species on the Duphla Hills, between Bhotan and Assam, at an elevation of about 3000 feet. Mr. J. T. Bennett Poe showed a remarkably well-flowered specimen at the last meeting of the Royal Horticultural Society, and was given an award of merit.

CAMELLIA GENERAL HECTOR MACDONALD.

This is another handsome addition to the list of new Camellias. This variety reminds one of *reticulata*, so large and imposing is the rich red flower. It is a welcome novelty. Award of merit at Royal Horticultural Society's last meeting. Shown by Messrs. Sander & Co., St. Albans.

LELIA EDISSA.

This is a cross between *L. anceps* and *L. purpurata* and is a remarkable plant, showing the intermediate characters of the two groups. The sepals are 3 inches long and rosy lilac, the petals nearly 2 inches broad, and similar in colour to the sepals. The lip is upwards of an inch broad, bright crimson, veined with a darker shade of colour and margined with rose on the front lobe. The side lobes are rose, shading to yellow, suffused with purple and lined with a darker tone of purple through the base and throat. The three-flowered raceme is produced on a scape resembling *Lelia anceps*. First-class certificate, Royal Horticultural Society's last

meeting. Shown by Messrs. J. Veitch & Sons, by whom it was raised.

CATTLEYA TRIANE (WEST BANK HOUSE VARIETY).

This is a charming form with finely-balanced, deep rosy-lilac sepals and petals. The lip is rich crimson-purple in front, margined with rose, a white area being in front of the orange disc. The side lobes rose, lined with white at the base. Shown by Mr. J. Leeman, West Bank House, Heaton, Mersey, Royal Horticultural Society's last meeting, and given an award of merit.

ZYGOPETALUM BALLII.

This is one of the most beautiful and distinct of the Zygopetalums. The sepals are 2 inches long and rosy purple, margined with white. The petals as long as the sepals, $\frac{1}{2}$ inch broad, white, spotted with purple on the upper half, suffused with the same colour at the base, and margined with white. The lip is $1\frac{1}{2}$ inches broad and $1\frac{1}{2}$ inches long. There is a margin of white nearly $\frac{1}{2}$ inch broad. The basal area is suffused with purple. There are also some violet-purple lines on the disc. Royal Horticultural Society award of merit last meeting. From Mr. G. S. Ball, Ashford, Wilmslow, Cheshire.

ODONTOGLOSSUM ADRIANE VAR. LORD ROBERTS.

This is one of the most beautiful of the Hummelian-*crispum* hybrids. The sepals are about $\frac{1}{2}$ inch broad, pale yellow, blotched with purple in the centre and on the basal area. The ground colour of the petals is lighter than the sepals, and covered over the central area with smaller purple-spottings. The broad lip is creamy white, with some large purple spottings in the centre and smaller markings on the basal area. Award of merit, Royal Horticultural Society's last meeting. From Mr. W. Thomson, Stone, Stafford.

ODONTOGLOSSUM LOOCHREISTENSE.

A natural hybrid between *O. triumphans* and *O. crispum*. The sepals are yellow, with some purple suffusion and bright brown spottings, more numerous on the upper than the lower ones. The petals are brighter than the sepals, with two or three large brown spots in the centre and numerous smaller ones on the basal area. The flower is of fine shape and substance, and upwards of 3 inches in diameter. It resembles a glorified form of *O. excellens* with the lip of *O. crispum*. It is by far the finest of this particular cross that we have seen, and with increased strength should be given to letter advantage. The plant exhibited carried a single flower on the raceme. Shown by Mr. W. Thomson, Stone, Stafford (gardener, Mr. W. Stevens), and given an award of merit, Royal Horticultural Society's last meeting.

LAW.

AN INTERESTING SEED CASE.

IN the City of London Court on Friday, before Mr. G. Pitt-Lewis, Q.C., Deputy Judge, an action was brought by Messrs. Bowcott and Watkins, seed merchants, 10, Floral Street, Covent Garden, against Mr. R. W. Gardner, Princess Road, Victoria Road, Roufford, to recover the sum of £6 15s., damages for breach of contract in respect of certain Swede Turnip seed. Mr. W. R. Hison, plaintiffs' solicitor, said that the plaintiffs bought the seed of the defendant on the understanding that it was 1898 or new seed. The plaintiffs, upon applying the ordinary test which was well known to the trade, found that the productiveness of the seed only yielded 60 per cent., and not 98 per cent. The plaintiffs had paid for the seed, and now that they found that it would not answer their purpose they were asking for the return of their money or for damages for breach of contract. Mr. Charles Butler, defendant's solicitor, said that the parties were well known to each other, for the defendant had been in the plaintiffs' service for twenty years. He had sold them the seed in question the day after he had purchased it. They retained it for two months before they found any fault with it. The practice was to test seed within a week. The plaintiffs had dealt with the seed before rejecting it. Mr. Watkins, plaintiffs' manager, was called and spoke to having purchased eight or ten bushels of the seed in question at 18s. 6d. per bushel. He understood he was buying new seed, and that meant that it was the previous year's seed. They usually tested seed immediately it came into their warehouse. The seed in question was tested on tannel and then on soil. The germinating power of seed which was two years old would be about 85 per cent., and perhaps more. It depended upon what care was taken of it. The percentage of productiveness depended to some extent upon how seed was tested. Martin, who was employed by the plaintiffs, deposed to having tested the seed in question. Mr. Butler explained that the plaintiffs should have rejected the seed

within a reasonable time, and that they did not do. The defendant was called, and said that he bought the seed in question for 18s. 6d. a bushel. Knowing that the plaintiffs wanted some of the same sort he offered it to them and they bought it, his profit being £1 on the transaction. Two months after the deal, when he ceased to think about it, the plaintiffs wrote and told him that the seed did not grow well. If he had been informed in time he could have gone to his sellers and raised the same point. Mr. Paul Ursulas was called to prove that the seed had yielded 90 per cent. The Deputy Judge said he came to the conclusion that there was a warranty that the seed was new seed. The plaintiffs were entitled to damages for the defendant's breach of contract, and he thought they ought to recover two-thirds of the money which they had paid for the seed. There would, therefore, be judgment for the plaintiffs for £2 5s. as damages, with costs of the action, and they would keep the seed.

ANSWERS TO CORRESPONDENTS.

Names of plants. *Solpinae*.—*Primula floribunda*, 1. *E. W.*, 1. *Ceterach officinarum*; 2, apparently an immature frond of *Pellaea corallata*; 3, *Nephrodium decumpositum*; 4, *Adiantum fulvum*.

Cyclobothras (H. T.).—Pot the bulbs at once in light well-drained soil and plunge in a cold frame, and in about a month's time plant outside on a warm south border. It all depends on the present condition of the bulbs whether they will be a success or not; if hard and firm, all well, but if shrivelled and dry, the result may not be satisfactory.

Cucumbers in frames (S. F. J.).—Do not attempt to make up a cucumber bed on a large scale until you have good strong plants nearly ready and plenty of fresh stable manure. But you can make up at once a small bed to suit a small frame in which to sow cucumber seed in pots that will produce plants. These may be strong for planting out into a permanent bed in about a month from sowing if you have kept up a good warmth. That is the difficulty with manure beds early in the year, as in cold weather the temperature goes down quickly. Perhaps it would be wiser for you to order plants to be ready to plant out in a hotbed about the middle of March. In the meantime collect stable manure, keep it occasionally turned and mixed, shaking out the longest straw. For a frame of two lights, 8 feet by 6 feet, the hotbed should be 12 inches wider and longer than the frame, and be nearly 3 feet in height when made and trodden firm. It will require a good amount of manure to form such a bed, and even when planted it is needful to place fresh manure as rapidly as it is collected round the bed to keep in the warmth.

GARDENING APPOINTMENTS.

MR. JOHN LOGAN, late gardener to Mr. G. de Belle Ball, Lisson Hill, Swadlow, has been appointed gardener to Mr. W. Woodburn, Hermitage, Rathfarnham.

MR. A. BROWNE, late head gardener to Mr. Pim, Stradbroke Hall, Monkstown, to a similar position in the gardens of Mrs. Henshaw, St. Philips, Milltown, in succession to Mrs. McKay.

MR. A. WARD, Stoke Edith Park, Hereford, gardener to the late Lady Emily Foley for the past seventeen years, and latterly sub-agent, has been appointed head gardener to Mr. F. A. Bevan, Trent Park, New Barnet, in succession to Mr. W. H. Lees, who is, we understand, entering business on his own account.

CATALOGUES RECEIVED.

LAWES, & Co., *James Carter & Co., High Holborn, London.*
FERN SEEDS. *Little & Ballantyne, Carlisle.*
CHRYSANTHEMUMS. *Vilmorin-Andrieux & Cie, 1, Quai de la Marée, Paris.*
SEEDS AND PLANTS. *H. J. Dever, 17, Chestnut Street, Philadelphia, U.S.A.*

Manual of Horticulture, a useful guide for 1900. Messrs. James Kelway & Son, Langport, Weymouth, Somerset.

Pennsylvania Lawn Mower. We have received a description and illustration of Lloyd's perfected lawn mower, which may be had in various sizes. The sole licensees here are Lloyd, Lawrence & Co., 29, Warwick Street, Finsbury, London, E.C.

BOOKS RECEIVED.

"The Hop: Its Culture and Cure, &c." By Herbert Myrick. Published by Kegan Paul, Trench, Trubner & Co.

"Lectures on some of the Physical Properties of Soil." By Robert Warrington, M.A., F.R.S. Published at the Clarendon Press.

"The New Forestry." By John Simpson. Published by Pawson & Brailsford, High Street, Sheffield.

Gardeners' Charity Guild. A smoking concert in aid of the funds of the Gardeners' Royal Benevolent Institution will be given at the Great Hall, Cannon Street Hotel, E.C., on Wednesday, March 14 next, commencing at 7.30 p.m. Mr. N. Sherwood in the chair.

Answers to Correspondents. Many answers to questions are through pressure upon space held over.



THE GARDEN.

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[MARCH 10, 1900.

FRUIT GROWING IN THE BRITISH ISLES.

(WITH SPECIAL REFERENCE TO APPLES.)

WE mentioned in *THE GARDEN* of last week (p. 153) that the fruit industry of this country was sufficiently valuable to stimulate a keener interest than is apparently expressed by the trade and private growers of the present day. Horticulturists were rudely awakened to a sense of their opportunities when the famous Apple congress held by the Royal Horticultural Society at Chiswick aroused public interest, and revealed an ignorance of Apple culture incomprehensible in a country capable of producing fruit as ruddy and handsome as the rosiest importations from over the seas.

The national insular conservative spirit dominates in a measure horticulture as severely as its sister, agriculture. We seem loth to leave the path lined out by our forefathers or to attempt to improve upon their ways of culture. But this clinging to the traditions of the past is unreasonable: it is futile to rail against foreign importations into the market unless the British grower presents fruit as luscious to tempt the national palate. A large demand exists for British-grown Apples. A stroll through any of the great market centres reveals the pleasant fact that the best winter Apples from our orchards realise prices not approached by the Apples from abroad.

Quite recently that good Apple Wellington, or Dinnelov's Seedling, was bringing in the handsome return of from 10s. to 12s. a bushel from standard trees, and it requires no intense mathematical perception to know that a few acres of trees would realise a respectable annual income.

We are not standing still, it is true, but progress is slow. Our markets reveal little of the change, for the reason that the grower is apparently slow to move until some incident occurs to arouse him to a sense of his loss in permitting a profitable industry to slip into other hands. Greater facilities for importing fruit mean, of course, severer competition at home, and it is an almost weekly occurrence to find that Apples from far distant lands have been received in England—fresh, wholesome, and possessing their natural good looks—a condition of affairs impossible before the quick mercantile fleets of the present day. We enjoy the home-grown fruit, whether the Apple or

the Pear, the Cherry or the Plum, because it contains its true lusciousness and flavour, developed by a distinctly suitable fruit-growing climate. The mealy productions of sunnier lands than ours have little of that delicious quality recognised in the Apple or other fruits grown in the British Isles. There are a few exceptions, and one is the famous Newtown Pippin, which refuses to bear abundantly in this climate.

Why are the British fruit growers to a large degree blind to their own interests in not facing this increasing foreign competition? We cannot answer a question that one would think in these days needless to ask. Probably it is due to a want of cultural details bearing directly upon the success of the tree, and when the variety is considered, its likes and dislikes, then it will yield an abundant return. Position, soil, stocks, pruning, and minor attributes to proper cultivation must be thought out, remembering that one variety will fail where another spells success, grown in the same climate and under the same conditions.

We hope that these notes will not be taken in an unkindly spirit; it is far from our wish to dictate to the fruit grower the methods he should pursue in raising the culture of fruit in this country to a higher level, but it has occurred to us that the following shortcomings are responsible for want of success. Exhibitions of fruit teach wholesome lessons. The annual display at the Crystal Palace under the auspices of the Royal Horticultural Society is witness to the great possibilities of fruit growing in this country. If the necessary £100 be not forthcoming to maintain this yearly display of fruit from various districts in the British Isles, then surely we must confess that failure is due to want of enterprise—a sorry confession in a commercial country. The beginner in fruit culture must not rely upon the exhibition for his selection of varieties. Many a noble fruit is seen there—a huge Peasgood's Nonsuch, maybe—that can never be accounted profitable. It is handsome and big, none too luscious, and there its value ends. More attention must be given to varieties capable of making a stir on the exhibition table, but richly prized, too, in the garden, or that appeal to those who require fruit of good quality.

An overwhelming abundance at one season signifies small returns, and the early autumn fruits quickly lose flavour and decay. The energies of the grower may well be directed to the winter supplies, and to achieve this desire varieties that naturally bear late ripening fruit

must be grown: not those that through elaborate storage preserve their freshness and colour until the spring. Their appearance is deceptive: the Apple painted with tenderest hue is a bag of mealy, unwholesome flesh.

Storage of late Apples is an essential detail in the routine of cultivation, but this is not a matter of great expense. A simple store is necessary—not an elaborate structure, which makes inroads in the bill of expenses at the outset of the business. We have a letter before us in which the writer, one of the most successful fruit growers of the day, says: "I have kept that good Apple, Cox's Orange Pippin, in excellent condition until the end of April in a cool dark store. The fruit was gathered late from dwarf standard trees." If such a sweetmeat as this luscious Pippin could be obtained at this season of the year in quantity, foreign importations would run little chance of acceptance at remunerative prices. Imported fruit is not cheap, but sold at almost prohibitive prices except to those indifferent as to household expenses.

We quoted prices paid for Wellington Apples, and, referring to the notes taken of the market recently, find that Northern Greening and French Crab are being sold at 5s. to 6s. a bushel.

Too many Apples is the universal complaint, and will be heard in the land until the grower undertakes to remove unprofitable varieties. If a tree fails to crop profitably after once obtaining a fair trial, remove it in the interests of the business.

The subjoined list has been prepared as a guide to the beginner and everybody who has failed to succeed. We hope our fruit-growing readers who have found the industry profitable, by cultivating varieties that fill the basket to overflowing, will give their valuable assistance in making the list absolutely reliable. Late Apples of good quality are desired, and to this section we look for useful additions.

A SELECTION OF APPLES.

<i>EARLY.</i>	
<i>Dessert.</i>	
Irish Peach.	Lady Sudeley.
<i>Cooking.</i>	
Cellini Pippin.	Lord Grosvenor.
Keswick Collin.	New Hawthornden.
	Stirling Castle.
<i>MIDSEASON.</i>	
<i>Dessert.</i>	
Allington Pippin.	Cox's Orange Pippin.
Blenheim Orange.	King of the Pippins.
Cockle Pippin.	Margil.
	Ribston Pippin.

Cooking.

Bismarck.	Striped Beautif.
Lady Henrietta.	Tower of Glamis.
Lord Derby.	Warner's King.

Wellington.

LATE.

Dessert.

Adon's Pearmain.	Fearn's Pippin.
Barnack Beauty.	Reinette de Canada.
Claygate Pearmain.	Scarlet Nonpareil.
Dutch Mignonne.	Sturmer Pippin.

Winter Ribston.

Cooking.

Altriston.	Newton Wonder.
Bramley's Seedling.	Norfolk Beautif.
Lane's Prince Albert.	Smardingham.

Wellington.

This list is intended merely as the nucleus of a selection that few will cavil at. We leave to our readers the task of rectifying mistakes and admitting varieties of greater excellence than those at present recorded.

The fact cannot be disputed: fruit growing in England offers scope to young men with proper training and some capital to embark in the industry. A demand exists for good fruit, a food more wholesome and satisfying when gathered from trees in the counties of these isles. Apart from the question of varieties and culture, difficulties must be faced and overcome. A grower must have within reasonable distance a market or centre to dispose of his produce. Writing of fruit in general, dwellers in large towns know that of stone fruit—Plums, Damsons, and Cherries—there is never an over-supply. This may be remedied by creating greater facilities for disposing of the produce and preventing a glut at any one point. The supply of the west is of little value to the dweller in the north, as cost of carriage seriously lessens the profits.

The fruit-drying trade opens up another source of profit. This would prove a lucrative undertaking entered into with proper training and business acumen, and check the flow of foreign importations. We are writing now of fruit grown entirely in the open air, not under glass in any form. Produce developed under artificial conditions has its value, but the true hardy fruits must be regarded as belonging to the orchard and out-door garden.

FALSE IDEALS.

SCARCELY Mr. Leslie misapprehends the real question in writing as he does in THE GARDEN of February 21. One would think from the following passage that we had all been protesting against good lawns, comfortable seats, the pleasant and beautiful shade of the pergola, &c.:

Lawns are none the worse for being kept smooth and velvet, paths for being firm and free from weeds; strong, comfortable seats are not eyesores, fountains are at times desirable; a pergola shade of a well-designed summer-house for tea or shelter does not necessarily injure the general beauty. And in the same way a well-clipped hedge in its *right place* adds not only a comfortable feeling of home to the garden, but assists much in the general beauty as a foil.

But the question of hedges is outside of the central one altogether. Hedges are made for dividing lines, fences, backgrounds, &c. I like a Box hedge as well as anybody, but, unhappily, it will not grow well and rapidly with me, and do not object to a comfortable seat, and have even made pergolas people think pretty.

The question of clipping trees into false shapes is a wholly separate one, and to show the

evils of the practice let me give a few instances. Take the gardens in any district round London—Harrow or Colham, say; there we shall find that nine out of ten evergreens are clipped to get them into what the gardener calls "good shape," and we see the same thing done in our public gardens, as at Kew, and parks, as at the end of the Serpentine. If the man who wields the shears thinks that his aims at form are better than that which Nature gave to the Holly—well, we can only pray for his conversion! That is a real evil running through the whole gardening world, a false ideal in the simplest and purest sense. Can anybody find in the gardens in which this shearing is carried out a Holly as true and right in form as we may find in the first Surrey lane? The harm done by it it would be difficult to exaggerate, in concealing the true and varied forms of things even from the eyes of those who live most among them and sacrifice a good deal for their purchase and care. Mr. Leslie would, I am sure, be the first to see how much is lost, from an artistic point of view and from many others, by the wholesale destruction of the true forms of shrubs and trees and the creation of false and ugly shapes in them. He may be lucky in his own and neighbours' gardens, but those who take the trouble to see a great many gardens throughout the country will know how far this practice goes. Of course, once people get accustomed to false and ugly shapes in shrubs, they will gradually train themselves to put up with ugly shapes and patterns in gardens, even as regards the flowers and their disposition.

Now to come to the question of deliberate design. Take a few instances in which clipping into false and ugly forms is done. Some of our young landscape gardeners now fill their beds with forest evergreens. I do not like to name instances of private places, and the designer of some is a friend of mine. The beds that should be filled with flowers are filled with Yews, and the unfortunate gardener, after the first two or three years' growth, has to be continually clipping down these Yews into table-like shapes. This may be good landscape gardening, but no one, I think, will claim that it is good flower gardening. I think it is bad in both ways. The garden I mean is quite a recently made one. Let us go to an old one, at Northiam, in Sussex, which I saw last year, a very good and interesting old house and a very well-placed garden behind it well walled round. Against the wall on one side is an enormous line of clipped Beech trees, the roots taking up half the garden, and the rest of the garden is much occupied by clipped Yews, many of them large, absorbing all the nourishment of the ground.

I may be asked what I want. I should like to see the walls, which are very good walls, clad with Wistaria, climbing Roses, Clematis, and Jasmine—a real flower garden, in fact, as walls so often are, walls giving beautiful backgrounds—and I should certainly leave the forest Beech where it was "made" for the wood.

I need not take your readers to the mechanical instances of clipped gardens abroad, such as Versailles and Schonbrunn, hoping I have said enough to show that the evil of clipping in our gardens is quite a different one from that of hedges. But I should say that these may do very great harm if put down, as they often are, without thought of the gardener. In one of the places alluded to above the idea was to form a Rose garden, and the poor gardener had to put the Roses between close-set lines of Yew; and there he is still—between the devil and the deep sea.

W. R.

RIVIERA NOTES.

OF newer Tulips, *T. saxatilis* most certainly deserves the first place. It evidently enjoys warmth more than any other early Tulip, and its large Peach-blossom petals, with a yellow base, wide open in the sunshine, are most beautiful in this climate. It flowers quite three weeks before *T. Kaufmanniana*, and lasts fully a month in beauty in a season like the present. Altogether it is most desirable, and promises here to be free in growth.

T. Kaufmanniana, so far, is less satisfactory, and does not come up to its English reputation. It is stunted in growth, has none of the pretty red tinting outside seen in English gardens, and the lemon-white interior is uncertain in tone.

Tulipa Greigii also is stunted in growth this season, but when planted in a stiff and rather moist clay soil can be the most gorgeous of all Tulips either here or in England.

Curiously enough, *Iris reticulata* is far less charming in this climate than in England. Its deep blue-purple petals wither so quickly in the hot sun, that one day suffices to fade their beauty, and its sweet scent seems far less pronounced than in a colder climate. What delightful weeds the Starch or Grape Hyacinths are! Deep purple-blue, cobalt-blue, pale tender blue, and even pure white, they crop up on nearly every terrace, and will in due time be followed by the larger Feather Hyacinths, which latter especially are wild garden flowers, and do not show themselves to advantage in a trim border.

The special glory of this week is a *Magnolia Yulan*, with its grand, wide-open, Lily-like flowers, set off by the rich rose-red of a fine *Pyrus japonica*, one solid mass of flower, a sight for those fresh from the frost-bitten shores of the North Sea.

Daffodils are behaving very curiously this season. The heat and drought that continued till the end of the first week in December has evidently tried them severely, and the mid-season varieties were in flower before the earliest *Tendy* opened a bud. Thanks to the heavy rain and dull, chill days of January, the later varieties promise to be good, and *Anemone blanda* still carpets the ground under the shade of the trees on a northern slope.

Cinnia, Nica.

E. H. WOODALL.

NEW AND RARE PLANTS.**BRODIAEA (TRITELEIA)
SELLOWIANA.**

THIS is a new plant recently introduced from Monte Video, or the neighbourhood thereof. *Brodiaea (Triteleia) uniflora* is a well-known garden plant, hardy on dry soils, and makes a splendid edging to beds of such bulbs as Tulips. *B. Sellowiana* is more dwarf than *B. uniflora* both in foliage and flower-scape, and the flowers are very slightly smaller. But it has some advantages over the better-known species, as it is distinctly fragrant in a temperature of about 65°, its bright crocus-yellow colour being very telling.

I see no reason why it should not turn out to be hardy, as it comes from the same locality as *B. uniflora*. In a cool vinery it flowers with me in January and February, and is very floriferous.

Isleworth.

A. WORSLEY.

[An illustration of this plant appeared in our issue of March 3 (p. 162). If it proves as hardy as *Brodiaea (or Triteleia) uniflora*, it will be of much interest and value.]

LELIA ANCEPS HYBRIDS.

AS far as we know, there are only three garden raised hybrids produced from the influence of *Lelia*

anceps, and these have been derived from the dark section or typical forms. In addition to the garden raised hybrids, there are the supposed natural hybrids *Laelia Gouldiana* and *L. Finckeniana*, the latter undoubtedly owing its origin partly to one of the white forms. The natural hybrids were fully dealt with in the last volume of *THE GARDEN* (p. 479), so there is no need for further particulars here.

The first hybrid raised under artificial conditions from the influence of *L. anceps* as a parent was the bi-generic hybrid *Epi-Laelia Hardyana*, derived from the intercrossing of *Epidendrum ciliare* and *Laelia anceps*. It first flowered in Baron Nathaniel de Rothschild's garden at Vienna in 1891. On November 13, 1894, Messrs. F. Sander & Co., St. Albans, exhibited it and received an award of merit for a plant from the same parentage. The habit of growth resembles more nearly that of the *Epidendrum* parent, but most of the growths have two leaves. The scape shows the intermediate characteristics of the parent species. The flowers

raisers, Messrs. J. Veitch and Sons. It was derived by Mr. Seden from the intercrossing of *L. anceps* and *L. purpurata*. This is by far the finest hybrid of this section, and is certainly one of the most distinct and beautiful hybrids produced of late years. In the habit of growth the influence of the *L. anceps* parent is apparent. It is like a glorified form of that species. The long flower-scape also shows the influence of *L. anceps*. On its apex three flowers are produced, which more closely resemble those of *L. purpurata*, but the intermediate characteristics of the parents are plainly defined. The sepals are 3 inches long, rosy lilac, and the petals as long as the sepals, 2 inches broad, pointed as in the *anceps* parent, and also rich rosy lilac. The lip is upwards of an inch broad, the outer margin bright rose, the whole of the central area of the front lobe being bright crimson, veined with a darker shade of colour; the side lobes rosy lilac, shading to yellow towards the centre. At the base there is a suffusion of brownish purple and numerous longitudinal purple reticulated lines, as seen through the base of *L. anceps*. It received a first-class certificate from the Orchid committee of the Royal Horticultural Society on February 27 last. H. J. CHAPMAN.



LAELIA EDISSA (L. ANCEPS - L. PURPURATA).

(Shown by the raisers, Messrs. J. Veitch and Sons, at the Royal Horticultural Society's meeting, February 27 last, and given a first-class certificate.)

resemble those of *L. anceps* in shape and are in colour almost white, only the faintest trace of colour being observed except on the front lobe and tips of the side lobes of the lip, which are crimson-purple. It is a most interesting and desirable addition, and should prove a free-flowering and useful winter-flowering hybrid.

The second hybrid to appear from the influence of *Laelia anceps* as a parent was *L. amena* (*L. pumila*

L. anceps). This interesting little hybrid was raised in Mr. C. L. N. Ingram's garden near Godalming, and was exhibited by the raiser on October 9, 1894. The plant shown was very small, and resembled *L. pumila* to a remarkable degree both in the habit of growth and in the flowers. Though resembling the seed parent so closely, many characteristics indicate the influence of *L. anceps*.

The last of these hybrids (*Laelia Edissa*) to appear is represented in the accompanying illustration, reproduced from a photograph kindly sent by the

to Schwetzingen, near Heidelberg, to take charge of the splendid herbarium of *Gartendirector* Leyher. He remained here for two years; and then, in company with the famous Professor Spenner, undertook his first *Stadtausreise* to the Black Forest. On his return he was appointed to a responsible post, under Inspector Siming and Professors Nees and Eisenbeck, in the Botanic Garden at Poppelsdorf, near Bonn, and he resigned this position before he had held it a year in order to visit the Rhine and Switzerland. His next place of residence after Poppelsdorf was Munich, whence he made pilgrimages on botanical research intent to the Tyrol and Italy. After following his profession in Vienna for a while, he also visited Prague and Dresden. Then he made a brief stay in his native city, which was brought to an end by his acceptance of the office of head-gardener at the Agricultural College in Brunswick. He later acted in the same capacity for Baron von Carnap, but was obliged to leave that nobleman's service owing to

a lameness in one of his arms. Thereupon he returned to Berlin and founded the celebrated nursery, which some time ago he made over to his son Adolph. After the transference he retired to his extensive estate in Friedrichsfelde, but he did not finally settle down until he had gratified his wish to see Paris and Copenhagen and had revisited Italy. It is hardly necessary to add that Herr Demmler is a member of most of the leading German botanical and horticultural societies, and that the fact of his attaining the ninety-first anniversary of his birth in excellent health brought him hundreds of congratulatory letters and telegrams from all parts of the Fatherland.

W. D. CHILD.

Schönberg, Berlin, Germany.

CAMELLIA LADY AUDREY BULLER.

We much regret that in our last issue we should have let pass without notice, until the whole had gone to press, the incorrect form (Lady Buller) in which appeared the name of the wife of the heroic general whose guidance of the most arduous part of the South African campaign the whole country has been breathlessly watching. The name, which of course should have been Lady Audrey Buller, was taken down as it stood, and the error, unfortunately, escaped us till it was too late to correct the mistake. Eds.

PRESERVATION OF CHOICE APPLES.

AN interesting article on this subject appeared in the January number of the Belgian *Bulletin d'Arboriculture, de Floriculture et de Culture Potagère*. It describes the result of some experiments that had for their object the prolongation of the time during which Apples could be kept unshrivelled and in good condition. The operation consisted in the packing away of the Apples in cases filled up with dry sifted peaty powder. The greatest care was taken to ensure that only perfectly sound fruit, without bruise or other injury, should be submitted to the trial. The peat (peat-moss litter was found to answer well) was dried and beaten as small as possible and sifted. The Apples were each wrapped in thin newspaper or tissue paper, and packed round with peat powder. Care was taken that no two fruits should touch, but that each should be isolated by a sufficiency of the peat; the top layer was covered with a good thickness, and the case carefully closed. It is said to be important that the fruit, after gathering, should stand for a certain time in the fruit room till the usual sweating has taken place, whereby the excess of moisture is thrown off. It is then in the best possible state for packing.

It appears from the results of these experiments that, though the coarser kinds of soft Apples lose their flavour, the flavour, colour, and all attractive qualities are perfectly preserved in the case of the best dessert kinds. We are told that the fruits were packed in the beginning of November, but though it was not clearly stated when they were unpacked for testing their quality, we gather that it was certainly several weeks after their usual season of maturity, and that it was the opinion of those who conducted the experiment that it might be possible to preserve the Apples in this way until the beginning of the next season.

Pears were also tried, but with little success, as in the case of this fruit it was found impossible to retard the natural season of ripening; in their case the only advantage secured was that of avoiding shrivelling or accident.

It is well known that there is something about peat of a wholesome antiseptic nature; probably this beneficent quality, in conjunction with the keeping away of the drying influence of the air, has to do with the satisfactory preservation of the fruit.

The same journal, in its issue for February, accentuates the good opinion so generally expressed on the merits of the new perpetual-fruited Strawberries raised by the Abbé Thivolet. The second

of this series, St. Joseph, is becoming known in England, and we shall hope during the coming summer and autumn to hear of the result of its cultivation from gardeners in many different districts. Meanwhile, this has been followed by a still better and more continual bearing variety, named St. Antoine de Padoue, which was obtained by the crossing of St. Joseph with the Royal Sovereign. We may be assured of its merit when we learn that it was awarded a first prize by the Horticultural Society of France, but, meanwhile, we have to learn how it fares with us. For the opinion of good gardeners in this country we shall have yet to wait awhile, as it was only last autumn that it was put into commerce by Messrs. Vilmorin, of Paris.

SOME HARDY FLOWERS AT THE DRILL HALL.

At the Royal Horticultural Society's show in the Drill Hall on February 27 there was, notwithstanding the gloomy weather, a fairly representative exhibition of the hardy flowers of earliest spring. Messrs. Wallace showed the new Iris stenophylla, but the dim light of the room prevented a due appreciation of its pure colour, which is a clear blue, the widened ends of the falls being marked with a deep purple blotch. Its height is about 5 inches, and it was awarded a first-class certificate. Other Irises shown by the same firm were the dwarf yellow I. Danfordiae, I. histrioides, I. stylosa, I. reticulata major, and I. reticulata Krelagei. Other plants on the same stand were Anemone blanda in varied tints, Muscari praeox, and Galanthus Whittallii. Amongst Mr. T. S. Ware's exhibits were Saxifraga Bauseriana and S. apiculata, Adonis amurensis, a form of the winter Aconite (Eranthis cilicica), Hyacinthus azureus, Leucojum carpatium, which appeared identical with the spring Snowflake (L. vernum), Galanthus Elwesii giganteus, and two pans of Cyclamen Atkinsii album and C. A. purpureum. Species of Crocuses were well shown by Messrs. Barr and Sons, comprising Crocus reticulatus, C. Sieberii, C. cruseus, C. Olivierii, C. susianus, C. biflorus, C. chrysanthus albus, and C. c. fusco-tinctus. A good pan of Iris stylosa alba was also exhibited, as well as Cyclamen comm. roseum, C. ibericum rubrum, C. l. roseum, Galanthus Ikarie, C. Fosterii, G. Elwesii, G. robustus, Narcissus cyclamineus, N. minimus, N. Bulbocodium albus, and N. B. citrinus major, while numerous bunches of Lenten Roses were also staged. Of greenhouse plants, the invaluable Primula floribunda was represented in more than one collection, while amongst Messrs. W. Cutbush and Sons' exhibits were Primula denticulata alba, Daphne indica rubra, the sweetly-scented Boronia megastigma and Acacia Drummondii. A number of plants of Clematis indivisa lobata in full bloom were shown by Messrs. W. Paul and Son amongst a large collection of Camellias, while Messrs. Cammell were responsible for an array of well-grown Cyclamens. A fine group of the vivid orange Lachenalia Nelsonii was exhibited by Lord Suffield.

S. W. F.

NOTES OF THE WEEK.

A winter garden for Dundee.—The city of Dundee has decided to spend £5000 on a winter garden, while Edinburgh, which some years ago received a legacy to be spent on the erection of one, lags behind. It seems strange that the latter city, for so long a time famed for its nursery gardens, should be so backward in the cultivation of flowers in its parks, and also hesitate to avail itself of the benefits thrown in its way. R. P.

Acacias in California. Many of the leading sorts of Acacias are in full bloom now (January 20) and in great profusion. They are much healthier and more free from insect pests than ten years ago, and it begins to look as if Acacias would again be planted extensively, for the effect of large masses of the best sorts, on our hill-

sides is magnificent. I send a photograph of a group in the University grounds showing A. mollissima, a favourite Acacia here, growing against a mass of Pines on a gentle slope. They are about twenty years old and in excellent condition.—C. H. S., Berkeley, California, U.S.A.

Sugar Beet.—The Sugar Beet Committee of the Central Chamber of Agriculture have decided to make arrangements for a series of not less than twenty experiments in the growth of Sugar Beet in different parts of Great Britain and Ireland during the forthcoming season, each experimental plot to be at least one acre in extent. As, in certain cases, previous experiments have demonstrated the value of Sugar Beet for the feeding of stock, independently of the value of the root for the manufacture of sugar, this point will be specially kept in view in connection with the proposed experiments of the present year. *Nature*.

Zonal Pelargoniums for a long journey.—Pelargonium cuttings, if taken the right way, can easily be sent long journeys of three weeks or so. The great point is to choose ripe, hard wood and to pack perfectly dry, the only moisture being that contained in the cuttings themselves. It is best to cut extra long, for this reason: on arrival both bottom and top of the cutting are brown and decayed, but a cut of the knife to a new joint shows sound. An expert in tropical gardening from Port Royal Mountains, Jamaica (elevation 2000 feet), was in England not long ago and particularly wanted Pelargoniums of a certain kind from a friend. The cuttings were, however, cut as for home use, and they arrived a sodden mass of brown decay.

The National Dahlia Society will hold its annual exhibition at the Crystal Palace on Friday and Saturday, September 7 and 8. A committee meeting will be held at the Drill Hall, Westminster, S.W., September 25, for the purpose of awarding certificates to seedling Dahlias. The committee will meet at 12 o'clock. A few of the more important classes are for sixty Cactus varieties, not more than two of a sort, shown with their own foliage; twelve varieties, six blooms of each, to be arranged with any suitable foliage in vases, which will be provided by the society. The stems may be stiffened with wires, but no wire frames may be used. The Duchess of Sutherland (patroness) offers a special prize of £2 2s. for the best eighteen fancy Dahlias.

Vitality of Acacias in California.—Few plants introduced into California are as much at home as the Acacias, which readily reproduce themselves in most places. The capacity of the large feather-leaved kinds, such as A. decurrens, A. mollissima (which is often rated as a variety of decurrens), and A. dealbata, to grow when broken down has often proved surprising. I send a photograph showing the appearance (January 18, 1900) of a stump of A. mollissima growing on the grounds of the University of California, Berkeley. This tree was broken off in August or September, 1899, by a wind-storm. It grows on a hill-side in a cañon, and the shallow, rocky soil has not been cultivated for years, but a good many forest trees were set there about 1882 and have grown well. The young growth can be plainly seen near the top. Other buds are developing near the base and at various points around the trunk.—CHARLES H. SHINS, Berkeley, California.

Crocus Sieberii and C. Olivierii.—I had intended writing a note earlier than this about these pretty Crocuses. I am glad, therefore, to see the pleasant and appreciative notice by "F. N. A. G." in THE GARDEN of February 24. They are both a little later here than C. ancyroneus and form charming companions in clumps grown side by side. I once read a reference to C. Sieberii, which said it "is a hardy mountaineer, anticipating all others." This latter clause is not quite literally correct, as it is not the first of the Crocus species to flower. It is, however, such a dainty and hardy little flower that it ought to be grown by everyone who cares for our earliest blossoms, which peer through the snow in a season such as this has been. Your correspondent has, I think, solved the difficulty of describing its colour better than many in calling it of "a peculiar mauve shade," although

even this description is hardly so clear as one would wish. It is sometimes called blue, which it is not. In C. Olivierii, again, we have an orange-yellow of wonderful depth. It is a real orange, and yet wonderfully bright. Like C. Sieberii, the dwarfness of the plant is greatly in its favour when we consider the weather it has to contend against. One is hopeful that notes such as that of your correspondent will bring home to many readers how much they miss by not growing such flowers as these. Crocus Sieberii is, I believe, more variable in size.—S. ARNOTT, Carsbothon, by Dumfries, N.B.

Crocus Sieberii and C. Imperati.—I can endorse all that "F. N. A. G." (p. 149) says of Crocus Sieberii; it is most charming. C. Olivierii I do not know, but will look after it. I think he must live in a very cold region, for with me (near Dublin) C. Sieberii has been in bloom all January on a sunny bank quite unprotected and is still good, though we had some 14 of frost a fortnight ago. C. Imperati under like circumstances was in flower in December, and is now practically over, only the weakest bulbs being in flower. I think C. Imperati varies a good deal; at least, C. l. longifolia does. I got a few bulbs of the latter a year or two ago. Some have the feathering very pronounced and very dark, while others are almost—some entirely—destitute of it, being clear pale buff. The ordinary form, I believe, varies a good deal, too, but I cannot speak from experience, as my stock has all originated from six bulbs and is practically uniform.—G. P.

(Our correspondent "F. N. A. G." writes from Maidenhead.—Eds.)

Mutisia decurrens.—Although I do not happen to possess this pretty climber at present, I have had several opportunities of seeing it and learning something about its ways. I believe that the main difficulty lies in inducing it to take to the place in which it is planted. It is hardy with us in several parts of Scotland. I think the late Mr. Charles Jenner was one of the first to establish it near Edinburgh in his garden at Easter Duddingston Lodge. It did well with him in the open, and, so far as I can recollect, with the lower parts of the plant partially shaded by the other climbers in what the owner called his "climber garden." I find, however, that some have had a similar experience to myself in failing to establish it, even if the plants were strong ones and turned out of pots without disturbing the ball of earth. I lost a fine plant last year, but I am hopeful, from what I have seen of it, that I may yet be more fortunate. Perhaps "T. J. W." will also try again.—S. ARNOTT.

The twin-flowered Snowflake.—Few who know it will deny that the Spring Snowflake is among the most precious of our early flowers. Even those of us who have a deep admiration for the lovely Snowdrop cannot but admit that the Snowflake is in some respects its superior with its exquisite satiny white bells so beautifully tipped with green or yellow outside. The species or variety of Leucojum vernum to which I now refer is among the best of its forms. It is often grown as L. v. carpatium, and is distinguished from the common vernum by its earlier blooming, its taller growth, its larger flowers, its always producing two flowers on a stem when established, and by the deep green of the spot on the tips of the segments. It is a little unfortunate that there are two plants sold under the same name. The other has yellow spots, and generally produces one flower. It is also later in coming into bloom. If one could persuade nurserymen to follow Mr. J. G. Baker's nomenclature in his "Hand-book of the Amaryllidaceae" and call the tall robust form with green spots and twin flowers L. vernum var. Vagnerii, and the form with the yellow tips L. vernum var. carpatium, it would be a gain and save some confusion. I fear, however, it is too much to expect this. I think some readers may like to know that there are two Snowflakes sold under the same name. This year the variety Vagnerii is rather later than usual, but it has had fully open flowers here for more than a week before this (February 28). I always look forward to the coming of its fine flowers.—S. ARNOTT, Carsbothon, by Dumfries, N.B.

Narcissus cyclamineus from Cork.

I went out to see my Daffodil grounds this morning, and to my great delight found several sorts fully open, and in the grass garden got the enclosed in a sheltered spot from seeds merely dropped—not purposely planted; simply accident. W. BAYLOR HARPLAND, *Cork, February 22.*

Snowstorms. The chief damage done by the recent heavy snow has been to the large Rhododendrons. Several of mine have suffered severely, and it may interest you to see the enclosed section of one of the many branches which were broken off. The section measures just a foot in circumference, and was taken at 6 feet from the main stem. Fortunately, it is but seldom that one is able to burn logs of Rhododendrons. A. KINGSMILL, *Harbour Wood, Middlesex.*

[The section of wood sent must have come from a very large Rhododendron, for it measures 4 1/2 inches in its wider diameter. The wood is tough and whitish, and the medullary rings indicate an age of about twenty-six years. Eps.]

Fuchsia globosa outside at Hitchin.

I am much interested in the remarks about hardy Fuchsias in "Answers to Correspondents" of THE GARDEN, February 24. I have here a large plant of hardy Fuchsia which I believe to be *globosa*. It has stood out for twenty years, and has never been cut down and protected at the root in the ordinary way; indeed, the knife is only used on it to remove wood that has died naturally. The last six winters have left it practically untouched, and it is now a large shrub over 7 feet in height and solid in growth. It flowers most freely. This garden is on a chalk hill 300 feet above sea level in the extreme north of Hertfordshire, with a slope to the west. The Fuchsia stands in a border facing due west, with a good wall at the back. F. A. TINDALL LUCAS.

Asparagus tenuissimus.

We have now several forms of the delicate *Asparagus plumosus* in cultivation, all of which have attained a considerable amount of popularity within recent years. The most generally grown is *A. plumosus nanus*, a charming plant in every way. It can, however, only be increased by means of seeds, whereas the pretty *tenuissimus* may be readily struck from cuttings. In this variety the branches are not arranged in a flattened frond-like manner as in *nanus*, but more in the way of *A. plumosus* itself. The variety *tenuissimus* is, however, far more slender in all its parts than the typical *plumosus*; indeed, so exceedingly light in texture is it, that when studded with moisture it appears little more than a cloud of mist. It is of a climbing habit, and is a delightful rafter plant for a small structure. Owing to its being easily struck from cuttings, neat little plants that are extremely useful for many decorative purposes may be formed by putting from four to six cuttings around the edge of a 3-inch pot, and placing them in a close propagating case in the stove. There they root quickly, and after being hardened off may be shifted into larger pots, where they will form globular masses of delicate bright green foliage. Plants obtained in this way retain the dwarf bushy habit for some time, but as soon as they develop strong shoots from the base they mount upward quickly. H. P.

Cytisus filipes.

It would be difficult to find a more graceful subject among the innumerable occupants of the greenhouse than a well-grown specimen of the Tenerife Broom (*Cytisus filipes*), which, though an old plant and, generally speaking, well known, is very rarely met with. It is of free growth, with long slender semi-pendulous branches, which are for the greater part devoid of leaves, their place being taken by bright green shoots. The flowers are white, and borne as a rule in February and March, a succession being kept up for some time. It is not at all exacting in its cultural requirements, needing little more than to be kept free from frost. This Broom is seen to particular advantage when grown as a standard, as the long cord-like shoots have then ample space for their development, and a few good specimens are very serviceable for grouping purposes. To obtain standards it is often grafted on to vigorous seedling stems of its near ally, *Cytisus racemosus*, or sometimes on to the *Laburnum*, but the first named

makes the best stock. Grafting is, however, not absolutely necessary, for seeds are sometimes produced, and when this happens they germinate readily if sown in the greenhouse, and the young plants may then be tied to a stick and limited to one shoot till the required height is reached. Pretty plants, too, may be produced by securing the leading shoot to a stick and allowing the side branches to grow at will, the result being a kind of loose pyramid. H. P.

HOW FLOWERS ORIGINATED IN NATURE.

It is now a fact familiar to all that the parts of flowers are really identical in their nature with leaves and are interchangeable with them. Thus the green Rose illustrates this by having its carpels, stamens, and petals in a foliaceous condition; so that if we wish to speculate when flowers first came into existence we must look



A CORNER OF THE GARDEN AT HOLME LACY.

IN THE GARDEN AT HOLME LACY.

The accompanying illustration shows a view in the beautiful garden at Holme Lacy, Herefordshire, the residence of Mr. Pilkington. The garden is one of the most interesting in the county, and is rich in striking pictures produced by contrast of flowers with the sombre green of well-kept Yew hedges.

back to the first change discoverable from leaves or leaf-scales, which are rudimentary leaves, to floral organs.

The geological history of plants is, however, so imperfect, that nothing has been discovered to throw light upon the origin of flowers. Many reasons exist, however, for believing that the conifers have descended from the higher cryptogams, such as Ferns, plants like *Welwitschia*

and Cycads, but at present we can only speculate. The conifers probably gave rise to ordinary dicotyledons, but the links are wanting. When we examine the male inflorescence of the Cypress and Fir, we find evidence of stamens being constructed out of scales, which remain green in the former, with four yellow anther cells at their base, but in the latter the whole scale is yellow.

Now whence came petals? Here we are on safe ground, for the Water Lilies illustrate the process: as well, indeed, does the ordinary procedure in the production of double flowers, for we find the filaments widening and the anthers disappearing by degrees till a stamen is represented by a petal. What induces the change to arise? That the alteration is the result of a response to some external influence seems obvious, but how Nature does it, is a question we cannot answer.

There are two kinds of stimuli. One follows on the visits of insects mechanically probing and irritating the flower in search of honey or pollen as food. The other consists of the external physical conditions of water, soil, and climate generally. If it be asked what flowers are the most primitive in type (apart from conifers), one would say such as the *Ranunculus* family, because the stamens and carpels are numerous and spirally arranged like leaves on a shoot, while entire freedom prevails throughout the flower. Cohesion, *i.e.*, union between the parts of the whorls, and adhesion, *i.e.*, union of different whorls, are entirely wanting. Both kinds of union are regarded as of a later or more advanced condition in flowers. Hence the usual order adopted in the classification of plants according to the natural system corresponds to a considerable extent with the supposed order of their evolutionary history. Thus dicotyledons have four great groups of orders. The first has all the petals free; the next has the petals adherent to a honey-secreting disc, called the receptacular tube; the third always has the petals coherent into a tube; while the fourth, called "incomplete," contains plants which are probably in all cases degradations from some members of the preceding groups. They have no corolla at all.

The next point to observe is that when petals were first made they were all alike in the same flower. The corolla is then called "regular," as of a Buttercup. Subsequently some became irregular, as Larkspur and Aconite, *Salvia* and Dead Nettle, Snapdragon and Foxglove. The question arises, How did their changes come about, for all irregular flowers have undoubtedly descended from regular ones; to which, indeed, they frequently revert, as in the terminal blossom of a spike of Larkspur, Foxglove, Horse Chestnut, Pelargonium, &c.? The probability is that the irregularities of all sorts are due to the irritations set up in the flowers by the insects themselves.

The first point to note is that irregular flowers are arranged up a stem so close to it that insects can only visit them from the front, but regular flowers, being terminal, can be approached from all points of the compass. Special adaptations are then correlated with their positions, such as the frontal lip, which acts as a landing place, as in Labiates and Orchids. It may be observed that in some of the latter (Orchids) the inferior ovary having no central axis, so to say, gave way under the weight of the insect and became twisted, thus acquiring strength, but the consequence was that the posterior petal now fell in front, the result being that this petal, and not the anterior one, enlarged and became the landing-place. If there be no exactly anterior petal in front, then the stamens undertake to carry the insect.

This they do by becoming declinate—that is, by inclining downwards and then turning upwards again. They then become strong, elastic springs, as in *Rhododendron*. The honey-glands will be found to be always localised in irregular flowers at the base of the flower, just where the proboscis of an insect will find it, whereas in regular flowers the glands occur all round, as in *Geranium*, or from a circular trough, &c., as in the Raspberry. "Guides" consist of extra streaks and spots of colour on the petal exactly over the position of the honey-gland, and are due to local irritations with special increase of colouring matter. These are the more obvious correlations between the structures of the flowers and the insect-visitors.

The actual minutest structure of the sepals and petals often shows a further response to the mechanical forces exercised by the insect. Thus, in the Labiates the tubular calyx, which is composed of five coherent sepals, ought to have only five ribs, *i.e.*, one dorsal or midrib to each. To strengthen it, however, as a support

flower rather than to the stigma of the same flower. That plants respond readily to mechanical strains by altering their internal anatomical structure is well known. Thus, if a weight be attached to a small growing stem just sufficient not to break it, in a few days it will have added supportive tissues to meet the strain; indeed, more than sufficient to bear a much greater weight than it could have done if left alone.

It is by the accumulation of facts such as the above, as well as others, that the belief that the irregular flowers have been derived from regular ones is confirmed, and that it has been brought about by the actual insect-visits.

Next, as to colours. As Pine trees have yellow anthers, it would be reasonable to infer that yellow is the first result of a change from green chlorophyll. Red follows yellow, and is probably a result of insect stimulus, as also, as stated, are the extra guides on the petals. After red comes purple, and then, finally, blue. White may occur anywhere in the series as



ANEMONES AT HOME IN SOUTHERN ITALY.

for the corolla tube, five more are usually added up the coherent margins. But in such a flower as the *Salvia*, which has to support a heavy insect on its enlarged lip, additional cords or ribs are added just where the strains are greatest. The calyx is almost bi-lobed, as if stretched with a tendency to tear, while the distribution of the cords will be understood as follows: *D*, being original dorsal or midribs; *M*, marginal cords; and *S*, a supernumerary one in front, where the strain is greatest of all. As the joint result of the alteration in the corolla and positions of the stamens, the anthers become situated so as to dust the insect in such a spot where the stigma may strike it when entering another flower. Hence, all irregular flowers, and, indeed, all regular ones when conspicuous, are thus capable of having their pollen transferred to another

being the arrest of all colour, as in the Water *Ranunculus*, which retains the yellow at the base of the petals only. Brightly coloured flowers often revert to yellow, as the var. *citrina* of the crimson *Adonis*. Various *Chrysanthemums* sport, *i.e.*, revert to yellow, that being the colour of the original species, *C. indicum*. As an example of red advancing to blue there is *Anagallis arvensis* var. *caerulea*, the corolla of which retains the red in the tube. Lastly, some flowers have become degraded in consequence of the absence of the insect to stimulate and keep up their conspicuous features. The size is then dwarfed; the petals nearly or quite disappear; the stamens are often reduced in number. No honey-glands remain, and the flowers fertilise themselves, sometimes never expanding at all. The reader is probably familiar with such common weeds as Groundsel, Shepherd's Purse, Chickweed, Knot-grass, cleistogamous Violets, &c.

GEORGE HENSLAW.

OUR GARDEN PLANTS AT HOME.

ACANTHUS MOLLIS LATIFOLIUS.

This plant of noble foliage is of frequent occurrence through Middle and Southern Italy, Northern Africa, and other regions adjoining the Mediterranean. In hollow, half-shady places, in the cool bottoms of rocky valleys, at the foot of mountain masses, may be found the great sheets of its magnificent foliage. The leaves are broadly displayed to view by the arching of the midrib, which also so disposes them that the blue of the sky is reflected on much of the polished surface, while the remaining portions show their local colour of full rich green. The great leaves all come direct from the root, and from among them the flower-stems shoot up straight and tall, their upright carriage in striking contrast to the arched bearing of the foliage. The hooded flowers are of a tender white with a purplish tinge, which is repeated in the protecting hood. They spring rather thickly from bracts armed with spines so stiff and sharp, that the flower-spike is bad to handle. As the blooms give place to the rounded fruit the size of a plump acorn, the stiff, protecting hood remains and shelters it from the autumn rains.

Like other plants that are natives of Southern Europe and yet are hardy in England, though at home they like a shady place and the cooling nearness of great rocky masses or the mouth of a cave, as in our illustration, with us they must have all the warmth and sunlight we can give them. A bank of deep light soil, where their long, thick, thong-like roots can go down a couple of feet, seems to suit them best. They are noble plants anywhere, but perhaps look finest at the base of a bold rocky bank. They also associate happily with stone seats or any wrought stonework: indeed, the leaves of this noble plant have a long and honourable association with sculpture such as no other growing green thing can boast. For the beauty and graceful dignity of its form was quickly appreciated by the ancient workers in marble, and when the earlier orders of architecture had progressed from the rude and massive Doric to the stately Ionic, and when this had led to the more graceful and highly ornate Corinthian

and the still later Composite, in the two latter orders it was the Acanthus foliage that gave its form to the richly chiselled ornament of the capitals and to the enrichment of the sculptured ornament of frieze and architrave and much else of ornamental detail on many a building or other object of public dignity or domestic utility. And, again, in the Middle Ages, when the fine arts arose again upon the basis of the teaching of the great artists of ancient Greece, and those churches and palaces and gardens were built and made, and those pictures were painted that are still among the greatest of art treasures, again the beauty of the Acanthus is recognised, and its ever-recurring form runs through all the best of the ornament of the Italian Renaissance. In marble, in bronze and iron, in delicate working of silver and gold, in cunningly carved wood-woodwork of throne, choir-stall, and canopy, and in every detail of the interior of palatial dwelling, of municipal building or of vast cathedral; wherever ornament rightly applied grew out of structure—not only in marble, wood and metal, but in painting and pottery and in woven fabric—the noble lines and forms derived from the Acanthus grew and thrived, conceived in adaptation of suitable use by the brain of the artist, and wrought in the same spirit by the sympathetic hand of the craftsman.



ACANTHUS IN MARBLE CAPITAL OF AN ANCIENT COLUMN.

TREES AND SHRUBS.

CATALPAS.

THIS genus of large deciduous trees is represented in both the eastern and western hemispheres and contains about a dozen species. Only five of these are at present in cultivation in Britain or are known to be hardy, two being natives of North America and three of China. The Catalpas are some of the most striking and beautiful of all hardy trees both in regard to foliage and to flower. The leaves are large and bold in outline, and the flowers borne in large terminal panicles towards the end of summer. Catalpas love a rich soil and abundant moisture. They are particularly well adapted for planting on the margins of ponds and water-courses. All the species have this peculiarity: they never form a terminal winter bud. In consequence of this, every shoot branches at its apex into two or three every spring, with the result that the trees naturally acquire a broad, spreading habit. This is especially apparent in the case of isolated trees growing on lawns—a position, it may be mentioned, in which Catalpas are seen to exceptional advantage.

In the forests of North America, where they are drawn up by other trees, the Catalpas occasionally attain to heights of 50 feet to 100 feet. In gardens it may sometimes be advisable to help them to reach a moderate height by keeping them to a single lead when young. All the species can be increased by cuttings of the roots or of the fairly-matured leafy growths.

The wood of the American Catalpas, although comparatively soft, is valued in the United States because of its quality of resisting decay when in contact with soil or water.

C. BIGNONIODES (SYN., *C. SYRINGEFOLIA*),
INDIAN BEAN.

Having been introduced from North America in 1726—more than a century in advance of any

other—this species is by far the commonest and best known of the Catalpas in Britain. It does not often attain a stature of more than 30 feet, although in its native woods it is met with twice as high. The broadly ovate leaves are in healthy trees of mature age about 6 inches long and 4 inches to 5 inches wide. The flower-panicles are erect, branching and pyramidal, frequently 1 foot in diameter at the base. The flower is 1½ inches across, with a broad, bell-shaped base, the reflexed limb being elaborately frilled. The colour is a creamy white, blotched with yellow and spotted with purple in the throat. The thin kidney-bean-like fruits are 9 inches to 12 inches long, but in most parts of the country are only produced after exceptionally sunny seasons like that of 1899. It flowers in July and August. This tree occurs in the South United States, and was figured by Mark Catesby in his "Natural History of Carolina" as long ago as 1731.

The following varieties are in cultivation: *Aurea*, with rich yellow foliage; *nana*, a remarkable low shrub, 2 feet to 3 feet high, which never flowers, and must therefore be regarded as a curiosity merely; *purpurea*, with purple-tinged leaves and shoots.

C. BUNGEI.

Whether the true *Catalpa Bungei* is in cultivation at the present time is very doubtful. Professor Sargent during a recent visit to Kew expressed the opinion that it was not, either here or in the United States. Certainly the plants supplied by some nurserymen under this name have nothing at all to do with it, being, as a rule, the dwarf variety (*nana*) of *C. bignonioides* that has already been alluded to. Even plants raised from seeds imported from China have proved to be *C. Kämpferii*. In any case, the true *C. Bungei* has not yet flowered in Britain. It is a tree 30 feet high, with the leaves either entire or lobed, as in *C. Kämpferii*, but of more triangular outline and with a longer, more acuminate apex. They are 4 inches to 8 inches long and about three-fourths as wide. The flowers are white, spotted with purple, they as well as the panicles being larger than in *Kämpfer's* *Catalpa*. It is a native of Northern China.

C. CORDFOLIA (SYN., *C. SPECIOSA*), WESTERN
CATALPA.

Whilst this species is nearly allied to *C. bignonioides*, it differs from it in geographical distribution and in the characters of leaf and flower. The leaves are ovate, but drawn out into a longer, more tapering point than in *C. bignonioides*. The panicles are larger: the individual flowers are also larger (2 inches or more across), but not so numerous. The corolla is white, with yellow blotches on the



ACANTHUS IN IRON TORCH-BRACKET, 16TH CENTURY

throat, but the purple spots are not so abundant. It flowers about a fortnight in advance of *C. bignonioides*.

This is probably the finest species of Catalpa, but is not yet well known in Britain. In the United States it is often 50 feet high, and in exceptional cases over 100 feet. It inhabits a more western region than *C. bignonioides*, and is found in the States of Kentucky, Louisiana, Tennessee, Missouri, Texas, &c. Professor Sargent, in his "Silva of North America," records a remarkable instance showing the power of the wood of this Catalpa to withstand decay when submerged in water. In 1811, owing to an earthquake, a large area of land in Missouri on which this tree and others were growing became submerged. All the vegetation was destroyed, but in 1878—or 67 years after—the trunks of the Catalpas were found to be still sound, whereas the other trees that had been contemporary with them had long since decayed and vanished.

Owing to its having been for a long time confounded with *C. bignonioides*, this species was probably introduced unknowingly, and it may exist in some gardens under the other name. It is said to be somewhat the hardier of the two.

C. FARGESII.

This is a new Chinese species introduced to France by Mons. Maurice de Vilmorin, and sent by him to Kew in 1899, where it is now growing. It will probably be a few years before it flowers, and nothing can as yet be said as to its value, except that in the size of its leaves it is fully as striking as any of the older species.

C. HYBRIDA (C. CORDIFOLIA × C. KEMPFERII).

It is now about twenty-four years since this hybrid Catalpa was raised by Mr. John C. Teas in Indiana, U.S.A. It has hitherto been generally known as Teas' Hybrid. In the United States it appears likely to prove the finest of all the Catalpas, exceeding even *C. cordifolia* in the vigour of its growth and the size of its panicles. Four hundred flowers have been borne on a single panicle; they are of the usual white, with yellow and purple markings on the throat. Generally the plant is intermediate between the two species that share its parentage.

C. KEMPFERII.

Whilst this species named in honour of Engelbert Kempfer, who visited Japan in the seventeenth century bears a strong resemblance to the American *C. bignonioides*, it is neither so fine nor so ornamental a tree. It has naturally the same rounded habit, but is never so large. The leaves differ in frequently being more or less lobed. The flowers are about 1 inch across, with reddish brown and purple markings. Kempfer noted this tree in Japan, and until a recent date it was regarded as indigenous to that country. Recent travellers have, however, concluded it to be (like many other popular trees in Japan) of Chinese origin solely. It is frequent in the grounds surrounding Buddhist temples in Japan. Introduced to Europe by Siebold in 1819.

Arboretum, Kew

W. J. BEAN.

THE ROSE GARDEN.

ROSA RUGOSA AND ITS BEST VARIETIES.

THE original species of this valuable tribe of hardy Roses, according to Thunberg, is a native of Japan, although Lawrence mentions it under the name of *R. ferax*, as indigenous to the Caucasus and having been introduced from thence in 1796. To show the wide distribution of this tribe, not long ago a variety of the species was found growing on the Rocky Mountains of America, and is now known as *America*, having been sent to this country by the Harvard University. It is a very large open flower, crimson-lake in colour. The whole tribe are deserving of a more extended popularity than they have hitherto commanded.

When we consider that they will endure with impunity 40° or more of frost, that the collection now consists of kinds bearing flowers almost as large as Hybrid Perpetuals, it seems inexplicable there is not a larger demand for them. It is true the type *Rosa rugosa* and *R. rugosa alba* are being extensively planted in game preserves, and it is found that pheasants and partridges are very partial to the seeds and pulp which these Roses so freely produce enclosed in their handsome fruit. Plants of the white and rosy-erimson coloured variety may be quickly raised from seed sown as soon as ripe. A nice sheltered, well-drained bed of loamy soil in which some sand has been freely incorporated would be all that is required. Sow in very shallow drills, keep the beds clear of weeds, and above all protect them from birds and mice. Perhaps two-thirds of the seedlings will be of the rosy-erimson variety even if the seed be sowed from *R. rugosa alba*; but should the latter form be most desired, plants may be propagated quickly by budding, or, better still, from layers put down in July. These *rugosa* Roses are conformable to a variety of uses, but perhaps the best manner they can be employed in is as hedge plants. Instead of planting so much Privet, one would beautify the garden or park far more delightfully with *rugosa* Roses than with that malodorous shrub. Certainly these Roses are not evergreen, but their foliage is so attractive during summer and autumn, the bold green leathery leaves being unmarked by insect or blight, that the planter obtains ample recompense.

There are numerous floral gems that require a sheltering hedge to screen them from cutting winds. What more suitable subjects are available than these *rugosa* Roses? They are the most accommodating of shrubs, flowering as freely if pruned hard as they will if left unpruned. I have seen the type forming a hedge fully 8 feet in height, and a perfect picture when adorned with its numerous and showy fruits, which, by the way, make a good conserve. As a background to the herbaceous border, the orange-scarlet of the fruit would give a tone of colour very acceptable in the autumn months when so much yellow abounds in the extensive *Helianthus* family. When planted as hedges, great watchfulness is necessary to see that the plants produce some new wood each year, otherwise the bottom part of the hedge will be devoid of foliage. A shrub loses a good deal of its attractiveness when it becomes bare of foliage and branches towards the base. If a tall wall-like hedge is desired, a double row of bushes could be planted, which would enable the planter to prune the front row rather severely, and thus hide the want of foliage of the back row, or the second row might consist of the lovely single rather dwarf growing *Rose Andersonii*, whose glowing fruit in autumn would harmonise so well with its more vigorous companion.

Perhaps some day our great railway companies will awaken to the fact that it is possible to beautify the banks abutting the iron roads which they control with cheap flowering shrubs, and one of the many lovely subjects for the purpose would be *R. rugosa*. For open spaces, recreation grounds, and such like places our corporate bodies would find in these Roses a shrub well suited to plant therein

in conjunction with Lilacs, Weigelas, Ribes, Spiræas, &c. As standards the double forms are a grand success on account of their great hardiness and ability to resist violent gales. One kind, *Blanc double de Courbet*, deserves special mention: it is the purest snow-white flower possible to find among hardy shrubs. This would certainly be the variety above all others that I should recommend if asked to name the best *rugosa* Rose. Picture a great spreading head of grey, half-pendulous growths covered with thick, leathery, rich myrtle-green bunches of exquisite semi-double white flowers, and one can obtain some idea of the beauties of this Rose, but no verbal description can do justice to the wonderful formation of the pretty elongated buds which only need a little longer stem to make them commercially valuable to the florist. This variety is deserving of a conspicuous position on the lawn. Give it a good start by trenching the ground and affording some good lasting fertiliser, and it will be an object of beauty for many years. One cannot expect fine showy flowers and fruit if the plants are neglected. New wood must be encouraged by cutting away old branches now and then before the plants start into growth, and in fact similar cultivation should be afforded as is given to what many consider superior Roses. A pretty cone-like mass of *Blanc double de Courbet* or *Mme. G. Brant* could be produced by planting a standard in the centre of a bed and about three bushes around it. The standard if possible should be double budded, with a space of 15 inches between each bud. An alternate plan would be to plant out a strong bush and when established layer three or four branches round, the layers, of course, remaining undisturbed. When necessary, a centre stake could be afforded to the older bush, so that in time a splendid pyramid of snow-white blossom would be the result. I am not sure that I care for the majority of double forms of *Rosa rugosa* which seem to be the aim of our hybridisers. That the flowers are more lasting cannot be denied, but we are in danger of losing one of the greatest charms this tribe has hitherto possessed, and that is their gorgeous fruit, and, moreover, there are double Roses galore in the Hybrid Perpetual and other groups. The only reasonable excuse for producing these double kinds is that we are providing the dwellers in the vicinity of smoky districts with a class of Rose which, by reason of its leathery foliage, smoke does not seem to harm, and its extraordinary hardiness may in some degree replace the Hybrid Perpetuals, many of which are not perfectly hardy.

I have nothing but praise for *Blanc double de Courbet*, but then it has its pure colour, fragrance, expanded shape, and thick petals to recommend it, and it is also a grand autumnal blooming variety. The double *rugosa* blossom rather earlier than the Hybrid Perpetuals. Last June the fine hedge of Mrs. Anthony Waterer at the back of the Rose dell in Kew Gardens was covered with a perfect mass of its rich crimson blossom simultaneously with many of the best single Roses, such as *Rosa lutea*, *Carmine Pillar*, *macrantha*, *hispida*, &c.

If *rugosa* Roses would thrive well upon railway embankments, obviously they would do so by the margin of lakes, or upon the small islands formed in the centre of ornamental pieces of water; they would if upon their own roots hold their own in the wild garden, and would certainly grow under trees as well as the Scotch Roses if care were taken when planting that their roots were provided with a good depth of soil, and not placed too close to any strong-rooting tree. Until recent years *rugosa* Roses consisted mainly of dull, cloudy, magenta-coloured varieties, excepting the whites. There is said to be more than one form of the original type, but I have never met with it. The profusion of yellow stamens in the single species is not the least of its many attractions; admirers of this group would warmly welcome a single form of *rugosa* with flowers as brilliant as *Bardou Job* or *Gloire des Rosomanes*.

Atropurpurea has the appearance of being a move in this direction. A good yellow would also be much appreciated. I think with patience this might be evolved by cross-fertilising *R. rugosa alba* with *R. hispida* or *R. lutea*. There is in the

Hardy outdoor flowers at Christchurch. The following plants are now in full bloom in the Riverslea Nursery, Christchurch: *Cyclamen coum*, *Iris Krelagei*, *L. hystrioides*, and a batch of seedling *L. reticulata*, amongst which are some very fine flowers; *Rhododendron praecox*, *Leucopium verum*, *L. x. carpatium*, and a very early form of *Sedum sibiricum*, which has been in bloom for the last three or four weeks; *Helicorus colebiens*, *magnificus* and other varieties. H. M.

Kew collection a beautiful rich crimson single kind with a white centre, received from the Arnold Arboretum. The vagaries of hybridised Roses are very remarkable: a similar cross to the above produced the double form Mrs. A. Waterer. I also saw at Kew an exquisite hybrid between *R. rugosa* and *R. macrantha* which had lovely clear pink single flowers and all the peculiarities in growth of *R. rugosa*.

Another interesting hybrid from the Arnold Arboretum was one which resulted from a cross between *R. Wichuriana* and *R. rugosa*. It possessed the procumbent habit of the former and gave one the impression of being a creeping variety of a Penzance Briar. The colour was a soft rose, foliage leathery but glaucous, and wood very spiny. I thought it one of the loveliest single Roses in the gardens at the time of my visit. *R. rugosa calocarpa* has never in my opinion deserved the high encomiums of the raiser when it was introduced. Perhaps in a drier atmosphere its fruits are more brilliant, certainly they are very abundant, but no larger, if so large as the hedge Briar, and they damp off so quickly in the autumn that a spray of fruit is invariably marred thereby. One of the finest kinds to grow, were fruit the sole consideration, is *Souvenir de Christopher Cochet*, but its flowers are very dull in colour. *Delicata* has been much admired; it is a very continuous flowering single variety of a most beautiful delicate soft rose colour. Among the oldest of the semi-double and double kinds *Mme. Georges Bruant* is a very worthy variety; although it does not produce seed-pods, its long Niphetos-like bud has accorded it a high position among garden Roses, and it should be extensively planted for its buds alone. It is a splendidly vigorous grower, equally adapted as a standard, pillar or bush. *Mme. Georges Bruant* was raised from a cross between *R. rugosa* and the Tea Rose *Sombreuil*, and was twelve years ago thought to be the commencement of a new race, but few have followed in its train.

Belle Poitevine is a very free-flowering variety, in fact almost always in flower. Its sweet, double, rose-coloured blossoms are much brighter than the usual run of this colour among Roses. The three following take their names from Hungarian mountains. They are really most interesting hybrids at present little known in England. *Hargita* has charming rich pink semi-double flowers not unlike a deep coloured *Blairii* No. 2, and the wood resembles in its prickles and ruby colour that of the old Rose named. *Tamogled* is very double; the buds are large and of a bright pink colour. *Jelina* is showy, having large double reddish-carmine flowers and magnificent foliage. *Thusaella* has splendid deep petals in colour not unlike the buff-pink *Bombon Queen*. These last four Roses are reputedly derived from crosses between *R. rugosa* or *rugosa alba* on the one side and yellow Tea Roses on the other. *Schneelicht* is an extra vigorous-growing kind with large snow-white flowers and very thorny wood. *Consul F. Meyer* promises to become one of the most valuable of double *rugosas*. It has buds resembling *La France*, and the large flowers when fully developed have a likeness to *Baroness Rothschild*. A reference was made to this Rose in "Notes from a Swiss Nursery," which appeared in *THE GARDEN* of October 7 last.

Fimbriata is one of those choice novelties found in nearly every tribe. Its pretty flowers, though small, are charmingly fimbriated like a *Primula* and are white in colour, shaded with the palest blush-rose. It bears distinct traces of its parentage, having resulted from a cross between *Rosa rugosa* and the Hybrid *Noisette Mme. Alfred Carrière*, the wood resembling in a great measure that of the latter. It is not at all showy on the plant, but must be cut and arranged to obtain the effect of its rare beauty.

Mme. Charles Worth, although the last to name, is certainly not the least. As a decorative shrub it is grand, yielding as it does large bunches of semi-double rosy-carmine flowers which are, moreover, very sweet. Its foliage is also most attractive.

PHILOMEL.

DAFFODILS UNDER GLASS.

SHAKESPEARE evidently had the kindly and patriotic trait which makes us attribute to all our English springs the graces which in stricter truth belong to only some of them.

"When Daffodils begin to peer . . . why then . . . the sweet o' the year" is too often deferred *sine die*. February can be a most exquisite month: a month of broad, soft airs which make us inland think of the sea; a month of reddening twigs and yellowing catkins, of cooing ringdoves and shoots up-breaking through the moist soil. But there has been little such amenity in the turn of the present year, at all events here in the uplands of North-west Hampshire. Even indoors the cool reflected light from the white expanse without gives to the rooms an uncomfortable and disproportionate look of too much ceiling. Outside there has supervened an ebb and flow of chilly rain and snow, slush and frozen slush ever since the deceitful gold of those indomitable December Aconites inveigled us into the spring mood. A full month ago the Daffodils were pushing into sight with sturdy leaf wedges and here and there a green bud. But to-day in the third week of February not even the spears of *Iris reticulata* or the long-necked

upon a time a neighbour's head gardener, an excellent man, though of the ancient grape, melon, and cucumber order, came to see my Daffodils. After making the round of all my seedling beds and dwelling observantly on my *chets-d'œuvre*, he took his leave in these words: "Well, all I can say, sir, is this: some of these flowers of yours deserve a pot; they are well worth a pot, sir." This eulogy was scarcely appreciated at the moment, but I understand now how encouraging it should have been. The old man had the eye of a life's experience—he has long ago passed away, I hope to the *Paradisus* of worthy gardeners—and knew the marks of a good flower from one important point of view. He meant that these Daffodils had been educated in size, symmetry, and colour to the rank of a florist's flower, a flower deserving of a little portable garden of its own, in which to be handled and fondled and turned about and set on a shelf for admiration or comparison with its rivals. Let no one scorn the notion as cramped and petty. The broader vision of profuse colour and form in our gardens resolves itself largely in its "ultimate analysis," into spike and cluster and solitary bloom which are our heritage from the restricted plodding of the florist proper.



A SEEDLING BETWEEN THE WHITE HOOP PETTICOAT AND NARCISSUS TRIANDRUS GROWN IN A POT

buds of *Crocus Imperati* can top the thick coverlet of snow.

In such a season, when the skies have chalked up "No thoroughfare" everywhere on path and border, the most uncompromising outdoor gardener may gladly betake himself to a refuge and a foretaste of spring in his greenhouse. No one can out-believe me in the creed that the hardy plant, at large in free air, is lord and master of all. Nevertheless, my five or six score pots of Daffodils are yearly a delight in the inclement days of February and March, and serve to add some three weeks to the reign of my favourite flower. And there is here the least possible artificiality: indeed, the film of glass is almost all. Fire-heat is used either not at all or only just enough to prevent actual freezing. For perfection of growth, the leaves not drawn and the flowers not flimsy—Daffodils should never be forced—it is surprising how far they will outstrip their open-ground brethren by a mere exclusion of frost. My nostrum for successful cultivation can be put into few words. Plant in August in loam, leaf-mould, and burnt earth in equal proportions, never using larger than 7-inch pots. Plunge in ashes until the shoots appear, then keep in cold frames, the foliage close to the glass, until the buds are almost opening. For the pots I am inclined to apologise. Once

The pleasure prepared in this little glass shelter, while the great outdoor Daffodil hosts are hanging back only *pour mieux sauter* presently with a rush, is twofold. First, there is this same close and affectionate florist's study of the points of the nobler individual blossoms—we can set each in the best light and at the best height. Every lover of Daffodils has been taught by plantations on steep banks and by cut bloom on a mantel-shelf that they look best on or about the eye-line. We can turn each to learn its features in profile, three-quarter and full face. Here are seven great ivory-white flowers of *Mme. de Graaff* in one small pot. Their ample rolling back at the brim, as though she were lavish enough of her robe's costly material to give it an extra fold, is a sure sign of vigour. There need be no fear of growing quite precious bulbs in this fashion, for with the simplest craft of management they will be as happy next year in the open ground as if they had never left it. The secret lies in protection of every leaf from injury after flowering and plentiful watering until they turn yellow. There is ceruus, smaller, but scarcely less lovely than *Mme. de Graaff*. In texture and tone its solid, drooping flowers are suggestive of some white stone of jade-like consistency. The *Leedsii* kinds are no less beautiful under glass

than the white Trumpets, but the least tall of these, as also of the coloured *incomparabilis*, should be chosen for this use. Leedsii Mimie Hume has a purity it never attains to out of doors white, except the faintest possible tint in its fringed cup of a colour like the pale side of a Peach. The large, shallow crown of *incomparabilis* Princess Mary shows the same suffusion of rare cinnamon-orange which it draws from the salt breezes of Scilly, but entirely lacks in my garden. Here is the new bicolor Victoria, wonderful in size and substance, a flower which seems quite to demand glass for development and clearing of its complexion. The glorious *maximus*, a Daffodil of pure wild blood, neither touched nor superseded by the florist's hand, revels in the moist air of its glass cage, and its great flanged golden cups continue to swell for a fortnight after their first unfolding.

The second delight, though the first in order of time, is the flowering in perfection of those smaller, early wild Daffodils which too often fail out of doors, or are missed by reason of what my man calls "scandalous" weather. Few things are more exquisite than a pan of the frail white Hoop Petticoat, or that other *Corbularia* of luminous pale citron. The humble

stature of *N. minimus*, whose tiny flowers imitate in their variety nearly every form of the larger Trumpets, exposes it to battering and soil-splashing by every storm, and minor fares but little better. The little Pyrenean *moschatus* is most delightful of all to establish, and has a Nerine-like glitter as of diamond dust in the pure white of its throat. Certainly let all these be grown also in the borders on the chance of halcyon weather to beguile them with a counterfeit of their Spanish or Algerian homes. But meanwhile it is more comfortable to "gloat" over their perfections—to make use of my friend Mr. Ewbank's expressive verb—in the greenhouse than outside with apparatus of bell-glass and mackintosh.

Here is *pallidus praecox*, no two of its flowers alike, but all taking on, in the calm of this retreat, a more refined refinement of their delicate tints of creamy straw. There are *Tazettas* but enough is as good as a feast, and to-morrow when we open the door the air shall be as of mid-April.

GEORGE ENGLEHEART.

AN ARTIST'S NOTE-BOOK.

CLEMATIS INDIVISA LOBATA IN POTS.

THIS is one of the most useful of winter flowering plants. It is easily grown and blooms when flowers are scarce. When planted out in the greenhouse it often gets attacked by mildew, and then it is almost impossible to keep it in health for any long period. The best way to grow this plant is in pots, putting them in 10-inch or 12-inch ones, and using a good rich turfy loam with plenty of drainage. About the middle of May stand the plants out of doors in a good open situation, securing them well to stakes and keeping the long shoots well apart, as they are apt to get entangled. This causes unnecessary trouble in the autumn. When taken into the greenhouse during the summer I give the plants a liberal supply of manure water with a little soot. This helps them considerably. By the end of October the plants will be covered with clusters of flower-buds, and they are then taken into the greenhouse, carefully trained to the rafters, and if given a little warmth, by the first week in January they will be a sheet of lovely white flowers, with the leaves of a dark green colour and quite free from mildew. After flowering, keep the house as cool as possible, and never allow the plants to be neglected. This Clematis is well worth all the labour that can be bestowed upon it. T. B. FIELD.

Ashwellthorpe Hall, Norwich.

[The accompanying illustration was made from a plant in Messrs. Wm. Paul's nursery at Waltham Cross. A group of this beautiful flower was shown by this firm at a recent meeting of the Royal Horticultural Society.—Ebs.]

SAXIFRAGA BURSERIANA.

HINTS ON ITS CULTURE.

IN the autumn of 1894 I obtained good plants of this beautiful Saxifrage and of its variety *S. B. major*. Both flowered freely in the early spring of 1895, and the extreme delicacy and grace of their white cup-shaped blooms made one feel that they were worth all possible care and attention.

But for a long time after this first success I met nothing but disappointment. Both plants were near the top of a bank, formed by cutting a V-shaped trench to provide shelter for hardy Ferns.



CLEMATIS INDIVISA LOBATA.
(From a drawing by H. G. Moon.)

They enjoyed the sun morning and evening during most of the year, but in winter the evening sun did not reach them, and they never had sun in the middle of the day. My first attempts to bring back the flowers were confined to carefully dividing the plants and to altering their positions upon the same bank. It seems certain now that the blooms of 1895 were due to the fine condition in which the plants were received. But at first I attributed them to the suitability of the position, and was unwilling to change. It was not till the spring of 1899 that I gave up the hope of flowers without some radical alteration, and moved the plants to an entirely different situation. In two respects the new position differs from the old. The Saxifrages now get no evening sun, but they are fully exposed from early morning to mid-day. They have the advantage of a deep, well-drained bed filled with loam, made light by a liberal proportion of mortar and sand. At the back are rocks, and stones are freely distributed over the surface to prevent evaporation.

It so happened that I paid a long visit to the rock garden at Kew last August, and devoted special attention to the Saxifrages. It was comforting to learn that even there *S. Burseriana* had proved a very shy bloomer, and a helpful hint was gleaned by noticing that the spaces between the plants were thickly covered with a layer of small stones. When I next saw my own plants it was plain that their new quarters had already effected a change for the better. With good hope I applied the stone mulch I had learned at Kew, and eagerly awaited the results.

This time there has been no disappointment. Before the hard weather, which commenced a fortnight ago and has broken up to-day (Feb. 15), *S. B.* major was in full bud, and one or two blooms had opened. The frost and snow have bruised the open flower, but the buds are not only not injured, but they have developed considerably while out of sight under the snow. *S. Burseriana* itself is not nearly so far advanced, but it too is forming flower-buds and is full of promise.

Until my plants have been a year or two in their new position I cannot claim to have reached any assured results; but I think I have found their secret in full exposure, good drainage, light soil, and a stone mulch.

C/o, Dublin.

H. K. M.

BOOKS.

THE EARTH LIFE.

IN the star-embellished halls of the world, let none deem that he is poor while he takes to himself the heritage of the ages, and moves like a king in royal participation of the earth life, breathing its breath exhaled from grass and foliage, with the blood of Roses pulsing in his veins."

Of all things Nature is sufficient to itself, and man is either a reverent worshipper or an impudent and ignorant meddler in all life's higher mysteries. All the old nations had respect for the bounty of food, clothing, and the beauty of Mother Earth, ages before cultured Greece bowed the knee to Demeter.

To love and reverence the earth lies as it were at the very deepest root of material things, and in this little book one may find oneself "watching at the floating veils of illusion that shimmer in the spray of waterfalls and in glamorous tree-tops quivering between us and the sun." In its dainty pages "One seeks the thing behind, and sees the world grow strangely filmy and transparent with unreality, in the midst of which one stands, a naked

soul gazing silently from edge to edge of manifestation, over the beautiful waves of phenomena to that which is beauty itself." We listen to the great herons in the sunlit Scots Firs, and see the lights and shadows o'er the flat bogs of Erin, and again we see the flash of Daffodils in the grassy meadows, and breathe the fragrance of wild Roses and Wood Hyacinths ever fresh and fair.

The book throughout is an exquisite collection of poems in prose, and one finds deep rich notes struck in life's music now reminding us of Wordsworth or again of Walt Whitman, but always delicate and tender and true.

The contents consist of ten short chapters under the titles of Fir Needles, Bog Pictures, The Music Making, The Voice of the Sycam, Virginian Creeper, The River Beyond the Mountains, Winter's Trees, A Creeper of the Earth, In Autumn Weather, and Finis. All are most suggestive and charming, but they should be read under shady trees or in the garden during a summer holiday of ample leisure and peace.

The scenes appear to be mostly laid in Ireland and Wales, but the spring, summer, and autumn aspects of tree and flower life touched upon will appeal to all those interested in gardens or in wild Nature anywhere. In the chapter on Winter's Trees we are told that "winter is the long Lenten fast of trees." Again, of "Weeping Birches with branches fine as a maiden's hair, and nun-like in their sweet melancholy keep vigil, perchance say gentle masses, over the graves of thrushes grown tired of play; golden was the hair of the Birches but a short time since, but now it is turned all grey with that watching and weeping in the cold starshine." Speaking of perfume we are told that "In an October twilight the air seemed charged with ghostly fragrances that arise and move wistfully to and fro; these are the souls of flowers but lately dead, come back to look for their petalled dwellings. For the scent of a flower is its little soul, differing from another even as the souls of men; and as for these blossoms that are scentless, one must pity and be very tender, perhaps one day they shall have found a perfume." Once again, "In the scent of Mignonette there is all the sweetness and all the sadness of life," and even when cold and snow have done their worst in garden, wood, and field, yet still there is hope. "Nature in her love chooses ever to take away weary things to rest deep-hidden for a time, to mingle one with the other for building up a newer life. Thus the bodies of trees and of men shall lay them down all brotherly together in their common mother-soil, and the colours of October leaves shall blend once more with the sunlit tints in unborn hair; thus the wild-rose flush which we have loved may but pass to brighten again in June hedges; for the joy of these unborn may glow inside tropic shells or throb across the dove colour of opals; it shall perchance deepen the blush of a future dawn, or the latest rosiest flush over snow peaks, after the sun has gone down. And so it comes forth in everlasting renewal, in the gladness of youth, this pulsing life of the body that is miscalled mortal, moving fair limbs in fullness of health and vigour, sparkling in laughter and smiling through its own April tears, to pass onwards for ever and for ever in ceaseless interchanging and blending with other forms."

Here is a little bit on form *versus* colour that will appeal to many readers: "The relations to

the mind of colour and of form are of so diverse a nature; colour seizes upon the floating emotions and entralls them, but it is a higher part of the consciousness that recognises form; its appreciation necessitates in part the intellectual. The savage who gazes with rapture at a glare of scarlet perceives not the Gothic lines of his own tree colonnades; the colour forces itself by its so evident beauties upon the unmotivated mind, but the loveliness of form is a quieter and a less apparent thing, which must be sought by the finer understanding."

In a word, "Earth Life" is a little book that will set the quiet reader thinking on many of the subtle mysteries of Nature as they exist in garden and field for all who have eyes to see and a mind alert to recognise the importance of apparent trifles, the nebula out of which all things delightful are made.

F. W. B.

The weather. A Weybridge correspondent, writing on February 27, says: "In many respects the weather this month has been very unusual. The rainfall has amounted to 4.59 inches. Snow fell on the 2nd inst., and did not entirely



SAXIFRAGA BURSERIANA MAJOR.
(Drawn at Kew by H. G. Moon.)

melt until February 19. The snow which fell on the 2nd and 13th insts., when melted yielded respectively 1.22 inches and 0.68 inch of snow water. A cold thaw set in on the 15th, and half an inch of rain fell. In the frozen state of the ground it was impossible for the water to run away; hence the Wey and the Thames became in a state of flood. The Wey burst its banks at 11 p.m. on the 16th, rose higher than within living memory, broke the Plough Bridge at Byfleet, and did other considerable damage. The record for sunshine amounted to 35 hours 20 minutes, registered on fourteen days.

Eranthis cilicica (Schott & Kotschy).

Towards the end of last autumn I received from a nurseryman at Haarlem a couple of dozen tubers of a plant under the above name, which he described in his catalogue as being larger and finer than *E. hyemalis* (the well-known Winter Aconite) and very early blooming. These are only now coming into flower about the end of February, so that, compared with *E. hyemalis*, which blooms early in January, they cannot be said to fulfil their promise of extreme earliness. They are apparently very tree-blooming, as, though the tubers were by no means large, every one of them is producing one or more flowers. The flowers are of a fine bright shade of yellow and of a good cupped form, and make an exceedingly pretty edging to a small bed in the spring garden, where perhaps their coming as a succession to the common kind may by many be considered an advantage. W. E. GUMBERTON.

"The Earth Life. By E. Longworth Dimes. London: George Redway, 1899.

GARDENING OF THE WEEK.

KITCHEN GARDEN.

SOWING SEEDS.

WITH the break up of the frost, seed sowing in the southern parts of the country will need to be considered. Of course it is early for this work on a large scale, but, on the other hand, it is well to make a start with such crops as the small early Radishes, Spinach, Lettuce, Turnips, and Carrots.

CARROTS

take a longer time to germinate than many other vegetables; they should have a warm border for the first crop in the open, sowing such kinds as Early Nantes or Sutton's Early Gem.

TURNIPS

should be sown in small quantities for an early supply, using such kinds as Extra Early Milan or White Gem, the latter being of rapid growth, oblong in shape, and of great value for early supplies, as it does not run to seed in heavy soils as do some of the flatter roots sown early.

RADISHES

need so little soil as a cover when sown, that the land will soon be ready for this crop, and a warm sunny border will be suitable. The Earliest of All Radish is a remarkably quick grower with a very small top. There is no lack of good kinds such as the Forcing Turnip varieties and French Breakfast. Growth is assisted by covering the seed bed at night or in cold weather with long dry litter or bracken. The Carter Spinach is a very early variety, and sown now on a south border will give good dishes at the end of May. Sow thinly and in good soil.

PARSNIPS

The most approved mode of culture is to sow as early in the year as possible, so as to obtain a long season's growth, and it is advisable to do so as soon as the soil is in a workable condition. For exhibition roots large size is considered needful, and it is important that the roots be shapely, and though there are but few varieties, and those mostly good, the best flavoured root is doubtless the new Tender and True, which is not so large as the older kinds, but the quality is excellent, and the root is of perfect shape and much whiter in colour than others. This vegetable is not always a favourite, but in hard winters it is valuable. For late supplies, that is from February to April, we sow much later than is often advised; the roots grown thus are smaller, but I think they are more serviceable, as they are not so strongly flavoured, and, being quite hardy, may be left in their growing quarters and lifted as required. If desired, they may be dug and clamped in the open, as it spoils the roots to house or store in a dry or warm place. For large roots the Student and Hollow Crown are reliable. They need ample room—15 inches to 18 inches between the rows and half that distance between the plants.

G. WYTHES.

Syon House Gardens, Beaufort.

FRUIT GARDEN.

VINERIES.

ACTIVITY must prevail from now onwards throughout this section of the forcing department. In the early vinery, as soon as the setting period is past, reduce the number of bunches on each Vine rod to a fair crop, *i.e.*, as many as each Vine can bring up to perfection in the size and colour of the berries without unduly taxing it. The number of bunches left should depend on the size they promise to be; young Vines produce larger bunches and a greater weight of fruit than do older ones, and early forced Vines cannot carry so great a weight of fruit as those started later in the season. Thin the berries by the time they have attained the size of Radish seeds. This is tedious work and requires carefully doing, so as not to damage or dirty the remaining berries. The amount of thinning required depends upon the variety, and whether the berries will be large when

ripe or not. Black Hamburgh may be made thinner than Foster's Seedling, and Madresfield Court more so than either on account of the closer habit of the bunch. All berries should have room to swell so that they are not wedged together when ripe, and yet they should be sufficiently close for the bunch, when cut and lying on a dish, to retain its natural shape. Berries may be left much closer on the top shoulders than on the lower part of the bunch, as they are so arranged that they fall back towards the main stem, which they hide more or less and give the bunch a compact, finished appearance. Clip out the small berries, leaving the largest. With these proper fertilisation has probably taken place, and the largest at this stage will be the same when ripe.

The temperatures may range from 65° by night to 75° during the day, with a rise of 10° from sun-heat. Ventilate cautiously to maintain a growing atmosphere without creating an inrush of large currents of cold air. Close early in the afternoon so as to shut in the sun-heat, and when the weather is mild put on a crack of ventilation at dusk to remain on for the night. Ventilate at the apex of the vinery only at this season. Once a day may suffice when it is dull for damping all bare surfaces, while four times is not too many when the sun is shining, particularly if the nights are frosty. Go over the Vines as often as once a week to pinch back laterals.

In the case of Vines in flower, a drier atmosphere is favourable to free setting. Maintain this by increasing the amount of warmth in the pipes and giving more ventilation. Every day about noon give each Vine rod a few sharp raps with the hand, which will have the effect of fertilising the flowers. Damp only on very fine days, and then in the afternoon.

Disbud Vines lately started as soon as it can be seen which shoots show fruit, leaving shoots that show good bunches and those nearest the base of the spurs. This applies where only one shoot is required from each spur. Where the latter are further apart on the rods two shoots may be required; in this case leave the one that shows the best bunch and the other nearest the base.

When the shoots have grown to one or two leaves beyond the bunch, nip out the point; whether one, two, or even three leaves beyond depends on the distance between the rods, but guard against crowding the foliage. Prevent the shoots getting damaged in growing against the glass of the roof by drawing them partly down to the trellis, more or less according to the strength of the shoot, and finally tying them to the trellis when they have reached a tougher stage. Suitable temperatures for Vines with young shoots beginning to grow are about 55° at night and 60° in the day, gradually increasing them as growth advances until the flowering stage and the temperatures mentioned above are reached. Damp down as often as circumstances demand.

Start late Vines into growth by closing the ventilators and applying heat to keep up a night temperature of 50°. Take advantage of the assistance of sun-heat by closing early, and syringe the rods once or twice daily until growth is on the move.

Examine the soil of borders, and where it is approaching dryness afford a liberal supply of tepid water, giving it when the soil is less dry where the fruit is swelling, but guard against watering while in flower by doing it a week beforehand.

Hatfield House Gardens.

G. NORMAN.

INDOOR GARDEN.

FERNS.

FEBRUARY is a good month in which to pot or replant the various Ferns, as they will then make their growth in the various receptacles, be they pots in an ordinary house or pockets in a rockery, to which they are transferred. The immediate effect of filling up blanks in rockeries at this time of year may not be so good as may be had by planting specimens in full growth later on, but the latter results are better in all ways. When planting Ferns for effect it is well to mix with them some of the hardiest of the Rex Begonias, the propagation of these being simplicity itself, as single leaves taken off with an inch or 2 inches of

stem, which may be pushed into a little soil in any available fissure, root freely and form plants from the base of the leaf, such plants being more compact than those which have been struck elsewhere and potted up in the meanwhile. The Selaginellas, too, should be attended to, replanting where necessary short pieces of the growth tips, thus getting rid of the older stems, the decay of which often causes the whole growth to fog off. Many of the Adiantums which are to be used for pot work may have all the growth cut away before splitting them up or repotting them in larger sized pots. This would be bad for many things, but the closer-growing Adiantums of the emacium type appear to grow away all the more freely for the cutting, provided it is done before many of the new fronds get into a forward state. For almost all Ferns a mixture of half fibrous loam and half good peat, mixed with enough sand to keep the whole free and open, will be suitable, but for the delicate rooted kinds some finely broken brick and charcoal mixed in as well will be found useful.

HIPPEASTRUMS

will now be pushing their flower-spikes, and those which are showing must be brought out from their winter quarters and stood on the stages in a light house. They may be grown very well under ordinary treatment for garden purposes without using plunging beds, the only difference in treatment being that plants so grown should be potted after they have flowered instead of potting them while dormant in mid-winter. Keep up a nice genial atmosphere in the house, which may be kept at a minimum temperature ranging from 55° to 65°, according to the time when flowers are wanted to be at their best. The plants should stand on a moist bottom and not on the open lattice stages with which houses are frequently furnished.

CARNATIONS.

The early autumn-struck batches of Malmaison Carnations should contain many plants that ought now to be potted on, using 5-inch pots for the majority, though the very strongest may go into 6-inch pots. The backward ones should be left undisturbed for a few weeks longer, as nothing is gained by potting on before the plants are ready. Early-struck winter-flowering Carnations may be removed from the propagating house and hardened slightly to prepare them for potting.

ANTHURIUMS.

Root action will now be getting very active, and as Anthuriums of the Scherzerianum section are mostly surface-rooting, it is advisable to add a little fresh material in the shape of fibrous peat and loam, interspersed with some lumps of charcoal and here and there a little Sphagnum Moss. The spathes now showing freely make it necessary to increase the water supply to the roots, but in this individual plants will vary greatly, according to their activity of growth.

Shipley Hall Gardens, Derby.

J. C. TALLACK.

FLOWER GARDEN.

PRUNING ROSES.

THE pruning of Roses should now soon be taken in hand; indeed, in mild seasons in the south-west the end of February is none too soon for commencing this operation. Amateurs as a rule prefer that their plants should produce a plentiful supply of flowers rather than a few show blooms for the exhibition table, and therefore need not prune so hard as is necessary where production of the latter is the object in view. All bush Roses should have the dead wood and spindly growths in the centre cut away; weak shoots should be shortened to half their length, while the stronger may be allowed to retain two-thirds of their growth. In the case of some specially weak growers harder pruning is advisable, since they lack sufficient vigour of constitution to perfect a quantity of bloom, and it is therefore necessary to direct what energy they possess to a limited amount of growth. Strong-growing Roses, such as those generally employed for covering walls and trellises, should, in the majority of cases, have had the greater part of the flowering wood cut out after it had perfected its crop of flowers in the preceding summer in

order that its place might be taken by the strong shoots thrown up during the season, which come into bearing the following year. This cutting out is, of course, unnecessary where the wall or trellis is but meagrely clothed, as in such a case ample room is afforded for the young growths to be laid in amongst the old without undue crowding. Some Roses, such as Rêve d'Or, should be but sparingly pruned, the growths being re-arranged and laid in as far as possible instead of being cut out, since extensive pruning encourages growth at the expense of flowers.

PROPAGATING SUMMER FLOWERS.

Many decorative plants that are indispensable for brightening the flower garden during the summer and autumn months, but which are of insufficient hardiness to exist during the winter in the borders, are usefully propagated during the early spring. Of these, tuberous Begonias occupy a foremost place. Seed should be sown in well-drained pans of light, porous compost surfaced with finely sifted sand and leaf-mould, the seed being sprinkled on the top of the soil. A pane of glass should be placed over the pan, and this kept in a temperature of 65°. The handsome Camas may also be raised from seed, which should be soaked for twenty-four hours in tepid water and then sown in light, porous soil in a temperature of 85°.

Seeds of plants useful for sub-tropical beds, such as *Acacia lophantha*, certain of the *Solanums*, *Eucalyptus globulus*, *Zea Mays variegata*, *Ricinus Gibsonii*, and like subjects, may also be sown in heat, while *Petunias*, *Verbenas*, *Marguerite Carnations*, *Campanula pyramidalis*, and other showy border plants may be propagated from seed, *Dahlias* of the *Cactus* and decorative sections, to which our autumn gardens owe their chief brilliancy, may be increased by placing the tuberous roots in heat, removing the young shoots when a few inches long with a little heel and potting them up, growing them on in heat and planting out in the early summer. Another plant that well repays, by the depth of its colouring, any little labour involved in increasing the stock is *Salvia patens*, whose beautiful blue is scarcely rivalled by that of the *Gentian*. This may be propagated in the same manner as recommended for the *Dahlias*, the young growths starting from the old roots making good plants for putting out if taken off and grown on in heat, while the roots eventually form more shoots in the place of those taken off. This plant may also be increased by sowing seed in heat at the present time.

S. W. F.

ORCHIDS.

MILTONTIA VEXILLARIA.

THE favourable change in the outside conditions has had considerable effect on the plants inside our Orchid houses, and much of the work which has been delayed will require early attention. The treatment of the above species, which I have found to be most successful, differs considerably from that which is generally adopted. The principal difference in the mode of culture is in the season of repotting the plants. The month of September is generally advised for this operation. I had been for many years under the impression that the autumn was not altogether the most suitable season for this operation, but, following the advice of those whom I considered more experienced than myself, I did not like to risk so radical a change as to defer repotting until the spring. When entering upon my present charge, the usual potting of this species had not been done, and I had thus an opportunity of putting my own ideas into practice, and my method has proved in every way satisfactory. It will be found that the principal rooting season of *M. vexillaria* is at the time when the new pseudo-bulb is about to be formed. If carefully observed, new roots will be found to be forming in quantity all around the base of the new growth. This is the best indication that the potting season has arrived, and should receive attention before the roots have become too far advanced, or they are liable to be injured in the operation of repotting. If done at this stage the new roots quickly establish themselves in the new material, and no ill-effects are experienced when the flowering season arrives.

Our plants are more forward than usual this season, and the roots being freely emitted, they are now receiving attention.

The potting compost should be of a very light nature: we use two parts chopped living *Sphagnum Moss* to one part fibrous peat. The pots should be just sufficiently large to contain the plant comfortably without crowding the old roots, and should be two-thirds filled with clean broken crocks. Shake the plants out of their old pots and carefully remove the old potting material. Cut away all dead roots from the base of the old bulbs. The newly developing growths are usually produced from the axils of the lower leaves at the base of the preceding season's growth. These leaves which ensheath the new growth generally decay when or just before rooting commences, and in case they have not decayed, and are likely to imprison the roots and interfere with their action, they should be removed, at the same time taking care to remove all dead and decaying matter that may be about the base of the plants. Take care that the base of the new growth is raised level with the rim of the pot, press the material moderately firm and slightly mounded towards the centre. After repotting give a thorough watering with rain water, using a moderately coarse rose on the water-can. Arrange the plants in position so that they may be placed within reasonable distance of the glass to prevent weakening the growths through being drawn. Shade carefully from direct sun-rays in bright weather until the plants become re-established, when more liberal treatment may be afforded, and as soon as the flower spikes make their appearance an abundant supply of moisture is required at the roots. The night temperature now should not be allowed to fall below 55°. Keep the house moderately close for a few days after repotting, but when the roots get hold of the compost, free ventilation may be afforded as soon as the temperature reaches 58°.

The atmosphere in bright weather should be liberally charged with moisture, the damping being done sufficiently early to permit the moisture to evaporate before evening.

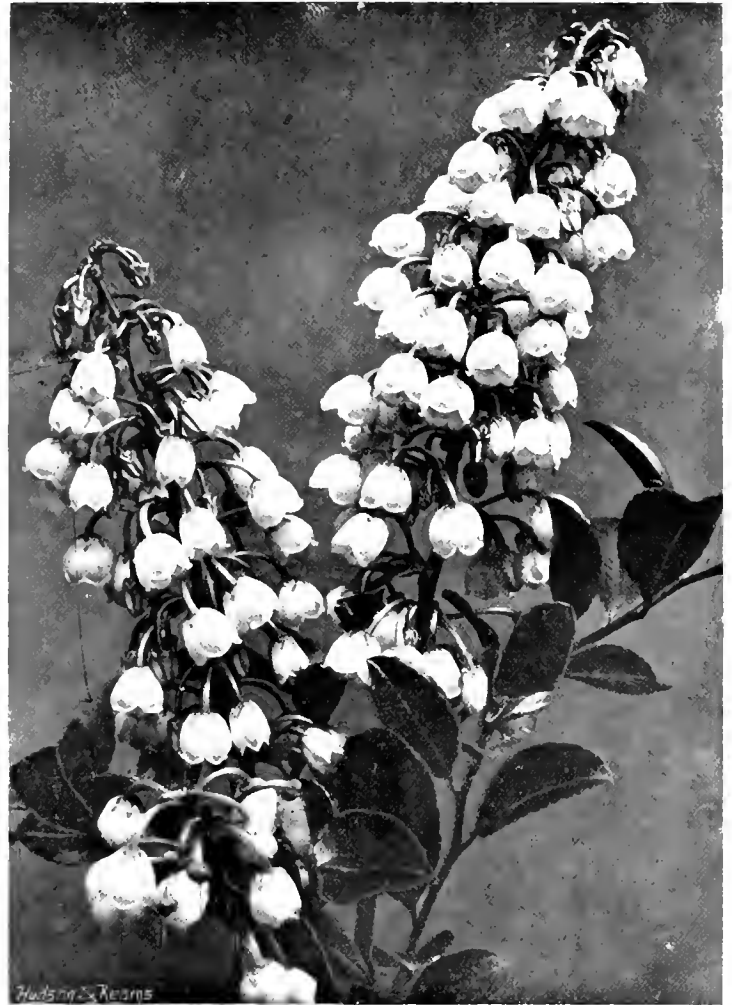
The smaller growing section which flower later in the season do not commence rooting usually before April, and their repotting may be postponed until then. The lovely *M. v. superba* belongs to this section, also *M. v. Leopoldii*. These should not be disturbed until root action commences, but more liberal treatment as regards moisture at the roots should be afforded. Place the last-named varieties in a position near the glass. I find that they do best when suspended. H. J. CHAPMAN.

ZENOBIA SPECIOSA.

OF the large class of hardy flowering shrubs, broadly known as *Andromeda*, and for the most part natives of North America, none are more

beautiful than the subject of the illustration and its near relative, *Z. pulverulenta*; and no flowering shrubs of modest growth are more desirable, where garden ground or, still better, wild garden spaces present conditions favourable to their well-being. They thrive in moist, peaty earth, and accord most pleasantly with the wild Heaths, Whortleberry and Mosses that in such soils form the natural undergrowth.

The flower of *Zenobia speciosa* is a handsome spike, more fully set with the waxy white bells than perhaps any other of the *Andromedas*, and the individual bells are of more solid texture. This beautiful shrub is also known as *Andromeda cassinifolia*, and is one of the most distinct and charming of the entire race.



ZENOBIA SPECIOSA.

THE FLOWER GARDEN.

HARDY PLANTS IN POTS.

IT has always been a mystery to me why some amateur does not take up the cultivation of early-flowering hardy plants in pots and show us what they are capable of doing. Year after year we see many of our choicest gems struggling against frost, snow, and torrents of rain, such as we are now experiencing, or icy blasts and parching drought such as we have suffered from in recent springs. As long as they do not absolutely die we let them fight it out with the elements, and in most years lose a great part, if not all, of their beauty.

The late Mr. Atkins, of Painswick, who was my first pupil in horticulture, and who

knew how to grow hardy plants as well as any man I have ever known, often said that if people would give the same time and skill to hardy plants as they do to Orchids or florists' flowers, they would often be better rewarded; and though many of them want considerable experience to grow them well in pots, they are worth the trouble. I never knew the real beauty of *Anemone Pulsatilla*, an indigenous plant here, till I potted a good plant raised from seed. There must have been 150 flowers all out at once in a 10-inch pot and far finer flowers than usual. *Saxifraga Stracheyi*, *S. ligulata*, *Primula denticulata* and other Himalayan and Japanese plants, such as *Epimedium macranthum*, are far more interesting and beautiful ornaments for the house at this season than the everlasting round of Hyacinths, Tulips, Cinerarias, and Primulas, which too often fill the greater part of our greenhouses. *Corbularia alba*, *Tecophylla cyanocrocea*, and many of the smaller and more delicate spring bulbs are also excellent pot plants when properly managed. I shall be glad if anyone can tell me how to manage the fine varieties of Japanese Iris in pots. I cannot grow them out of doors, but have not yet discovered whether they can be grown in pots of moderate size.

H. J. EWES.

Colesborne, Gloucestershire.

THE CARNATION.

A NOTED florist writes to me about the Carnation. By the word "florist" I mean an amateur who cultivates the favourite garden flowers such as the Auricula, Tulip, Pink, Carnation, &c. The Carnation, to the florist, includes the bizarres, flakes, and Picotees; these my good friend terms the classic forms. My friend's words are important as showing the mind of the true old florist on this question. He writes, "I could not bear to grow any but the classic forms that make the flower to me. I do not think that these could ever vie in border effect with the selfs and the fancies perhaps, but then the object of the two divisions is different. In the olden time we did not grow for borderings and clumpings, and other devices that were at their best afar off. Our delight was in the intrinsic separate properties of each single flower." The old florists (and there are many not so very old) have a standard of excellence for the Carnation and Picotee. The Carnation, whether it be a bizarre or flake, must come up to this standard. The ground must be pure white, and if a scarlet bizarre, the colours are scarlet and maroon laid on in flakes and stripes. The crimson bizarre has also two colours, crimson and purple on a white ground. The pink bizarres are pink and purple. The flakes have a white ground marked with one colour only; they are of three colours, purple, scarlet, and rose. The Picotees have also a pure white ground with the petals margined with red, purple, rose or scarlet. The above defines the florist's type of a Carnation. Of course the flower must be of good form, the petals broad and of good substance, a smooth, not a serrated margin, and the flowers holding up their heads boldly on stout stems. This was an important point in the early half of the present century, and a burst calyx was a disqualification.

The late Mr. E. S. Dodwell, a keen Carnation fancier, informed me that he was one of the first amateurs who suggested showing dressed flowers on cards. I am not sure about the date, but it must have been about the year 1850, earlier rather than later. Before that time the stem of the Carnation was inserted in a long slender tube and stood up boldly above the mouth of the tube, and in this condition it was placed on the exhibition table. The National Carnation and Picotee Society has, amongst other good things, provided classes for Carnations shown as they are cut from the plants; moreover, it has improved on the old system of showing by putting the foliage of the Carnation with the flowers. They are, of course, still exhibited as heretofore on cards, and many persons think that the flakes and bizarres are most effective

in this way. Certainly the beautiful markings of these lovely Carnations are shown to the best advantage on cards. I am well aware that many amateurs do not like to see cards used with Carnations at all, but that is no reason why they should not be so exhibited now, as they have certainly been for half a century.

Carnation growers are now preparing to repot their plants, or to plant them in the open ground. The soil should be prepared and be in good condition before potting. The flower-pots also should be clean and dry. Sufficient drainage of potsherds should be placed in the bottom of the pots, and over the drainage some turf fibre to prevent the finer particles of soil from mixing with the drainage. A very good compost for Carnations consists of good fibrous loam, and if the loam is what may be termed sandy loam, do not add any sand, but a little mortar rubbish and a sixth part of leaf-mould. Pounded oyster shells may be used in small quantities, say a quart to a barrow-load of compost. It is desirable to pot firmly. Even in making a remark of this kind one is not always clearly understood. I instructed one of my men to pot the Carnations firmly, and he pounded the soil so much that the plants were forced out of the soil. Amateurs entirely ignorant of gardening matters often take up the culture of Carnations, and although they may read papers written in THE GARDEN and elsewhere for their instruction, it is easy to make a mistake owing to lack of practical knowledge. One of the most instructive writers on gardening matters was the late Mr. Thomas Baines, and he gave instructions in one of his papers as to the quantity of artificial manure to place on the surface of a 15-inch pot as a stimulant. It is well known amongst gardeners that this is a flower-pot 15 inches in diameter, inside measure, but Mr. Baines informed me that an amateur who attended to his own plants had followed his advice, and complained that the dressing had killed his plants. He had measured round the outside of the flower-pot under the rim, and used the amount of manure recommended to surface-dress a 4½ inch pot. It is easy for an amateur to write to the editor for advice when any detail is not well understood rather than to risk failure by following out instructions in the wrong way. After the plants are repotted they may be put into the garden frames again for a few weeks. If frames are not available, they may at once be placed out in the open garden, but in that case it would be better not to repot them until the middle of March, or even April. Being the owner of a large collection, the repotting of the plants extends over a considerable period, and I continue repotting well into May, but the late potted plants do not produce layers so freely as those done early.

The Carnation as a border plant is held in high estimation in most gardens, and many of us exclaim with Perdita, "The fairest flowers of the garden are our Carnations." Like the Rose, the Carnation is a good old English flower, and charms us with its sweetness and beauty. It deserves one of the best positions in the garden, and when well cultivated never fails to give satisfaction as a hardy border plant. It likes a rich deep soil and the careful hand of the gardener. Some people say their soil is not adapted to the culture of Carnations. I can only reply that I have cultivated the Carnation in all classes of soil, and never failed to grow the plants well. In light gravelly soil in a dry district the plants need attention as to watering in summer, and the layers should be put down as soon as they are ready. It is easy also to get a little good loam of a clayey nature to mix with the light soil—a spadeful would be sufficient for two or three plants. I prefer to plant three or two spadefuls of suitable yellow loam placed around the roots will form an ample root run for the three plants for one season. This, of course, is not necessary unless the soil is unsuitable. In soil adapted to Carnations nothing is needed except deep working of the soil to a depth of 18 inches or 2 feet. In new soil this depth has to be reached gradually by digging or forking up the subsoil without throwing it on the surface. If manure is plentiful, some of it may be mixed in with this subsoil. For the last six or

seven years I have been breaking up fresh soil in this way: the system answers admirably for Carnations and all classes of flowers, fruits, and vegetables that relish a generous deep soil. The ground has been under grass for generations, and we line off an opening for the trenching 2 feet 6 inches wide; a good spit is taken out and all the loose earth; the bottom is then well dug up, so that with the top spit and the loose earth taken out this digging loosens the soil to the depth of 18 inches, but the bottom part is left at the bottom, and if some good manure is mixed up with it the roots work freely into it. If this lower 8 inches were put on the top and what was previously the surface turned to the bottom, a failure of the crop the first year would be the result. Trench as deep as you can, but work the subsoil into the upper portion gradually, that is a few inches each time of trenching. It is always safe to put a few handfuls of potting soil around the roots of each plant, pressing it down firmly. Three plants together in a border have a better effect than one. For borders and clumps selfs are best. By the use of this class a mass of crimson, purple, or bluish purple (as in Bendigo), scarlet, rose (deep or pale), yellow, buff, white, bluish, &c., is obtained. I do not think any of the striped, flaked, or edged flowers should be planted in masses, but as individual plants, or three together, in borders to be admired, as for their beauty and sweetness they are unsurpassed.

Before this paper appears in print it will be time to sow Carnation and Picotee seed. March is the best month, as under careful treatment every plant will produce masses of bloom the following season, that is in 1901. Sow in a little heat, prick the seedlings out in boxes, and they are ready to plant out in May or June. It is also the time for repotting, and here, as in the border, the best effect is obtained by three plants in a pot 8½ inches in diameter. In the flower-pots a size smaller two plants will be enough, unless they be small, when three may be put in. I may finish this too lengthy paper with a few hints about tree or winter-flowering Carnations. Get the cuttings or slips in as early as possible. Now is the time to strike the plants in order that flowers may be obtained at Christmas. The cuttings should be given a little bottom-heat, and the temperature of the propagating house should be about 55°, certainly not less than 50°. The cuttings form nice rooted plants in about three weeks, when they may be removed from the propagating frame and be inured to a more airy house. Pot off singly into small flower-pots, and as the plants increase in size and vigour repot when necessary. The plants produce the best blooms in 6-inch flower-pots. J. DOUGLAS.

NICOTIANA SYLVESTRIS.

IN comparatively few of the numerous seed lists which reach me at this time of year do I find this recently introduced *Nicotiana*. How it comes that a plant of this importance, alike valuable for the sub-tropical garden and hardy border, should receive tardy recognition I am at a loss to understand. It was shown at least twice last year at meetings of the Royal Horticultural Society, and received an award of merit. Unlike *Nicotiana glauca*, this plant produces large heads of bloom which remain open all day. I would advise all who want a distinct new plant not to fail to order a packet of seed this spring.

J. T. BENNETT-POLL.

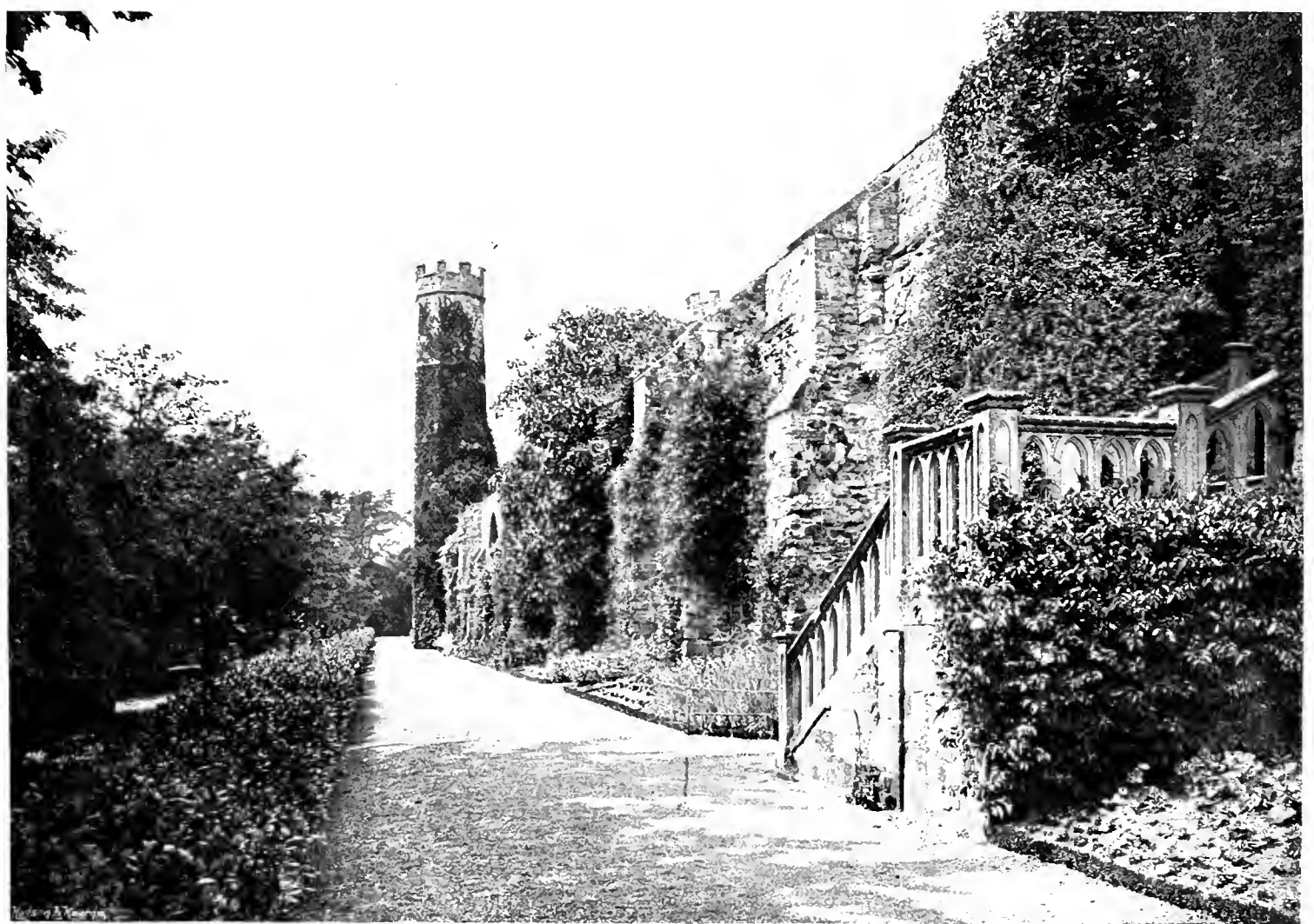
SOME OF THE RARER SHRUBS AND CLIMBERS.

As my text is about "flowering shrubs and climbing plants," I think I must next say a word about *Abutilon vitifolium*, which takes high rank wherever it does well. I have two varieties of it, and both were given to me by the late Major Gaisford. So far it has done quite well in my garden, though I fear it is not very long lived, and certainly it needs protection when the weather is cold. Mr. Nicholson says in his "Dictionary" that it is not a fast

grower, but he does not live in the Isle of Wight, for here I think it responds to the conditions under which it is growing very quickly indeed. It considerably overtops the wall against which it is placed, and it would reach to a greater height still if it were not for the wind. For the rest of my "flowering shrubs and climbing plants" I think names must in a great measure suffice. Magnolias should never be forgotten where objects of great interest are desired, and the following may be recommended with safety: *M. conspicua*, from China, which grows to a great size, and is a very handsome hardy deciduous tree; *M. Soulangiana*, which is probably a hybrid between *M. conspicua* and

southern garden. It is a pretty Australian composite, and its small whitish Aster-like flowers make it look as though it were all covered over with snow in the month of July. Several Roses are of course to be recommended. *Rosa gigantea* seems to be worthy of its name, though it has not been so kind to me in the way of flowering as it is to its possessors in Cannes. *Rosa sinica* is too recent an introduction for me to speak about it with any certainty as of use in the Isle of Wight. All that I can say is that it seems to be passing through this winter successfully, and if it does half as well here as I saw it performing last spring in the south of France I shall be glad that I have it.

years against a wall with a western exposure. It grew to such a large size and did so well from every point of view, that Mr. Noble, of Ascot, who happened to see it, declared that it must be the finest in the kingdom. But its end was a miserable one. I noticed one very hot day, either in July or August, that the sap was exuding from the stem and trickling down in rather plentiful streams; the leaves were also beginning to curl up, and "unhappiness" was written on my shrub in a very evident manner. In a very few days it was all over with it, and smstroke had done its work beyond all chance of repairing. As I have no wall in my garden with an eastern exposure, I planted another



CLIMBERS UPON THE OLD ABBEY WALL, BATTLE, NEAR HASTINGS.

M. obovata, *M. stellata*, from China, *M. Lemnii*, which is a hybrid and has large flowers of a rosy-purple colour; and *M. parviflora*, from Japan, which is certainly hardy in this part of the world and a great favourite of mine.

Piptanthus nepalensis is a sort of evergreen Laburnum with bright glossy green leaves and abundance of showy flowers. *Carpenteria californica* must not be passed over; when in bloom the pure white flowers, resembling those of the Japanese Anemone, render it of great beauty. *Caryopteris mastacanthus*, from China, is certainly of great value because of the late season of the year when it is accustomed to blossom. *Ozothamnus rosmarinifolius*, though rather tender, should have a place in any

Vitis Coignetiae and *Vitis humulifolia* are both included in this place. The former for its vividly bright red foliage in autumn; the latter for its very pretty berries, which are of a pale china-blue colour and marked all over with dark specks.

Of course the above do not comprise anything like the number of flowering shrubs which can be recommended for a warm part of the world, and there are many others besides them, but I think those which I have named are amongst the best I possess, and the others may be taken for granted. Let me just mention two that have done well here for a long time, but which, alas! are now lost to me. I had a very fine specimen of *Fremontia californica* for many

years against the vestry of St. John's Church, and this seemed to prosper for a time, but its fate was as bad as its predecessor's, though in quite a different manner. I did not return from the Continent last year till April had come, and my gardener becoming impatient uncovered the shrub before the east winds had departed; it was stricken by a cold blast, and very soon perished. Still, I feel sure that under more favourable circumstances I could pilot *Fremontia californica* through all its difficulties, and that it would again do well in my hands. It should never be exposed to a western sun in the Isle of Wight, and must be protected against strong east winds while it is young. There is another fine shrub which is much hardier than

GUMMING ON FRUIT TREES.

WHAT is known as gumming on fruit trees is practically confined to those producing stone fruit. Peaches, Nectarines, Plums, Apricots, Cherries, and Almonds are all prone to it, and the intelligent cultivator dreads its appearance on the trees named almost as much as an outbreak of canker in the Apple orchard. Fortunately, however, it does not spread rapidly from tree to tree as canker does, though it is equally difficult to eradicate when once it puts in an appearance. Is gumming really contagious? Some authorities aver that it is so, and that the exudation contains spores of a fungus which under certain conditions increase rapidly, and do not remain on one tree. So far, our experience does not lead to this conclusion, as we have known one Peach tree badly attacked for years, while the adjoining tree whose branches met those of the diseased one remained perfectly free.

Its appearance at times is most puzzling, even to experienced growers, as, knowing what conditions are likely to produce gumming, measures are taken to avoid or combat it. This is not so, however, with the amateur or young gardener. The latter especially often undertakes the management of a valuable lot of trees either growing against walls in the open or under glass. A few errors on his

afforded as the trees require it. Deep rich borders of loose formation and overcharged with manure encourage soft strong shoots which seldom become matured by autumn. With outdoor trees such unmaturing wood is easily injured by frost, and its effect is readily noticed the following spring, first of all by the discoloration of the bark, forming patches of red here and there. These eventually turn black, the bark dies, and this is generally followed by the exudation of gum. From this it would appear that the sap vessels having been ruptured, strangulation at that point results, and the growth above, being cut off from further support, perishes. With strong growing trees then we would advise that they be lifted and the roots re-arranged, bringing the latter nearer the surface. Place fresh strong loam about them, the only addition required being old mortar, and then ram the whole firm.

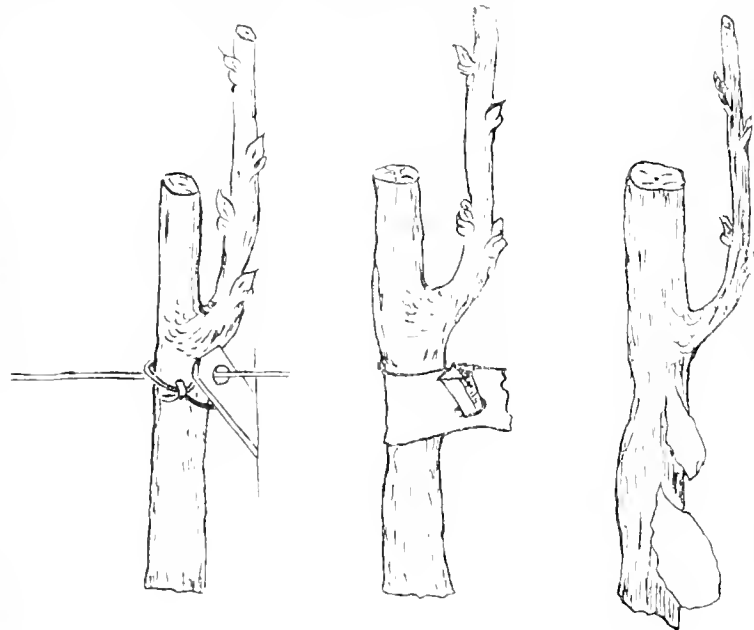
Although, as pointed out, gumming may be the result in the first instance of indifferent root action, coupled with what may be termed frost-bite, it generally follows wounds or abrasions of the bark. How do these abrasions occur? Seeing the evil which follows, how careful one should be in avoiding them.

A perfectly trained tree always reflects credit on

is generally supposed, and which deserves a word of mention in this place. I refer to *Lagerstromia indica*, which is lost to me through my own fault. Some years ago I was paying a visit to Major Gaisford at Offington, and of course I inspected the garden with the greatest attention and care. He said to me, "Come along here and I will show you something with which I am sure you will be pleased." He then took me into the little inner garden, where so many treasures were kept, and there he pointed out a fine specimen of *Lagerstromia indica* which was in full blossom at the time. Unfortunately, I was far from being pleased with what I saw. The shrub was delightful and quite worthy of his strongest commendation, but I saw in a minute that I might have had just the same in this garden if I had not been so impatient about it. *Lagerstromia indica* had been in Major Gaisford's hands for a long time before it blossomed, and so it had been in mine, and to all appearance it was doing very well indeed. Perhaps it might have blossomed the very next year if I had not cut it down and thrown it away. It was a lesson to me which I have never forgotten, that I should not despair about shrubs. Canon Ellacombe says something of this in *THE GARDEN* of February 10 about *Clerodendron trichotomum*. *Lagerstromia indica* is a beautiful object, and Mr. Robinson writes in his book on greenhouse and stove plants that it is quite different in appearance from any other plant with which he is acquainted.

I have just taken a run round my garden, and I see there are still several other things which deserve a word of mention by me, but they must be taken for granted. Let me only give just a few names. *Indigofera decora*, *Pterostyrax hispidum*, *Abelia rupestris*, *Exochorda grandiflora*, *Berberis stenophylla*, *Lonicera fragrantissima*, *Lapageria alba* and *rosa*, *Rhynchospermum jasmoides*, *Desmodium penduliforme*, *Choisya ternata*, &c.

St. John's, Ryde, I. of W. H. EWANK.



EVIL EFFECTS OF WIRE AND TIGHT SHREDS.

part in the cultural details may lead to much trouble, it not the total loss of valuable trees, through the excessive exudation of gum from the main stem or branches. As many will be employed for the next few weeks in the important work of pruning and training these fruit trees, a few remarks bearing upon some of the causes of the evil referred to may prove useful.

We say "some" of the causes, because it is certainly not confined to one. Among others, one of the most fruitful sources is the too free use of the knife. Trees which produce stone fruit resent hard pruning more than either the Apple or Pear. Under proper treatment pruning can and should be reduced to a minimum. This in the first instance is accomplished by properly disbudding the branches, and secondly by preventing the formation of gross shoots. Rank-growing trees are more subject to gumming than those which make medium growth and carry full crops of fruit annually. To severely prune the former only makes matters worse. The fault can generally be traced to the border, unless through some mishap the crop fails, and there is not the strain of fruit production to balance growth. It is the roots, therefore, and not the branches that must be dealt with. A firm and rather shallow rooting medium favours the formation of short-jointed, healthy fruiting wood, support being

the man in charge, and young gardeners generally take a pardonable pride in such interesting work; but in securing some of the branches in the desired position a certain amount of strain is necessary, and it is here that the utmost care must be taken to avoid undue pressure on any part sufficient to damage the bark. A wound to the latter is easily produced by the use of shreds that are too short, and which will not allow for the free swelling of the various shoots for at least a year. No part of the tree should ever be allowed to press hard against the brickwork. Young trees should always be planted so that the base of the stem is at least 6 inches from the wall;

then should any of the main branches or any portion of the stem, owing to curves or bends, come too near the bricks, they should have the bark protected by placing a wedge of cork where the pressure exists. Many condemn the use of strained wire on walls for training purposes, as the wire and the eyes or studs through which it is laced prove so harmful to the bark. In these gardens there is something like a quarter of a mile run of Peach walls, of which half is furnished with wires, and for the rest we use shreds and nails for training the trees. We cannot say that any difference has been noticed, or that gumming has proved more troublesome with one or the other method, but the greatest care is used in training. The matting or tar cord is twisted round the wire before the shoot or branch is tied in position, and it is the aim of the workman to place the ties alternately on either side of the shoots, the same as one would do with shreds and nails. By this means the growths can be straightened and the strain is on the matting, as the bark is not pressed against the wire, while the loop is of sufficient size to allow of the wood swelling. Even then it is necessary to look over the trees frequently during the growing season to free any shoot that is likely to become too closely encircled by the shreds or matting.

THE FRUIT GARDEN.

APPLE BESS POOL.

THIS is a very old kind, and one not often met with, but it has much to recommend it, especially where good late Apples are in demand. It is excellent for cooking, or may be used for dessert.

The fruit is long and pointed, above average size, and deep red. After being kept for some time it turns a yellowish red, and is in use from February to April. Its greatest fault is that it is a shy bearer in a young state, but those planting an orchard will be wise to plant two or three trees of this kind. It is an upright grower, and when it comes into bearing, crops enormously. Some thirty years ago there used to be some fine trees in an orchard at Hedson Park, Maidenhead. Has anyone tried this grafted on the broad-leaved Paradise stock? J. Crook.

PLUM POND'S SEEDLING.

This is a fine useful kind, and when in full bearing the crop is most profitable, as it commands a ready sale in good condition when placed on the market. This, as well as Victoria, does grandly on north walls, and frequently here escapes frost, while it is destroyed in other positions or on trees in the open. This I saw an example of last September when paying a visit to Sherbrook Park, Exeter. On a high wall, 14 feet or 16 feet high, were growing two large trees, which were covered with large fruit. J. C.

Chard

The usual wall nail, we consider, when it comes in contact with the bark is equally as injurious as the galvanised wire, perhaps more so, as the edges of the former are sharp, and soon make an indentation in the swelling bark. Neatness in training is requisite, but the health of the trees must be studied also; therefore sufficiently large shreds should not be discarded for those which are just large enough at the time, but which do not allow for future development of the branches they hold in position. The accompanying drawing shows the evil result of the latter and a fruitful source of gumming.

RICHARD PARKER.

Goodwood.

CORRESPONDENCE.

CYCLAMEN COUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—"H. H. D.'s" note (p. 96) on the successful culture of *Cyclamen coum* in a sunny border is interesting, as affording evidence of the adaptability of this charming flower and its varied forms to positions situated in full sunlight, provided conditions of soil and drainage are satisfactory. The inference apparently drawn by "H. H. D." is, that his fortunate experience is due to the baking received by the corms from the summer sun, but, from the numerous instances that might be recorded where this plant flourishes in more or less shaded situations, it is to be surmised that full exposure to the sun's rays is by no means the chief element of success. In the note referred to, in mentioning the profusion of self-sown seedlings which have sprung up in the neighbourhood of the parent corms, your correspondent alludes to the seeds that have been carried into the shrubbery behind the narrow, sunny border, from which spot corms are being constantly dug up for friends. Here, at all events, there must be shade, which the plants, from their rapid increase, evidently find as congenial as full exposure to the sun. I have met with instances where *Cyclamen coum*, *C. nepapolitanum*, and others have seeded themselves freely in sites shadowed by trees, and were surrounded by hosts of immature plants. The chief desiderata for the successful culture of hardy *Cyclamens* are, doubtless, perfect drainage, a porous soil and shelter from bitter gales, which by tearing off the leafage weaken the corms, and, given these conditions, it would appear immaterial whether they are planted in the full sun or in partial shade.

S. W. F.

MAKING AN ASPARAGUS BED.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—I shall be much obliged if you can furnish me with a few hints as to laying down an Asparagus bed. I have two old beds about 30 feet long by 5 feet wide which I propose to plant with fresh roots. Can you advise me as to when I should plant the roots, approximately how many I should require, and generally as to the course to pursue in planting?

Norwich. W. S. TILLET.

[We fear that you will get poor results by patching old Asparagus beds, as the result from such is never satisfactory. The soil must be partially exhausted and the plants or seeds would not have a fair chance. You could fill up gaps with seed, or you may, as you have two old beds, lift one to patch up the other, but by so doing you will probably injure the old roots in the bed, and the roots lifted will not be nearly so good as younger ones in new soil or position. Your best plan would be to plant a new bed entirely, then in a year or two at the most you may destroy the old beds. If you have the means to force in a frame or a house, the roots from the old beds would do for that purpose, and afterwards may be thrown away. If you have no convenience for forcing, we advise you to cut hard for the next two seasons whilst your new bed or beds are making good progress, and then destroy the old ones, using the land for a totally different crop for a time. There is no

time to lose in making the land suitable by deep cultivation and manuring. By making the beds now, the soil will be in better condition to plant or sow early in April. We would in your case advise plants for the making of new beds, as you will thus gain a season's growth, as seeds do not make much progress the first year, and you cannot cut from seedlings till the third year, and only then very sparingly. The beds are best made in an open position and in light soil. This should be deeply trenched, and the land will need ample quantities of decayed manure, well mixed in as the work proceeds. In good loamy soil double-digging will suffice, the bottom being dug up and the manure being placed under the first course. In heavy land we would advise a liberal use of old mortar rubble, burnt refuse, sea sand, or charcoal refuse—in fact, anything that lightens and improves or drains the soil. For the latter purpose a liberal use of rubble or the rougher materials advised above will be found beneficial if this is placed in the bottom of the trench as the work proceeds.

Planting is best done early in April just before the root growth is active. In a 30 feet run of bed, 15 to 18 inches between the plants would be none too much, and the same distance between the rows. We prefer even more space if room is no object, but frequently in small gardens much room cannot be afforded. We have had good results by planting 12 inches apart in the row, with 18 inches between the rows. In light land the beds are best made level, not raised, but in heavy or wet soil the beds should be 6 inches above the alleys. These latter should not be less than 2 feet wide. In planting, draw out wide flat drills, spread out the roots evenly, and cover with fine, good soil. Plant 4 to 6 inches deep, and should dry weather follow, give water and mulch between the rows with short manure to conserve the moisture. We prefer two-year-old seedlings, and these, if purchased, should not be out of the soil long or allowed to dry. No cutting should be done the first year, and very little the second. If seed is sown, sow at the same time as advised for planting, thin early, and feed in both cases as growth is made.]

FLORAL CLOCK.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I may refer "A. K." to the "Philosophie Botanica" of Limbous (ed. iv., 1809, p. 415). That is the original of all floral clocks, and if "A. K." does not know the book, he will thank me for introducing him to a work which, in my opinion, has more good information on botany in a small compass than any book I know.

H. ELLACOMBE.

Biton Viarage, Bristol.

ON THE WILD FLORENTINE TULIPS.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—In answer to "T. R." (p. 150), at least nine distinct species of Tulip grow wild in the neighbourhood of Florence, viz.: *T. Oculus solis*, *T. precox*, *T. maleolens*, *T. Fransoniiana*, *T. Clusiana*, *T. stragulata*, *T. spatulata*, *T. sylvestris*, *T. australis*. Whether they are all truly native there may be doubted. Some of them (*e.g.*, *T. Clusiana*, *sylvestris*, and *australis*) show very little variation. Some of them show a great deal. On plate 1990 of the *Botanical Register* are figured four well-marked varieties of *T. stragulata*. Whether *T. spatulata* is a wild Italian plant or a variety of the long-cultivated and very variable Siberian *T. Gesneriana* is doubtful. Several very distinct forms of Tulip commonly cultivated in gardens are nowhere known in a wild state. The whole subject of Florentine Tulips has been fully discussed by Dr. Lérrier in his paper entitled "L'Origine des Tulipes de la Savoie et de l'Italie," published at Turin in 1884, and in a paper entitled "Les Tulipes de l'Europe," published in the 14th volume of the bulletin of the Society of Natural Science at Neuchâtel. He has also written other papers on the same subject. The whole question of the relationship to one another of the different Tulips is a very difficult one. Not long ago Mr. H. J. Elwes, F.R.S., discussed it fully in a paper read before the Royal Horticultural Society and pub-

lished in their journal, and I have since done my best to monograph the genus, in the journal of the Linnean Society and the *Gardeners' Chronicle*.

J. G. BAKER.

BUCK-BEAN.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—It has occurred to me to write you about a flowering water plant which I saw growing wild in the country last summer. It seems to be a species of Water Lily, and blooms about midsummer. It has triple leaves, somewhat like the Strawberry plant, but smooth and glossy green. The flower-spikes resemble very much those of the Horse Chestnut tree, and are almost exactly like it both in colour and form.

I have a very small fountain in the grounds of this club, the lower basin being 4 feet or 5 feet in diameter and nearly 3 feet deep, containing gold fish. Do you think I might try to grow a clump of those flowers in it? If so, what would be the best way to manage them, and the proper time to attend to the planting? The garden space is well open, and gets a good share of sunshine in summer and autumn.

P. F. O'REILLY.

St. Iver's Club, Wexford, Ireland.

[The plant you describe is the Buck-bean or Marsh Trefoil (*Menyanthes trifoliata*). It is not a Water Lily, but a member of the Gentian tribe. Like others of the Gentianaceae, the root is intensely bitter and a valuable tonic. It grows in mud covered with shallow water or peaty swamps, and is not suitable for growing in a deep basin. If the tank has an overflow that could be led into a cemented space a foot or so deep, a suitable place could there be prepared for it. It should be planted in autumn. Eds.]

VERONICA SPICATA.

[TO THE EDITOR OF "THE GARDEN."]

SIR, This beautiful little alpine is, I believe, almost unknown in English gardens, except by those who have brought it from its own mountain haunts, from the fact, mentioned in the note in THE GARDEN, February 17, page 130, that an altogether distinct and common species is credited wrongly with its name. It is plainly to be identified by the description in M. Correvon's very useful and popular little book, "Flore colorée de poche"; nevertheless, it was wholly a revelation to me last year to find it not more than 3 inches or 4 inches high, growing on grassy ledges on the mountains above the Rhone valley, and always finer and bluer when the drip of the rock above made the soil somewhat damp and spongy, which bears out "T. J. W.'s" theory that it does best in moist soil. Having grown the tall garden *V. spicata* and discarded it as taking the room of more desirable species, I puzzled a good deal over this dainty little alpine, and was very glad to have the difficulty solved by his note. The true *V. spicata* has the advantage of lasting in flower for a considerable length of time, for we found it in July, and a few stray spikes still remained in September when we left the mountains. The little colonies of bright blue spikes, scarcely higher than the turf from which they sprang, will always live in memory amongst the many lovely pictures of plant grouping which we found amongst the rocks. Once I gathered a solitary pink specimen, but never again met with one. Though it evidently enjoys moisture, *V. spicata* will succeed in drier spots; indeed, M. Correvon gives it as growing in dry pastures, where it is certainly abundant. We found it in company with *Dianthus sylvestris*, one of the most charming of alpine Pinks, and with the deeper coloured and clustered *D. atrorubens*.

K. L. D.

[Is it possible that in this case, as in some others, that those who have brought plants from the Alps may have observed that what in higher altitudes is a dwarf plant degenerates into a lanky, weedy thing in our gardens? We have seen this happen in the case of the common field Ox-eye Daisy, flowering only a few inches high at about 4000 feet, and to all appearance a charming dwarf alpine plant, but gradually growing in a garden to its usual stature. Also a

very neat and showy Echinum from a mountain district in Norway grew from seed in an English garden into a dull plant of straggling habit, not to be compared with our native Viper's Bugloss. It is unlikely that this is actually the case with regard to the Veronica in question, for were it so, the fact would be sure to be known to M. Corveon, and probably also to so excellent a gardener as "K. L. D." But it is worth mentioning in anticipatory mitigation of the occasional disappointment of the ardent collector. In illustration of the same natural law as affecting some plants, we may mention that seeds of a true strain of the dwarf Papaver alpinum grown for three years in English gardens produce plants that increase in size till they are not to be distinguished from P. nudicaule. —Eps.]

THE BEST PEAS.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—As I have the following sorts of Peas, could you kindly tell me through THE GARDEN which sorts to sow and how often to keep up a succession: Ringleader, Fillbasket, Antocrat, Main-crop Marrow, Ne Plus Ultra? YOUNG GARDENER.

[As regards dates of sowing, a given date cannot always be advised, for this reason, seasons vary very much; for instance, if cold or wet, a much longer period of growth is needed, and if hot and dry, the plant is soon affected and cropping over. The following is a safe plan: Sow seed every three weeks from now until the end of June or early in July. Begin with Ringleader, which should be ready early in June. Fillbasket will follow on if seed is sown at the end of March and be ready at the end of June. Antocrat sown the middle of April should be ready in the early part of July and last until the third week. Main-crop Marrow sown the end of April or early in May will provide a succession of pods well into August, and it has few equals as a good summer Pea. Your last selection, Ne Plus Ultra, cannot well be beaten. Seed sown of this in June should give you good produce early in September. If you need a longer supply, sow Michaelmas Pea at the end of June for late September use. On the other hand, the best calculations may be upset by climatic influences; to guard against this, provide deep drills and an ample supply of rotten manure for the three late lots. Your selection is excellent, and you should not fail with these. —Eps.]

DEEP CULTIVATION.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Having read in your paper the excellent article by Mr. Beckett on "Trenching the Soil," also the interesting and instructive correspondence arising therefrom, I should like, with your permission, to say a few words.

Ten years ago the writer worked under Mr. Beckett at Aldenham House for nearly three years, and so had facilities for observing the working of the soils in the kitchen gardens, and also the new ground work then, as at the present time, being extensively carried on. I can fully endorse all Mr. Beckett and your other able correspondents say in favour of trenching, both as regards the excellence and uniformity of the crops at Aldenham. During the two years I have been in charge of the gardens here I have always, whenever possible, carried out this same system of trenching. Although only about a mile from Aldenham House, the character of the soil differs very considerably. Here we have a very sandy soil, while in many places within 2 feet or 3 feet of the surface there is pure white sand of a very fine nature. After being here a few weeks I took in an extra piece of land for vegetable growing, trenching it 3 feet deep and working in a good dressing of manure. The crops we have had from it have well repaid the trouble taken with it. Potatoes were very clean, while I may mention that Brassicas were quite free from clubbing, a trouble which in my opinion we should hear much less of if trenching were carried out. Mr. Engleheart mentions the case of the allotment holders who had excellent crops obtained from the ordinary digging, while the deep cultivation system

on the adjoining land was a failure. I may mention that I know of a labourer living in this parish who three or four years ago obtained a piece of meadow land, about 10 poles, for an allotment, and who trenches it every year. The land is very heavy, having a clay subsoil. He has had first prize for his allotment at Aldenham show for two years, while last year he obtained the bronze medal given by the Royal Horticultural Society for the neatest and best cultivated allotment, following this up by obtaining seven firsts, two seconds, and one third, out of eleven entries at the One-and-All show held at the Crystal Palace a few weeks after.

H. NAVLOR.

The Gardens, Piggotts Manor, Elstree.

NARCISSUS PALLIDUS PRÆCOX.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—In Mr. Arnott's note on the above Daffodil he alludes to the difficulties that so often attend its culture in some gardens. In many instances that have come under my own notice this variety has persistently died out, though re-introduced again and again and planted in varied soils and exposures. In light soil, in heavy loam, and in the grass its behaviour has proved equally unsatisfactory. The first season it blooms fairly well, the second poorly, and rarely shows more than an occasional flower in the third year. As mentioned by Mr. Arnott and by "F. H. C." (p. 49), this Daffodil is very variable. Some strains doubtless possess a stronger constitution than others. In my own case the only one that appears to possess any constitutional vigour bears a flower the pale yellow of which is suffused with a suspicion of buff, while the petals are of greater consistency than is the rule in the majority of forms. It is to be regretted that this beautiful Daffodil is not amenable to universal successful culture, since its elaste colouring and earliness render it invaluable in the garden. S. W. F.

CHRYSANTHEMUMS.

SEASONABLE NOTES.

LATE blooming varieties will produce a wealth of flowers during midwinter, some of these lasting well through February. For supplying cut bloom for Christmas and the New Year festivities, I know of nothing more beautiful or more easily produced. Indeed, from a gardener's point of view, this section is probably the most serviceable of any, either as bush plants for the conservatory or for use in a cut state.

Good cuttings should now be procured and rooted five or six in a 3-inch pot. Little heat should be afforded them at this season, giving only just sufficient to keep them in a fresh condition. Put off singly into 3-inch pots immediately they are sufficiently rooted and grow on in a cold frame.

Among the best varieties to grow for this purpose are Jessica, in my opinion, the best of all the many whites; L. Canning, Niveum, Boule de Neige, white; Princess Blanche, creamy white; Golden Gem, bronzy yellow; Eugène Lanjaulet, bright golden Anemone pompon; Jeanette Sheahan, light yellow sport from the well-known Princess Blanche; Rubra perfecta, purplish crimson; Perle des Beantes, crimson; King of the Plumes and Mrs. Filkins, both golden yellow, belonging to the feathery class, most useful for this season, but will require to be stopped rather late to retard their flowering. Early-flowering varieties should now be propagated. For beautifying the flower garden during the autumn these have few equals. When grouped together in separate colours in flower beds, dotted about in the shrubbery borders, or arranged in their proper heights and blending their colours so as to harmonise on a border wide enough to contain three or four rows, and this, I think, is the most suitable and pleasing position to cultivate them they are objects of much beauty, and a few degrees of frost do not hurt them, for after the Dahlias

and other tender plants are killed these will continue to give much pleasure during the closing days of summer. These should also be struck five or six in 3-inch pots and kept close in a cold frame till rooted, when they may be potted off singly when sufficiently rooted, and planted out from these about the middle of May on richly-prepared ground. Twenty-four good varieties are as follows with their colours and approximate heights:—

Alice Butcher, red, shaded orange, 3½ feet; Bouquet Fen, terra-cotta, 3 feet; Crimson Précocé, crimson, 1½ feet; Crimson Pride, crimson, 2½ feet to 3 feet; General Hawkes, crimson-claret, 3 feet; Geo. Wermig, sulphur-yellow, 2½ feet; Gustave Grunerwald, light pink, 1½ feet; Harvest Home, bronzy red, tipped gold, 3 feet; Harvest Queen, ivory-white, 3½ feet; Henri Yvon, rosy salmon, 1½ feet; Ivy Stark, orange-yellow, 2½ feet; Lady Fitzwygram, white, 2 feet; Little Bob, crimson, 1½ feet; Louis Lemaire, rosy bronze, 1½ feet; Mme. A. Nonin, silvery pink, 4 feet; Mme. Desgrange, white, 2½ feet; Mme. Marie Masse, lilac-mauve, 2 feet; Mrs. J. P. Pitcher, blush, 2 feet; Mychett Beauty, golden yellow, 3 feet; Mychett White, pure white, 1½ feet; Piercy's Seedling, orange-yellow, 1½ feet; Queen of the Earlies, white, 3½ feet; Roi des Précoces, dark crimson, 3 feet; Rycroft Glory, golden yellow, 3 feet; White Grunerwald, white, 1½ feet.

E. BECKETT.

Aldenham House Gardens, Elstree, Herts.

RECENT PLANT PORTRAITS.

THE March number of the *Botanical Magazine* contains coloured portraits of the following five plants:—

Stanhopea Rodrigueziana (plate 7702), a native of New Grenada, is a handsome member of this most singular family of Orchids. The flowers, which are solitary, are so anomalous in character, that they cannot be compared with any other of the forty known species, and may almost be said to constitute a distinct section of the genus. The flower has a white ground heavily spotted with carmine, and the middle portion of the lip (or mesochile) bears no approach to anything hitherto known. This curious plant bloomed for the first time in 1898 in the collection of Sir Trevor Lawrence, Bt., at Burford, Dorset.

Mathiola sinuata var. *Ogrisia* (plate 7703), a native of Western France, is a fragrant annual or biennial Stock, with good-sized single flowers of the purest white. It is found in a wild state on the Ile d'Yeu (Insula Oya), off the coast of La Vendée, whence its specific name, which in gardens has been corrupted into ohienis and chinensis.

Ceropegia Waudii (plate 7704), a native of Natal, is a curious trailer with variegated foliage, pinkish stems, and inconspicuous tubular flowers of merely botanical interest.

Cereus mojavensis (plate 7705), a native of California, is also known under the synonyms of *C. Bigelovii*, *C. molliavensis*, and *Echinocereus mojavensis*. It is one of the dwarf tufted species nearly allied to *C. Fendleri* (*Botanical Magazine*, t. 6533), and has very long spines and medium-sized, rose-coloured flowers.

Kniphofia Rafii (plate 7706). A native of Natal. This is a pretty little new species of Kniphofia, nearly allied to *K. laxiflora*, from which it differs in its shorter smooth-edged leaves, shorter perianth, and exerted stamens. It is exceedingly free-growing, and was introduced into cultivation by Herr Max Leichtlin, of Baden-Baden.

The Paris *Revue Horticole* for February 16 has a portrait of a pretty and well-known hardy shrub named *Ribes speciosa* or *fuchsoides*, with flowers resembling a small Fuchsia. The number of the same periodical for March 1 gives a portrait of a new Hybrid Tea Rose named Sokel d'Or.

The *Revue de l'Horticulture Belge* for March contains plates of *Moradla didyma*, the well-known scarlet-flowered hardy border labiate allied to the *Salvia* family, and one of *Ledia Gouldiana*, a beautiful species, with medium-sized, rosy-purple flowers with white centre.

W. E. GUMBLETON.

INDOOR GARDEN.

PROPAGATING CODIÆUMS AND DRACÆNAS.

THERE are several methods of increasing these beautiful and indispensable stove plants, all of which are best performed in early spring. As *Codiaeums* and *Dracenas* become old they are apt to lose their lower leaves, especially if frequently employed for house decoration, and then become very unsightly, necessitating the propagation of young plants. It is unwise, however, to only do this when it becomes absolutely necessary, for small specimens in 4-inch or 5-inch pots are most serviceable for decorative purposes, and should, if possible, be raised every year. The most generally practised method of propagation is to partly cut through the stem at the point where it is desired that roots shall form, and to cover all around this with moss held in position by being tied with raffia. The moss requires to be frequently syringed to keep it moist, so as to encourage the formation of roots. As soon as these appear through the moss the rooted portion may be severed from the parent plant and potted in a 3-inch pot. For some few days after potting, until the roots have taken hold of the new soil around them, it is advisable to keep the plants in a close atmosphere, as is obtainable, for instance, under a handlight or bell-glass, in the stove.

It is not so necessary to partially cut the stems of *Dracenas*, for roots are more readily emitted from these than is the case with *Codiaeums*. Instead of allowing the shoots to form roots while still on the plant, they can be taken off to form cuttings and inserted in very small pots (filled with silver sand or a mixture of sand and peat) and plunged in the propagating pit. The cuttings will take root if simply placed in sand, providing that this is kept warm by hot-water pipes underneath and is enclosed above by a small frame. We prefer, however, to place them in small pots, taking care to make the soil firm around them. They will soon take root if the pots are plunged in a brisk bottom-heat under a hand-light in the propagating pit. If the old stems of *Dracenas* are laid in sand and kept warm by artificial heat, numerous shoots or suckers will be produced. These may be taken off, and usually root very readily; in fact, if not removed too soon they will probably already have made some few roots. *Croton* cuttings may also be made to take root in warm water if the temperatures of this and of the surrounding atmosphere are properly maintained.

In France, some cultivators, after having established the young plants by one of the above-mentioned methods, instead of transferring them by gradual stages from small pots to larger ones, plant them out upon a prepared bed of good soil made up in a warm house, preferably a low one, as then the plants are near the glass and obtain a full amount of the sunlight which is so necessary to their successful culture. They remain here during the summer months, are kept warm and moist to encourage growth, and when this is almost completed, in September they are taken from the bed and potted into various sized pots, according to the amount of roots they have made. By this method fine healthy plants are obtained in one season, and if carefully lifted and potted, no leaves will be lost. This, I think, is a more satisfactory method than that of keeping the plants in pots throughout the summer, for the growth made under the latter conditions is not so free, and the plants when well rooted are more liable to suffer from want of water than those planted out. If this occurs they experience a check, and probably lose some of their leaves. H. H. T.

VELTHEIMIA VIRIDIFOLIA.

This genus of half-hardy bulbous plants, belonging to the Lily family, comprises but three species, all of which are natives of South Africa. *V. viridifolia* bears, in the months of February and March, racemes of reddish-yellow flowers, borne on a stalk

from 12 inches to 18 inches long. They are very showy, and the plants also are of easy culture. We keep the bulbs during summer in a cool house facing north, and late in the autumn repot if necessary, or perhaps only top-dress them, using a rich soil with a good sprinkling of silver sand. The bulbs may remain in the same house until the flower-spikes begin to push if they are not required earlier than the end of February. Growth will soon commence after potting, and if the bulbs are of a proper vigour the flowers will eventually appear. Gentle stimulants can be applied with advantage when these are seen.

Frogmore, Windsor.

H. THOMAS.

GALTONIA CANDICANS.

AMONG the good garden plants of comparatively recent introduction scarcely any are more gener-



GALTONIA CANDICANS.

ally useful than this fine South African bulb. Unlike so many other bulbous plants from nearly the same latitudes, it needs no special care, such as drying off and replanting, but makes itself quite at home in our gardens, preferring soils that are stiff and rich.

It is a plant so distinct as well as important, that it deserves to be placed with special care; and although it is good anywhere and useful for carefully planned groups in the mixed flower border, it is best when so placed that it makes a quiet picture of flower beauty of its own. Of all positions the best would be as an isolated group, only associated with some rather important foliage of a different character, such as that of the large form of *Megasea cordifolia*, and so placed that it would be

against a background of quiet and yet darkly-rich greenery such as that of the clipped Yew hedge, where its ivory white bells and glaucous leaves would have their fullest value.

SOCIETIES.

THE ROYAL GARDENERS' ORPHAN FUND. THE NEW CHAIRMAN.

At a meeting of the committee of this fund, held on the 2nd inst., Mr. H. B. May, Dyson's Lane Nursery, Upper Edmonton, was unanimously elected chairman, in succession to Mr. William Marshall.

ROYAL HORTICULTURAL SOCIETY.

The next fruit and flower show of the Royal Horticultural Society will be held in the Drill Hall, James Street, Westminster, on Tuesday, March 13, 1-4 p.m.

A lecture on "The Evolution of Plants," illustrated by various garden strains coming true from seed, will be given at three o'clock by Mr. R. Irwin Lynch.

LINNEAN SOCIETY OF LONDON.

The following lectures will be given at the evening meeting, Thursday, March 15, at 8 p.m.: 1. "Report on the Botanical Results of an Expedition to Mount Roraima, in British Guiana, undertaken by Messrs. F. V. McCannell and J. J. Quelch," by Mr. W. Götting Hensley, F.R.S., F.L.S., and others. 2. "Bryozoa from Franz Josef Land, collected by Mr. Jackson, Harnsworth Expedition, 1896-97," by Mr. A. W. Waters, F.L.S., &c.

THE ROYAL CALEDONIAN HORTICULTURAL SOCIETY.

The arrangements for the present year are somewhat more ambitious than any made of late years. The fruit, flower, and scientific committees instituted last year are continued, their *personnel* being scarcely altered. The usual shows in April and in September exhibit nothing novel in the schedules of prizes, the class for a decorated fruit-table, to be judged by points, though largely a failure in the two years it has formed an item in the autumn programme, forming this year again one of the principal classes in the schedule. Difficulties arising from confused ideas as to what constitutes "kinds" and "varieties" are dealt with in a series of paragraphs explaining what the society means by these terms, and exhaustive lists of dessert and culinary hardy fruits with synonyms of Grapes and Roses are given to serve as guides to exhibitors.

A new feature in the arrangements is provided by two smaller exhibitions to be held respectively on May 2 and July 11, at which, however, no prizes will be given. At the former meeting Mr. Lindsay is to lecture on "Primroses and their Allies"; Mr. Hugh Dickson, Belfast, at the latter to lecture on "Roses." The fruit and flower committees meet on the occasion of each of the shows.

BRIGHTON AND SUSSEX HORTICULTURAL SOCIETY.

WE have received the annual report of this excellent society, and we are pleased to learn that the committee have to report a substantial increase in the subscribers' and members' subscriptions, which is especially gratifying, showing the popularity of the society is still maintained. On the other hand, the show receipts (excepting the summer show) are not so favourable, many causes contributing to the detriment of the Chrysanthemum show. The expenditure generally is less, and the committee are able to present a balance-sheet showing a profit on the year's working of £39 2s. 1d., and a balance in the hands of their bankers of £107 7s. 1d. The thanks of the society are due to the president, vice-presidents, and subscribers for their kind support during the past year, and to Mr. F. G. Clark for his services as hon. auditor. The following exhibitions will be held this year: Spring show, April 3 and 4; summer show, August 28 and 29; and Chrysanthemum show, November 6 and 7.

The president of the society is Mr. G. W. Willett, J.P., D.L.; chairman, Mr. G. Miles, Victoria Nurseries, Dyke Road, Brighton; vice-chairman, Mr. J. Binney, Danny Park, Hassoeks; hon. treasurer, Mr. W. Balchin; and secretary, Mr. J. Thorpe. In connection with this society there is a mutual improvement association, and an interesting course of lectures will be given during the spring by well-known horticulturists.

NATIONAL DAHLIA SOCIETY.

WE have received the report of this society for the past year, and we are pleased to notice that the annual exhibition at the Crystal Palace (on September 1 and 2) was very satisfactory.

The number of entries was again about 300. Omitting the blooms submitted for certificates and those staged "not for competition," the number of shows and fancies taken together was 1302, a decrease, as compared with the previous exhibition, of 108; of pompons 1880, an increase of 24; of cactus 1809, a decrease of 45; of singles 516, a decrease of 456; making a total of 5727 blooms, a decrease of 582.

The unfavourable season had adversely affected the show and fancy blooms, so that they were mostly deficient in the quality and symmetry which secure admiration for them; nevertheless, there were some fine individual blooms. The pompons were exhibited in very good form, small compact blooms of good quality being generally staged instead of the larger and coarser blooms that were once too often seen. The dry weather militated seriously against the display of singles, so that the competition was poor, several intending exhibitors failing to stage their blooms. Those that were staged presented the usual attractiveness and charm of the single varieties in a high degree. The display of Cactus

varieties was again magnificent, and received added interest on account of the large number of new kinds. They are evidently very popular, and are developing more rapidly than ever, so that the task of adjudicating on the respective merits of the many seedlings is rendered difficult. Certificates were awarded to sixteen new *Cactus* varieties.

The committee made arrangements to hold a meeting at the Royal Aquarium, Westminster, on September 19 and 20, for the purpose of affording an additional opportunity for the exhibition of seedling Dahlias, and for the awarding of the society's first-class certificate to such of the new varieties exhibited as the committee considered worthy.

In order to give additional interest to this meeting, it was thought desirable to offer prizes in a few competitive classes, and £26 was promised towards a special prize fund for this purpose.

The primary object of this, the first late exhibition of the society, was so well attained, that more than seventy seedlings were brought before the committee, and certificates awarded to ten of them. The competition in the various classes was very good, in a few severe, and such a large number of miscellaneous collections was got together that the whole formed quite a large show, the success of which was the subject of universal comment. The committee desires to thank Mr. R. Dean for the invaluable services rendered by him in connection with this show.

The value of Dahlias for decorative purposes has not yet been fully realised, and it is hoped that the society will be able to do more in the future than it has done in the past to illustrate the effectiveness of the Dahlia when used in this way. More classes should be provided having this object in view.

The methods of staging at present in vogue in most of the classes are admittedly far from ideal, and the committee would welcome any exhibits in illustration of fresh ways of staging or any suggestion that would improve the existing methods.

The committee desire to call attention to the periodical horticultural shows in connection with the Paris Exhibition of 1900. Classes will be provided for Dahlias on the following dates: August 21, September 11 and 25, and October 9, each show extending over a period of five days. Further particulars can be obtained from the Royal Commission, Paris Exhibition, 1900, St. Stephen's House, Westminster, London, S.W.

The committee desire to convey their best thanks to the donors of special prizes, viz., The Crystal Palace Company, Messrs. J. Cheal & Sons, Messrs. Keynes, Williams & Co., Messrs. Dobbie & Co., and Mr. W. Troseder; also to the Horticultural Club for kindly allowing the society's meetings to be held in the club room.

The committee are able to report that the membership has been well sustained during the year, but the numbers should be much greater than they are, and it is hoped that the society's supporters will in the coming year endeavour to bring the society to the notice of some of the many enthusiastic admirers of the Dahlia who are outside of the society and unaware of its existence.

The committee deeply regret to have to record the loss by death of one of the patrons of the society, Baron Ferdinand de Rothschild, M.P.

The committee has also to deplore the loss sustained through the death, in the prime of life, of their president, Mr. T. W. Girldstone, M.A., F.L.S., who was elected to the presidency in 1897 after serving the society as hon. secretary for nine years. In each of these offices Mr. Girldstone devoted himself enthusiastically to the interests of the society, and great things were expected as the result of his efforts in future years. During his brief tenure of office as president he had secured the addition of many names to the roll of membership, and the compilation of the official catalogue of Dahlias was almost entirely his own work. Mr. Girldstone's achievements as a raiser, grower, and exhibitor of single Dahlias are more fully dealt with on another page; by his untimely death the National Dahlia Society loses a most distinguished president and its most liberal supporter, and the horticultural world one of its most devoted and intelligent members.

In conclusion, the committee express the sincere hope that each member of the National Dahlia Society will make every effort to obtain the support of new members, in order that the work of the society may be extended and carried on to the best advantage.

The income of the society from all sources, including the balance of £1538. 9d. in the society's favour from the year 1898 and the sums contributed to provide prizes for competition at the second exhibition, amounted to £2004s. 9d., and the entire expenditure, including the payment of all prizes awarded at the two exhibitions, amounted to £1924s. 7d., leaving a balance in the treasurer's hands of £798s. 2d.

The hon. secretary is Mr. Frank Hindson, Gimmersbury House, Acton, W.

THE NURSERY AND SEED TRADE ASSOCIATION, LIMITED.

SALE OF WEED-KILLERS AND INSECTICIDES.

THE annual report of this association contains many matters relating to the trade, including sections of the Pharmacy Act under which proceedings have been instituted by the Pharmaceutical Society against nurserymen and seed merchants for selling by retail compounds for killing weeds and insects on plants. As the members present desired that the Pharmacy Act should be amended to permit of nursery and seed merchants selling these compounds, the subject was referred to the committee of management to consider and determine what steps should be taken in the matter, and to ask the assistance of the manufacturers of and wholesale dealers in these compounds in defraying the costs of and incidental to the preparation and passing of an Act of Parliament.

The president (Mr. N. S. Sherwood) expressed his opinion, and the members concurred that it was advisable that a fund should be raised to enable the association to take the

opinion of counsel upon questions affecting the trade, and to contest or support any action for their mutual benefit, as the annual subscriptions to the association are insufficient for this purpose after discharging the working expenses of the association.

It may interest our trade readers especially to know the names of those interested in this association. From the annual report we learn that the treasurer is Mr. W. J. Nutting (Messrs. Nutting and Sons), 106, Southwark Street, S.E. Trustees: Mr. H. Simpson (Messrs. Cooper, Taber and Co., Ltd.), 90 and 92, Southwark Street, S.E.; Mr. J. Hayes (Messrs. J. and J. Hayes), Edmonton; Mr. Harry J. Veitch (Messrs. James Veitch and Sons, Ltd.), Chelsea, Committee: Mr. G. H. Barr (Messrs. Barr and Son), 12, King Street, Covent Garden, W.C.; Mr. George Binyard, Maidstone; Mr. W. Y. Baker (The Thames Bank Iron Co.), Upper Ground Street, Blackfriars, S.E.; Mr. J. Harrison (Messrs. Harrison and Sons), Leicester; Mr. J. Hayes (Messrs. J. and J. Hayes), Edmonton; Mr. J. Ingram (Messrs. Wood and Ingram), Huntingdon; Mr. W. J. Jeffries (Messrs. Jeffries and Son), Cirencester; Mr. John A. Laing (Messrs. J. Laing and Sons), Forest Hill; Mr. William Paul (Messrs. W. Paul and Son), Waltham Cross, Herts.; Mr. T. Peed (Messrs. John Peed and Sons), Rompell Park Nurseries, West Norwood, Surrey; Mr. T. F. Rivers (Messrs. T. Rivers and Son), Sawbridgeforth; Mr. A. P. Silberrad (Messrs. R. Silberrad and Son), 25, Savage Gardens, Cuthbert Friars, London; Mr. H. Simpson (Messrs. Cooper, Taber and Co., Ltd.), 90, Southwark Street, London; Mr. J. B. Shade (Messrs. Protheroe and Morris), 68, Cheapside, London; Mr. Harry Turner, The Royal Nurseries, Slough, near Windsor; Mr. Harry J. Veitch (Messrs. J. Veitch and Sons, Ltd.), Chelsea; Mr. Wood (Messrs. Wood and Son), Wood Green, London; Mr. H. Williams (Messrs. H. S. Williams and Son), Upper Holloway, N., Secretary; Mr. J. P. Worrell, 30, Wood Street, Cheapside, E.C.

ANSWERS TO CORRESPONDENTS.

Names of fruit. *Weiss and Buntel*. The small Apple is Count of Wick, and the large one Gloria Mundi.

Names of plants. A. Y. Z., *Saxosa*. Probably you have not been answered before because you failed to send your proper name and address. The white flower is *Iris stylosa alba*, and the blue flower is *I. histrio*. Heath is *Erica mediterranea alba*. H. G. 1, *Croton Lehmannii*; 2, *C. Van Gerstedtii*; 3, *C. Cronstedtii*; 4, *C. nobilis*. The plant not numbered is *Draecena superba*.

TREES AND SHRUBS.

Shrubs to fringe a small pond (POMONA). Our correspondent asks for the names of shrubs suitable for planting on the margin of a small pond in Northern Somersetshire. We should advise (elder) Rose, whose original form is the wild Water Elder (*Sambucus racemosa*) of our stream-sides; also this same Water Elder, for the sake of its beautiful berries; hardy Bamboo (*B. Metake*), Quince, beautiful both in flower and fruit; and the North American Snowdrop tree (*Balaia tetraptera*), grown either as bush or standard. With such plants it would be well to associate such plants of bold aspect as the large herbaceous Spiræes, such as *S. Arvensis*, and the handsome *Rubus spectabilis*.

FLOWER GARDEN.

Seeding Verbenas (EVA). You can purchase Verberna seed now from any good seed firm at quite moderate prices both in distinct colours and in mixed form, some four to six diverse colours we have noted as being thus offered in packets separately. Seedling plants make very beautiful beds and cannot be termed formal ones, as when several colours intermingle, there is not only variety in colour, but in habit of growth. The seed should be sown thinly in shallow pans, that have in the bottoms ample drainage and are filled with sandy soil. It is well where seeds are few to make shallow holes equally all over the surface of the soil with the point of a finger and to put a seed into each, as in that way the little plants later get ample room to grow, and become quite strong before it is needful to dibble them off into other pans, or else shallow boxes, thinly, or to get them singly into small pots before planting them outdoors in May.

Dahlia shoots (S. M. G.). There is yet ample time to obtain cuttings from stored Dahlia roots. Set yours in shallow boxes close together and put some fine soil about them, then water and stand in very gentle warmth on the floor of a greenhouse for a week. As soon as the small shoots are seen to break up from the crowns of the roots place the boxes near the glass and give more warmth. In a very short time stout shoots 3 inches long will be formed. Take these off carefully with a sharp knife, each cutting having a small piece of fleshy root attached, insert them thickly into 5-inch pots filled with sandy soil, and stand them in a close, warm frame, or, failings such, then in a box stood in the greenhouse that can be close covered with glass. They will soon make root, and become, after being potted singly, nice strong plants in small pots ready to plant out at the end of May. The roots may then be divided with a sharp knife, each portion having one stout shoot, and these again may be planted out in due course.

INDOOR GARDEN.

Ivy-leaf Pelargoniums (AVLEFFE). You will observe that to the plants you term "Geraniums" we have given the proper appellation of Pelargoniums. Really they are not at all Geraniums. That these plants are largely employed, as you say, in summer bedding there can be no doubt, but if the soil be at all rich or the weather wet, they have a tendency to grow too luxuriantly and not to

flower freely. We prefer to see them planted against a trellis of from 3 feet to 4 feet in height, intermixed with white and red Fuchsias and free-growing Heliotropes, as in such case, just moderately tied to the trellis, they intermingle and form singularly beautiful objects. Also from such plants quite a wealth of flowers may be cut during the season. Ivy-leaf Pelargoniums also grown as semi-pyramids are most effective when in good-sized pots they are dropped into holes on lawns during the summer.

KITCHEN GARDEN.

Summer Spinach (S. J. W.). Very early sowings of Spinach will be useful this spring, as winter greens are fast becoming scarce. Anything of the Spinach type will be in great request. Sow now, and again three weeks hence, in shallow drills on a warm border, seed of the variety known as Flanders, or ordinary summer Spinach. These sowings will give plants in the rows rather thick, but the growth will be all the quicker, and then the crop may be clean cut as fast as high enough to do so. But for later sowings to give a summer supply, and these should be made in rows 12 inches apart monthly and quite thinly, sow the Long Stander, sometimes called The Carter. That fine variety produces large, thick leaves, and is much longer than is any other variety in bolting off to flower. For August sowings to stand the winter there is no better variety than is the Vinoflay, or, as sometimes called, Victoria.

Sowing Vegetable Marrow seed (HOPE).— Being a very tender plant, it is unwise to sow seed of it too early, except where it is possible to put plants out on to a manure bed and under a frame for a time, as then the plants come into fruiting early. For first-early purposes, and especially where grown under glass, the best varieties are the short-fruited Pen-y-hyd and the excellent Moore's Cream. But to grow, as is ordinarily done, on hills of soil or on heaps of decaying garden refuse for general fruiting, none are better than the Long White. To have good plants to put out at the end of May, sow seeds in a greenhouse or frame in 5-inch pots, four seeds in a pot, early in April, putting out all but two, when good growth results. Such plants after being well hardened by exposure in a sheltered place outdoors can be planted out where to grow with safety, or putting a little warm manure into a hole and a few inches of soil over it, a few seeds may in that way be sown outdoors late in April.

TRADE NOTE.

THE RATIONAL TREATMENT OF FUNGID DISEASES. UNDER this title we have before us a copy of a pamphlet, issued by Messrs. William Wood and Son, Limited, of Wood Green, N., the well-known horticultural merchants and specialists. Marking, as it does, a departure from the old methods of dealing with the fungoid pests of field and garden, the details of the treatment cannot but be of interest to all horticulturists and agriculturists.

Whether from the pamphlet that "preventive treatment" is the basis of the rational method, *i.e.*, purification of the soil and the destruction of hibernating spores which may be resting in it, thus ensuring for the roots healthy action and immunity from fungoid contagion. The soil being thus freed from impurity and disease germs, the environment of the young plants is favourable to vigorous growth. This purification is effected by means of a new discovery of this firm, which they have named "Veltha," and which is considered to be the most destructive fungicide known.

Prevention is always better than cure, and growers would do well to begin at the root of the matter by applying the fungicide even before there is visible evidence of the fungus. Certainly there is no more practical way of demonstrating the worth of an article than by the testimony of the users to its beneficial effects. Judging from the large number of letters which the firm have received giving strong evidence of the value of "Veltha" as a cure for and preventive of fungoid diseases, there should be a great future before the new remedy. We understand that Messrs. William Wood and Son, Limited, will be happy to supply copies of this pamphlet gratis and post free to inquirers.

GARDENING APPOINTMENTS.

MR. J. STORESBURY, late head gardener to Mr. George Pim, Brennanstown, Cabinteely, has been appointed head gardener to Colonel Smyth, Gaybrook, Mullingar.

MR. W. USHER, for the past three years general foreman at Brennanstown, succeeds Mr. Stodesimny as head gardener.

CATALOGUES RECEIVED.

FARM SEEDS. *Keat and Bendon, Darlington.*
Asparagus. *George Bonnard and Co., Maidstone, Kent.*
Herbaceous Plants. *F. Percival, Loughford, Warrington.*
Engineer Cycles. *The Engineer Cycle Works, Limited, York.*
Garden Seeds. *W. H. Hudson, 109, High Road, Kilburn, N.W.* *H. A. Burpee & Co., Philadelphia, U.S.A.*

BOOKS RECEIVED.

"Hand List of Tender Dicotyledons cultivated in the Royal Gardens, Kew, 1899." Sold at the Royal Gardens. Fubomd 2s. 6d., bound 3s.
"The Nature and Work of Plants. An Introduction to the Study of Botany." By Daniel Trembley Macdougall, Ph.D. Macmillan and Co., Ltd. 1900. Price 4s. 6d.
"Flowers of the Field." By the Rev. C. A. Johns. Edited by Prof. G. S. Boulger. Published by Society for Promoting Christian Knowledge, Northumberland Avenue, London. Price 7s. 6d.
"Bulletin of Miscellaneous Information." Additional series iv. List of published names of plants introduced to cultivation, 1876 to 1890. Eyre & Spottiswoode, East Harding Street, Fleet Street, London. Price 4s.



THE GARDEN.

No. 1478.—Vol. LVII.]

[MARCH 17, 1900.

TO OUR READERS.

NOW that the renewed issue of *THE GARDEN* is already in the third month of its existence, we feel it to be no less than a duty of common courtesy to offer a few words of thankful acknowledgment to the many friends whose cordial co-operation may well be regarded as the main cause of its now steady growth and increasing usefulness.

The letters that went out to the paper's old friends, asking for a continuation or revival of their active support, have without exception been answered in a spirit of the most friendly encouragement, while the two or three who have excused themselves from special exertion on the plea of age, or ill-health, or of a burden of literary work already too heavy, have expressed their regret in such kindly terms, that we feel as sure of their sympathy as if they had been able to prove it by practical acquiescence.

We feel that it is no small matter of encouragement to be thus assured of the willing support of those eminent in botany and horticulture throughout our land, while we have also the distinguished satisfaction of receiving constant proofs of most generous kindness from our brothers in horticulture in foreign countries.

It is doubtful if there be any bond of common interest so fruitful of good-fellowship as that of gardening. The love of flowers induces a kind of freemasonry, so much so, that we often feel a need to relax some of those lesser restrictions of civilised intercourse to which we Britons are apt to attach a perhaps undue importance. For whereas we are notoriously shy of addressing ourselves to persons unknown to us, even in such exceptional circumstances as render this exaggerated reticence an absurdity, so does a love of flowers, and the simple and wholesome impulses it engenders, impel us to abandon our attitude of apprehensive isolation to cast off our defensive armour, and greet each other as simple human beings. Perfect strangers will write to one another, the ceremony of introduction being performed by some Daisy or Forget-me-not; and from such a beginning many a lifelong friendship has arisen.

Close is the natural bond between botany and horticulture; each needs the help of the other, and though a good gardener need not be a profound botanist, yet some knowledge of the broader classifications of plants and their

main relationships is not only a great addition to the interest of gardening, but is an important matter as a guide in cultivation. When, for instance, we say broadly that all Buttercups like strong heavy soil, it is understood that this applies not only to the more obvious Buttercups such as *Ranunculus*, *Caltha* and *Trollius*, but also to *Clematis*, *Anemone*, *Adonis*, *Helleborus*, *Eranthis*, and the other plants that come within the natural order *Ranunculaceae*. So also the fruit grower, if he has a garden favourable to Pears and Apples, will know that he can also succeed with Roses; and he will remember how closely linked are the many plants of the great Rose family that inhabit our gardens and woods and wild places; of how his Peaches, Plums and Apricots, Almonds and Cherries are all nearly related, and these with the Sloes and White Thorns of our hedges and the great wild Cherries of our high woods; of how Cherries are nearly related to Laurel and its kinds; how Raspberries and Blackberries are near akin; how Strawberries, Gemms and Potentillas resemble each other in flower and leaf; how Quinces, Medlars, Pears and Apples, Mountain Ash and Service tree, and all the wild and cultivated forms of *Spiraea* are all within the great Rose family, and love good loam as does the Rose itself. And for all such easy excursions into the fields of botanical knowledge and such aids to the groping of our ideas we have to thank the botanists, beginning with the great Linnæus.

And though much of botanical lore may be dry, or may appear so to those who have little knowledge of the chain of observation and record that have gone to the development of each separate conclusion, yet we may well be reverently thankful to those patient and learned men who have endured the toil needful for the gradual disentanglement of some of Nature's knotty problems, and have put the discovered facts before us in ways so clear and simple, that they can be easily followed by people of little learning.

While offering our thanks to all those whose constancy of helpfulness seems tacitly to promise a steadfast continuance, yet as we wish always to increase the usefulness of *THE GARDEN* and to further extend its wide embrace of matters of horticultural interest, so do we also invite the further co-operation of all whose tastes are reached by the subjects of the paper.

Those who have a love of flowers and gardening are widely spread throughout our immense empire; and now that whole families of the younger generation are growing up in

homes where an understanding of the better ways of gardening, that during the last quarter of a century have come to be understood, and are about to go forth into the ends of the earth as soldiers, sailors, and engineers, on missions diplomatic, religious or medical, on surveys, on duties of all kinds that take men into many parts of the temperate world, we ask them to remember the home gardens and to keep a bright look-out for anything that may help to enrich them.

To such correspondents the pages of *THE GARDEN* offer a cordial welcome for any short record of their observations, especially when these are gathered in such latitudes as may present some sort of equality of climate with our own.

We feel sure that the friends of *THE GARDEN* will learn with pleasure, and we trust with some measure of personal gratification, that the paper is increasing greatly in circulation, and this surely is a wholesome sign that the love of flowers is extending in these isles and in other lands, from whence most encouraging letters have been received to testify to this world-wide interest in gardens and horticulture generally.

HAMPSTEAD HEATH PROTECTION SOCIETY.

We are pleased to learn from the report of the third annual meeting of this society that its zeal in preserving the natural beauty of the famous Heath shows no abatement. This society has accomplished much good work in the past, and will ever watch that the picturesque features of the Heath are not destroyed by bad planting and the idiosyncrasies of local authorities.

In the course of the meeting, a short, formal report of which we give in the proper department, Mr. F. Danford Thomas mentioned "the unrivalled charm of wildness so near London. In his garden were to be seen not only wood pigeons, but squirrels. The very greenness was restful. Indeed, some people seemed to value the Heath because, they said, it was so good for their children's eyes."

There was an interesting discussion upon the various beautiful features of the Heath and the best means of preserving them.

Mr. Alfred East, A.R.A., spoke with enthusiasm of his, and all artists', delight in the Heath. He reminded his hearers also of "the value of its associations in its wild state with so very many great men. It was loved by the poet Keats, who wrote that exquisite 'Ode to the Nightingale' here. It was the chosen home of the leader of the renaissance of landscape art—John Constable. These associations with Hampstead Heath in its natural

state were of immense value, and should never be broken."

Mr. Walter Field, A.R.W.S., spoke of a member of the Hampstead Heath Protection Society who had died recently, Mr. Gordon Chisholm, who had sketched on the Heath sixty years ago with the great artist William Müller. Mr. Chisholm was over eighty when his warm love of the Heath induced him to join the newly-formed society.

The urgent question of repairing the bald places on the Heath without introducing any discordant note, of assisting, not altering, Nature, was discussed by the meeting generally. The chairman promised that the committee would note the points agreed upon and do their best to fulfil the object required.

Readers know from past comments in THE GARDEN that the society has our cordial support, and it is unnecessary to again express at length our thoughts concerning its important work.

"IN A SMALL WAY."

NOTES FROM AN OBLONG GARDEN. III.

February 14.

I HAVE a lovely plan for next month, and the beginning of it must be arranged for at once. In the front of my oblong—the portion which lies between the house and the road, and which is partly occupied by the stable, against which a tiny greenhouse is built as a lean-to—there is a patch of grass, which forms an illegitimate short cut to both greenhouse, cold frame, and stable, and which is now a bare eyesore, the weakness of human nature taking the servants invariably and myself occasionally across it as a thoroughfare. It is a fairly sheltered spot and gets the afternoon sun, and I propose to make of it something quite out of the way for an oblong. Perhaps I am ridiculously ambitious, but I do not see why Mr. Barr's plan of growing Nymphæas in sunk tubs should not be carried out in a small way here. There is only room for two tubs, but better two than none. An oil barrel is ordered, and when it comes will be cut in two round the middle, and with the bottom taken out this will make two miniature ponds. Two holes will be dug, the staves sunk, and the water made to stay *in situ* by puddling with clay, after the direction in Barr's catalogue. The rain-water supply is close by, so that any loss from evaporation can be easily made good every day in hot weather. Round the two sunk tubs, which are really not tubs, but may be called so for convenience sake, I shall make a sublined rockwork border, and plant Lythrum and the Globe Flowers, with their roots well tucked up in the grateful cooeth of stones. This bit of ground is not very dry even as it is, so I fancy they will do. The worst thing about the plan is that climbing ambition has fixed its desires on *Laydekeri rosea*, which costs 15s., is a lovely pink colour, and smells sweetly; while *odorata pumila*, the little white fragrant Water Lily from America, is much more likely to succeed in such humble surroundings, and only costs 2s. 6d. or so. The yellow Nymphæas are all much cheaper than the pinks in proportion, and I am inspired to try *Helveola*, a little pale Evening Primrose-coloured plant with pretty bronzy leaves, for my second tub. The planting is simple enough, but good quality heavy loam is indispensable. A layer of well-rotted cow manure is put in first, then loam and a little manure about a foot deep; then the Lily rhizome, tied to a turf or stone, is planted, and the water let in. Mr. Barr recommends the addition of a little broken-up charcoal to keep

everything sweet, and I think that the addition of an inch or so of river gravel on the top of the loam would improve the appearance of the miniature pond still further. Nymphæas are fairly hardy, especially in these parts, but they must be protected from frost, for which purpose I shall have a wooden cover made for each pond, which, with the near neighbourhood of the heated greenhouse, ought to answer, as only the severest frost gets into the cold frame close by. Business is very active in the greenhouse just now, for the oblong expects to be largely supplied from it. As I like a perennial garden

and it is pretty closely planted, the borders being blocked out in lengths of 3 feet or 4 feet, each devoted to one class of planting—there is no room for bedding-out, but there are always gaps to be filled up. I am keen on having the encircling walls, which are of old limestone, delightfully lichened and full of cracks, thick with *Stoncrop*s, *Houseleeks*, and *Dianthus*. I have mixed seeds of all these with stiff soil, and pushed it into all the chinks, and sown Wallflower and the Cheddar Pink in the interstices of the coping; but in case of failure, the second halves of all the packets have been sown in the cold frame, and a box of mixed Saxifrage seedlings in this greenhouse is making second leaf. The interest of raising perennials from seed is not half appreciated. They can be sown almost at any time in a warm greenhouse, and there they are not so slow in germinating as when only sown in a summer frame after the approved fashion. I have *Viola cornuta* just thickening in a pan close to the glass and a big panful of seeds of the hardy *Primulas*, so that the pan is a standing dish in the greenhouse for many months. *Pentstemon* hybrids occupy another pan. One block of the sunny border is devoted to these lovely flowers, which are not thought half enough of by amateur gardeners. Their flowering time is so long, if they have plenty of manure, and they are so useful for cutting; while even if a very severe winter finishes them, two or three potfuls of early autumn cuttings kept in a cold frame will furnish a fresh supply very easily. All flowers with campanulate or tubular blooms, from the spotted Foxglove to the glorious *Gloxinia*, appeal to me very strongly, and my earliest joy among them is in the *Fritillaries*. These are supposed to be rather particular and to do best in shade, but I find they will grow anywhere here. Anything more exquisitely fairy-like than an unexpected white or yellow *Fritillary* dancing on its hair-like stem I defy Oberon himself to show me, and they take up little space, yet they are very seldom seen in gardens. M. L. W.

Bathwick, Bath.

AMERICAN NOTES.

A TEACHING SCHOOL OF PRACTICAL HORTICULTURE.

PRACTICAL beginning of what promises to be a most important movement in horticultural advance is made in the recent action taken by the Committee for the Improvement of the Condition of the Poor in New York city, in acquiring land for a horticultural school. This committee, which was formed in 1896, has as its original members A. S. Hewitt, R. F. Cutting, W. E. Dodge, Mrs. J. S. Lowell, J. H. Schiff, Howard Townsend, Mrs. A. B. Comstock, and Professor I. P. Roberts, of Cornell, but has since been greatly enlarged.

Acting under the advice of Mr. Powell, a farm has been taken at Chappaqua, thirty miles from New York city, and in direct communication with the New York Botanic Garden, which latter institution will co-operate with the new teaching school of practical horticulture. The purpose of the movement is to demonstrate the value of horticultural work in its practical application as a means

of relieving much of the agricultural distress of to-day, and at the same time to train up a race of expert practitioners. The institution will work on lines entirely distinct from what are followed at present by any teaching institution in the country. It will be for practical application of practical methods; in short, commercial horticulture as against investigation of scientific principles, and will, indeed, form a connecting link between the higher education of the agricultural colleges and the bread-and-butter work on the farm.

The 200-acre tract of land, which has been secured through the generosity of one of the members of the committee, is admirably adapted for experimental horticulture. It contains a good proportion of orchard land and a variety of sites adapting it for the several crops which will have to be grown. The institution, while looking toward the improvement of the conditions of the people, is not a charity, but is founded with a view to demonstrate the value of real work, to build up a healthy sentiment in the realisation of the value, dignity, and importance of work for its own sake, and to better the methods of horticultural practice as applied to every-day life.

In this country, with all the wonderful advantages of State agricultural colleges and their experiment farms, we have yet been much behind some European countries in the opportunities of training young gardeners and horticulturists in the actual handicraft of their profession. At last the blank seems likely to be filled.

It is a somewhat interesting antithesis that what is practically the Chiswick of American horticulture sees its light in the same year that the council of the Royal Horticultural Society of England is forced, through the development of urban growth, to abandon the time-honoured and historic gardens of that name in England, which have shed such a lustre on the horticulture of the world.—*American Gardening*.

RECENT PLANT PORTRAITS.

THE last-issued number of the "Dictionnaire Iconographique des Orchidées" contains portraits of the following thirteen Orchids, species and hybrids:

Cattleya Leopoldii var. *purpurea*.—This highly-coloured Orchid, though placed under *C. Leopoldii*, M. Cogniaux, in the text accompanying the figure, questions as to the probability of its being a natural hybrid.

Cattleya Schaudiana.—Known so well to all Orchid growers, that a detailed description is not required.

Cattleya Atlanta var. *splendens*.—This handsome form of *C. Atlanta*, already described, has been raised by M. Peeters between *C. Warscewiczii* crossed with pollen of *C. Leopoldii*. With flowers much larger and colour more brilliant than *C. Atlanta*, it deserves the varietal name *splendens*.

Cattleya Waddelliana.—A very fine hybrid, raised by Messrs. Veitch between *C. Bowringiana* crossed with pollen of *C. Warscewiczii*, which latter it much resembles.

Cattleya Ella.—Another of Messrs. Veitch's fine hybrids between *C. bicolor* and *C. Warscewiczii*. A flower of remarkable size and colour.

Cattleya Goossensiana.—This remarkable hybrid has been raised by M. Peeters from *C. Schilleriana* with pollen of *C. Gaskelliana*. It is dedicated by M. Cogniaux to M. Goossens, the artist who illustrates the "Dictionnaire." It bears a richly-coloured flower with a large handsome lip.

Cypripedium A. de Lairsse.—A grand hybrid of large size and distinct marking, raised by M. Peeters between *C. Curtisii* and *C. Rothschildianum*. In appearance it takes more after the latter.

Cypripedium Mulleri var. *Dr. Climp Doorebos*.—A fine hybrid between *C. Lawrenceanum* and *Rothschildianum*, intermediate in form and colour between the parents.

Lisochilus Horsfallii.—An old plant rarely found now in cultivation, producing tall, many-flowered spikes of delicate rose colour and maroon.

Oncidium Kramerianum.—This is the old and well-known *Butterfly* Orchid, so wonderful in form and rich in colour.

Oncidium rubrum. One of the many small-flowered *Oncidiums* with branched sprays of red-brown blooms with yellow lip.

Stanhope Wardii. - Another introduction of many years ago, bearing quaintly-formed blooms of bright yellow with numerous small spots of red-purple.

Vanda Sandoriana. A good form of this most remarkable *Vanda*, or *Esmeralda*, as it is sometimes called, varying so much from the typical *Vandas*, that with one or two others it is placed in a subsection of the family under the name *Esmeralda*.

BEST APPLES FOR BRITAIN.

EARLY.

Dessert.

Irish Peach. Lady Sudeley.

Cooking.

Cellini Pippin. Lord Grosvenor.
Keswick Codlin. New Hawthornden.
Stirling Castle.

MIDSEASON.

Dessert.

Allington Pippin. Cox's Orange Pippin.
Blenheim Orange. King of the Pippins.
Cockle Pippin. Margil.
Ribston Pippin.

Cooking.

Bismarck. Striped Beaufin.
Lady Henniker. Tower of Glamis.
Lord Derby. Warner's King.

Wellington.

LATE.

Dessert.

Adam's Pearmain. Fearn's Pippin.
Barnack Beauty. Reinette du Canada.
Claygate Pearmain. Scarlet Nonpareil.
Dutch Mignonne. Sturmer Pippin.
Winter Ribston.

Cooking.

Alfriston. Newton Wonder.
Bramley's Seedling. Norfolk Beaufin.
Lane's Prince Albert. Sandringham.
Wellington.

[Through pressure upon our space, several important contributions upon the subject are held over until next week. Eds.]

THE INDOOR GARDEN.

LACHENALIAS.

IN no way do *Lachenalias* show to better advantage than when grown in circular wire baskets. Their natural habit of growth is a semi-pendent one, which renders them just suitable for suspending in a greenhouse or conservatory. This style of growing these naturally drooping plants is preferable to having them in pots. When once the bulbs are established in the baskets it is not necessary to disturb them for three years.

If 2 inches of the surface soil is pricked off in September and replaced with turfy loam and cow manure in equal parts, this will be sufficient to assist the growth each year, with the addition of weak liquid manure freely given when growth is in full swing. The more the plants are fed within reason the more luxuriant will the foliage be, and for baskets the leaves play an important part in the beauty of the plants, as they serve to hide the wire.

The bulbs of *Lachenalias* increase fast when they are in a healthy state. When re-arranging the bulbs in the baskets it is a good plan to sort them into two sizes for the sake of uniformity when in flower. The best time to shift them is when they start into growth in September or early in October.

The baskets are easily made of galvanised wire (No. 8 size). The size of the basket may vary according to circumstances, such as the number of

bulbs at disposal and the site they are to occupy when in flower. Those 18 inches in diameter and 15 inches deep afford space for a very fine display. Line the basket with common green moss from the woods to prevent the soil falling through between the wires. The bulbs are placed in layers, commencing in the middle at the bottom of the basket, and placing the point of the bulb in such a way that the leaves will grow through the wires and

however, be daily moistened to keep it in a fresh condition. When growth has fairly commenced water must be given freely.

As regards compost, *Lachenalias* are not too particular. Three parts of fibrous loam and one of leaf-mould and cow manure, with a plentiful addition of coarse silver sand to keep the whole porous, form a suitable soil. When the plants have done flowering they should be hung in the full sunlight, gradually withholding water from them as the foliage shows signs of ripening off. When this has wholly taken place the baskets may be hung up in a cool shed, where they can remain without water until the time again comes round for renewing.

As to variety, although *L. Nelsonii* is generally regarded as quite the best, there are other deserving sorts. *L. tricolor* is an excellent variety for baskets, as it is quite easy to grow and blossoms profusely. *L. aurea*, a free-growing yellow-flowered variety; *L. luteola*, having yellow flowers with green and red markings; *L. quadricolor*, scarlet, yellow, and green with a crimson edge, and *L. pendula*, with rich crimson flowers tipped with green, are all worthy of attention. E. M.

RIVIERA NOTES.

AMONG the crowd of early-flowering bulbous Irises, *Iris assyriaca* can hardly be said to take a first place. Its large bulb makes one hope for more vigorous growth than it actually attains to, but its quiet grey-blue flowers are prettily raised above the bold recurving foliage, so that a good group of it is not without considerable merit. There is a curious similarity in the shade of blue between it and the lovely *I. sinensis*, so beautiful and so full of flower just now, but it entirely lacks the grace of form and bright golden markings that distinguish *I. sinensis*. *Iris assyriaca*, however, is much more lasting in individual bloom.

After some weeks of delightful weather it is sad to say that a severe fit of cold and heavy fall of snow visited us this morning; it is too early to say how much damage has been done, but as the snow has melted in the morning's sun there may not be much injury to plants unless it freezes again at night. It will be curious to hear how other places fared on March 8. E. H. WOODALL.

Cimiez, Nice.

NOTES OF THE WEEK.

Early flowers at Kew. The Royal Gardens, Kew, increase in interest as the year ages, and recently on a cold March day Crocuses were scattered in profusion over the Cumberland mound and in the grass near the entrance from the Green. Kew in spring is a garden of flowers, and a thousand *Daffodils* are showing through the grass to continue the flower beauty commenced with the Snowdrops and the Crocuses.

Dwarf Irises. Every spring one is charmed with the various dwarf Irises which gladden one's eyes with their brilliant colours; some, too, are precious for their exquisite scent. But one's pleasure is dimmed by the recognition of the fact that but a very small remnant consent to live more than one year with us, and this note is written in the hope that it may elicit suggestions from those who have been more successful than we can claim to be. Of all the common forms, *I. histrioides* is the only one that seems perfectly contented. *Histrio* may linger a year or two, and so with *Bakeriana*, *Rosenbachiana*, *reticulata* (both forms the less attractive *Kreklagei* being the more persistent), but none seem to be here proof against some foe, be it fungus, climate or some other cause. I know of a garden in Worcestershire where *I. reticulata* increases and multiplies as fast as *Scilla sibirica* or *Chionodoxa*; this is in light soil, in beds on terraces on a steep hillside. Quite



LACHENALIA NELSONII. (HALF NATURAL SIZE.)
(From a drawing by Agnes Cook of flowers sent by Mr. Allan, Garsdon Park Gardens, Norfolk.)

hang downward. Strong bulbs may be planted 3 inches apart. When filled, the baskets are at once hung in a light position in a cool house, where the growth will be stocky. If they are given too much heat the leaves are liable to become drawn, which spoils their appearance, and the flower-spikes are not nearly so strong. The soil being moist, water will not be required for a week. The moss should,

lately I have heard of it near Wimbledon flourishing as vigorously in stiff soil almost resembling clay. What is the secret? Here in Reading we have no soil—20 feet of gravel lies below us, and we must put in whatever soil we deem our plants require. Stagnant moisture we do not fear. Would that those who have succeeded, especially such as have gardens resembling this, reveal wherein the cause of failure lies. One's perplexity is increased by the fact that here and there in some odd corner a single bulb of *I. reticulata* will live and thrive for years.—A. C. B.

A note from Ireland.—May I say how glad I was to see "Notes from Ireland" in to-day's GARDEN. I have sometimes wondered why we so seldom see any Irish gardening news in your paper. In spite of frost and unpleasant weather generally we have had our rooms full of Snowdrops for more than a month. The *Lamrustimus* bushes are a mass of bloom, and the Crocuses have never seemed so bright. About three weeks ago we found ten little Primroses in the Scotch Fir wood near the sea. In the garden to-day I found three beauties, and noticed, too, a dear little Primrose out, also *Czar* and *Neapolitan* Violets, Wallflowers, and Periwinkles. In a neighbour's garden the Mediterranean Heath and yellow *Nemophila* are ready for the hoes, and plenty of *Anemones* and *Polyanthuses*. The winter *Jasmine* still looks bright, but *Pyrus japonica* is nearly over. The buds of the common double Daffodil and the graceful princeps give promise of early flowers, and make us feel that the most beautiful of all the seasons of the year, the spring, is very near.—O. C., *Carrowgarry, Co. Sligo*.

[We think that our correspondent's yellow *Nemophila* must be *Linnanthus Douglasii*.—Eds.]

Botanical work at York.—Messrs. James Backhouse and Son, Ltd., of York, have inaugurated a new department in their nurseries, which may be of great service to botanical lecturers and demonstrators, in providing a supply of material especially for microscopic work. They have issued an extensive priced catalogue, comprising objects in the Myxomycetes, Algae (including diatoms), Characeae, Fungi, Hepaticae, Musci, Pteridophyta (prothallia and vegetative organs), Gymnosperms, and all the more important orders of Angiosperms. The department is under the management of an experienced practical botanist, Dr. Arthur H. Burt, and seems likely to supply a long-felt want. *Nature*.

Iris japonica. This Iris, now in flower, is very much in the way of the *Morcas*, lately figured and alluded to in THE GARDEN. It is in every respect a very beautiful plant, and under greenhouse treatment keeps up a succession of its charming blossoms for about six weeks. The Japanese Iris is seen at its best when grown in good sized masses or clumps, as in the Cactus house at Kew, where it is just now very attractive. The flowers, which are borne on a branching spike, are of a beautiful pale mauve colour, blotched with yellow, and are about 3 inches across. A kind of fringed crest forms a very conspicuous feature of the flower, and owing to this it is sometimes met with in gardens as *Iris fimbriata*, while another name for it is *I. chinensis*. Its cultural requirements are not at all exacting, yet many fail to flower it in a satisfactory manner. The principal consideration is good drainage, a soil that will stand for years without renewing, as it flowers best when pot-bound, and full exposure to the sun in order that the rhizomes may be ripened. T.

Croci at Kew. Few flower gardeners seem to know the great wealth of Croci, not the Dutch forms merely, but species and their varieties. It is interesting to see a small collection of the most beautiful near together, as we noticed a few days ago at Kew, where small beds are filled with distinct species of beautiful colour. We made a note of the following: *C. biflorus* var. *minor*, the old Cloth of Gold Crocus (*C. susianus*), *C. Korolkowii*, the ordinary *C. vernus*, *C. Tommasianus*, a charming flower, purplish rose, and large; *C. etruscus*, pale like; the handsome *C. Imperati*, *C. Siberii*; *C. chrysanthus* var. *insculptus*, a Crocus of remarkable colour, deep butter yellow, and *C. reticulatus*.

Phlox maculata, the spotted-stalked *Phlox*, introduced into this country originally from North America in the year 1740, is in danger of becoming lost. I find no evidence of its presence in this country beyond a few examples in the herbaceous borders at Kew, and it speaks volumes for those ably conducted gardens that so many forgotten treasures are retained there. It may be argued that *Phlox deussata* has been so improved of late years, that there is no need of other species. Few will dispute the fact, however, that the large blooms of the improved varieties of the latter have assumed a very indefinite shape, or mop-like contour. There is room for improvement by giving breadth to the trusses in preference to the conical shape, and the habit of *Phlox maculata* with its flat-topped trusses would seem to be a good model to work from, and an equally desirable parent to work upon in the effort, whilst increasing size of bloom, to retain the original form of truss, with a better display of each bloom upon tall *Phloxes*.—W. EARLEY.

Agathæa cœlestis.—When the Marguerite became a popular flower, this *Agathæa* also advanced in favour, and, under the name of the Blue Marguerite, it made its way into many gardens where as *Agathæa cœlestis* its merits had been previously ignored. If stopped during its earlier stages, it forms a neat bushy specimen that will flower more or less continuously throughout the year. The Daisy-like blossoms are a pleasing shade of blue, and being borne on fairly long wiry stalks, their value in a cut state is thereby enhanced. If cuttings are struck in the spring and the young plants shifted on as required, they will by the end of the season form good specimens in pots 6 inches to 8 inches in diameter, and will in a warm greenhouse flower throughout the latter part of the autumn, during the winter, and often well on into the new year. For winter blooming the plants should, after mid-summer, be stood outside in a sunny spot in order to ensure good sturdy growth and an ample supply of flower-buds. Should the plants show a tendency to bloom before they are required to do so, the flowers may be picked off. This *Agathæa* was introduced from the Cape of Good Hope in 1753, but its popularity is quite of recent date. H. P.

The Mountain Avens. *Dryas octopetala*, of Scotch origin, and therefore hardy and

endurable, is a member of the extensive family of Rose-worts, which should be better known and more generally grown. The young leaves it forms annually somewhat resemble small Oak leaves, the delicate coloration of which is so highly appreciated, from amongst which rise its eight-petalled white flowers, somewhat resembling *Anemones*. The plant is very suitable for a front rank border plant and rockeries, but, as regards the latter, should be planted in clefts beneath which are goodly depths of soil. It thrives best in peat soil, and is propagated from seeds, cuttings, and by division—the cuttings to be made in summer and covered with a hand-glass. There is a dwarfier form, named *Dryas octopetala minor*, which is more compact in growth. I may add both are evergreens. I observed lately at Kew Gardens, *Dryas Drummondii* (yellow-flowered), all other species being white-flowered) doing well in the open border. Though a North American species, it is classed amongst half-hardy evergreens. It is deserving attention, though absent in trade catalogues. *Dryas* of this class make pretty pot plants.—W. EARLEY.

Achillea tomentosa, or Downy Milfoil of British origin, has become prominent of late years in connection with carpet bedding, but has not, in accordance with its real merits, yet taken its proper position as a herbaceous border plant, a front row plant in particular, for which it is so well adapted. It is a more pleasing permanent subject than many that are habitually grown—a permanent evergreen with an effective downy appearance, which displays prominently its bright yellow flowers. It is suitable both for growing in tufts and as an edging.—W. E.

SHELTERS.

PART of the garden at Oakwood, Wisley, before some Poplars grew up was much exposed to high winds, and for some plants we wanted shade, so the question of shelter from wind and sun had to be considered. We began with sheep hurdles, which answered to a certain extent, but the feet on the ground rotted and they were not high enough. We had higher ones made, but they were very clumsy, so we tried iron cattle hurdles with cut Furze or Heather worked in between the bars. For some purposes these answered well. If Japanese Rose hedges are wanted, young plants grow fast against this shelter, and by the time the Furze has rotted the Roses have made a good fence. We next tried scrim from the Willesden Paper Company stretched over the iron hurdles; but this after a time looked shabby and the scrim rotted. We at last arrived at a shelter which we think practically answers every purpose, and is easily portable. We have a great many of this sort in use and have thoroughly proved them. I send on a photograph. The iron hurdle is five-barred; it stands 3 feet 6 inches out of the ground and is 6 feet wide; 3-foot common laths are tied by tarred string to the hurdles, two sets one above the other overlapping about 9 inches; this gives stability and a height of shelter of 5 feet 3 inches, which is enough for most purposes. One cross piece is put above the hurdle to stiffen the laths. The laths do not touch each other, so air passes between them. The whole shelter, iron, laths, and twine, is well painted over with black varnish, which we get from Hill and Smith, of 118, Queen Victoria Street. We make up the shelters for our own use, but if there is any likelihood of a demand for them, I could send a pattern to Messrs. Hill and Smith, who supply the iron hurdles, and ask if they could supply the shelters complete from their country works. All I should ask is that they should be called "The Oakwood Shelters." I believe wooden shelters are used in Holland, but I have never seen them and do not know how they are made. GEORGE F. WILSON.

Heathbank, Weybridge Heath.



PLANT SHELTER AT OAKWOOD, WISLEY.

THE FRUIT GARDEN.

GROWING APPLES FROM CUTTINGS.

MUCH has been written in favour of growing Apple trees from cuttings instead of the orthodox or generally followed plan of grafting or budding them upon various stocks. I have repeatedly made experiments with many varieties to test the suitability of the plan or otherwise. I must say I cannot think how any person can advocate the principle of raising trees from cuttings. My difficulty has been to induce them to strike at all. I have inserted cuttings in August, September, and October, even in the spring, and with but indifferent results. The only varieties I could ever induce to root at all are Manks Collin and King of the Pippins. The former is the better adapted to this mode of increase. Even this does not grow freely enough to make a tree and give a fair return. There

desirable practice would be a great gain in more than one way, for exhibitors would find that the appearance of their fruit was actually improved, while all persons of taste while visiting the show would far rather see Melons and Grapes shown with a natural garnishing of their own leaves than bedded in oddly-irrelevant nests of pink paper.

CANKER IN FRUIT TREES AND ITS TREATMENT.

M. PIERRE PASSY in the current number of the *Paris Revue Horticole* writes as follows about the above-named subject: "Canker is a serious disease of the branches and shoots of fruit trees; Pears and, above all, Apples are attacked by it, but all varieties are not equally subject to this malady. There are some which are a deal almost entirely to resist its attacks, while others, on the contrary, such as the *Reinette du Canada*, are specially liable to suffer from them. It is also an undoubted fact that the conditions of locality have a great influence on the evolution of this disease. It is, for example, in confined and damp situations, in narrow valleys, and in low-lying and damp soils that the disorder

that the cause of death was not a Saprophyte which had established itself in tissues which were already dead. We have this year confirmed these experiments by starting the development of well-defined canker on a variety of Pear tree relatively by no means subject to it. The canker was distinguished not only by its general aspects, but by the production of the fruit-ifying organs of the fungus. We had chosen for this purpose a Pear of the variety named *Bonne d'Ézée*, which, although growing very near the varieties *Duchesse* and *Beurré d'Amanlis*, kinds which are very subject to the attacks of the parasite (as they showed numerous cankers characterised by the two sorts of fruit-bearing organs of the fungi *Conidies* and *Peritheces*), yet *Bonne d'Ézée* was absolutely free from it, which is a proof how little liable it is to this malady. On May 20 we made on a branch of the previous year a small longitudinal incision, into which we introduced by means of a perfectly clean instrument some spores of the conidian form taken from a canker borne by a *Duchesse* Pear. In order to avoid too intense an evaporation, which might easily have taken place at this time, and thus have offered an obstacle to the germination of the spores, and to avoid also the introduction of other germs, the wound was immediately covered up with some Pear tree leaves spread over the incision and kept in their places by two ligatures of raffia. Eight days after the inoculation you could already see on both sides of the incision the spreading of the mortification of the tissues, indicating clearly to a practised eye the nascent canker. Six weeks after the mortification had spread to about six centimetres in length, and already at regular distances you could see the formation of the little button-holes by which the masses of fructiferous stroma escape. In the month of August canker had attained ten centimetres in length, many groups of fructifications having separated themselves from the bark. The branch, entirely circumscribed by necrosis, was visibly perishing, and the leaves borne on the young lateral shoots were beginning to wither and fall. There is no doubt that death was near, and that the branch would certainly not have shot forth in the ensuing spring. This artificial inoculation of canker into a variety not liable to it shows clearly what is the provoking agent, and at the same time the rapidity with which the malady can extend when the fungus is well implanted into the living tissues as was here the case. It also tends to confirm the opinion that *Nectria ditissima* is a true parasite capable of rapidly bringing about by itself the death of living tissues and of causing the special necrosis so well known by cultivators of trees. It follows quite naturally from the above-mentioned details that one should seek in the first instance to radically destroy existing cankers. The most effectual way to do so is to burn the affected branches so as to destroy all the spores, and thus diminish the chances of their dissemination. If one cannot destroy the branches attacked, the cankers must be severally cut out, removing every particle affected by the parasite, and even removing also a portion of the sound wood. The portions removed must then be burnt and the wound healed with a powerful antiseptic. For this purpose might be used a concentrated form of the Bordeaux broth, or the following preparation: Sulphate of iron, 30 to 40 kilos; sulphuric acid, 1 kilo, to 100 litres of hot water. Pour the acid on the sulphate, and then add the water very slowly and with precaution. Apply the mixture as soon as the dissolution of the sulphate of iron has taken place. Then protect the wounds from fresh infection by covering them with some appropriate coating, such as grafting wax, Norway tar, or clean earth worked into a clay with Bordeaux broth; also anti-cryptogamic dustings of all the branches will destroy any spores which may be on them or may be brought to them, and will act as a preventive. Finally, the facility of infection being granted, one should avoid with the greatest care the making of wounds with instruments which have been previously used to cut off branches affected with the fungus. This would be to expose one's trees to a direct inoculation of the malady. All instruments, therefore, should be most carefully cleaned before using.



A GROUP OF OCTOBER FRUIT GROWN IN YORKSHIRE.

appears to be no vigour in such trees; they remain much too close to the surface, although they fruit freely enough. Certainly I shall not be tempted any more to take up time and space in raising trees by this method when I can follow the orthodox system of grafting or budding them on such stocks as the Crab, free, or the English Paradise. E. M.

OCTOBER FRUITS AT SKELTON CASTLE, YORKSHIRE.

It is pleasant to see a picture of a group of fruit so well grown by a good gardener in the north of Yorkshire, and to see it so simply and effectively grouped by an amateur photographer who is an enthusiast for fruit and flower subjects. The basket contains Tomatoes and the good early-cooking Apple *Duchesse of Oldenburg*. The rest of the group comprises the excellent Pear *Louise Bonne of Jersey*, Melon *Hero of Lockinge*, Peach *Bellegarde*, and Grapes *Black Alicante*, *Muscate of Alexandria* and *Barbarossa*. The fruit bears as good evidence of Mr. Batty's successful culture as the grouping does of the photographer's taste.

We cannot help thinking that if some such groupings of fruit, with the beautifying adjunct of related foliage of fine type, were adopted in putting up exhibits of mixed fruit at shows, that such a

is most prevalent. It has also been asserted that it was altogether the result of locality, and that it was inherent in certain varieties. These are, in my opinion, mistaken conclusions. Canker is the result of the development of a parasitic fungus, a fact of which there is no longer any doubt. But often affections which are fairly analogous in form are confounded with those whose cause is very different. Thus many assert that canker is caused by the piercings of insects such as the lamigerous plant-louse, thus completely confounding the affection caused by the insect with that of the fungus. If it is true that after many years the wounds caused by the insect show a certain analogy to those caused by the fungus, and that sometimes this latter fixes itself in the wounds caused by the insect and so aggravates them, it is none the less true that at the outset there is between these two attacks no connection and no resemblance, and one can hardly conceive the attribution to one and the same cause of affections which are so distinct and so different one from the other when they are examined with some care. These confusions can only be the result of inaccurate observation. Many mycologists have for a long time affirmed that the cause of the canker was a fungus, and the experiences of Herr Goeth in Germany have shown that *Nectria ditissima* (Tal.) was a true parasite, causing the death of the organs it invaded, and

Then conditions of locality having, as we have stated above, an undeniable influence on the development of this disease, which is easily explained when the conditions necessary to the germination of the spores and the development of the mycelium are known, one should strive to open out the locality to fresh air and to make the soil as wholesome as possible, so as to render the conditions as little favourable as may be to the spreading of the disorder." W. E. G.

[We have to thank Mr. Gambleton for the trouble he has taken in making the translation of this most lucid and useful article. Eps.]

A LETTER FROM ROME.

THE WINTER ASPECT OF THE PINCIO.

It is interesting to note the effect of winter on trees, more or less foreign, in warmer

seed-pods of an *Acacia*, still green, at a little distance arouse illusive hopes of spring. Planes dangle their prickly balls, and are too idle to scatter their golden silk without a shaking. Even the Limes are unwilling to part with their winged seeds, and almost delude the bees with false hopes of nectar. Leaves fade through sheer weariness, but there is little storm or stress to shake the branches free from the burden of the past summer.

The Ginkgo, or Maiden-hair tree (*Salisburia adiantifolia*), is an exception. A short avenue of sturdy, straight-stemmed specimens of this little-known tree is growing, in full vigour, on the Pincio. They might easily be passed by at this season; but an observant eye cannot fail to notice the short spurs not spines thick set upon the slender branches, which distinguish the Ginkgo from any other tree form.

for flower-beds displayed in so many of them, it is delightful to look with a critical eye at the groups of Palms and evergreen and flowering shrubs, and to find how much may be accomplished by permanent planting. Doubtless the genial climate of the south makes what we call "sub-tropical" gardening both possible and easy. For example, the fine Musas, which were in great perfection but a few weeks ago, have simply had their broad leaves trimmed down to the base, the stumps being fully exposed and needing no sort of protection, and the young leaves being almost ready even now to burst the sheath. Canas, too, are cut off at the ground-line and the dead leaves and stems laid over the clumps. But "natural" planting, which is in vogue here, is in direct contrast to the formal style of the old Italian garden, with its close-clipped walls of Bay and



FERULA COMMUNIS IN SEED ON THE COAST OF SICILY. (From a photograph by Signor Crupi.)

climates than our own. With us, it is true, the dead, crisp leaves may cling to the sheltered side of the Beech or Hornbeam hedge, but the rocking branches of Oak, or Elm, or Ash in our wind-swept isles toss off every leaf and leave us a gracious legacy of bare, interlacing boughs. Acorns fall and seldom leave their cups behind; the Ash and Sycamore drop their "keys"; even the Laburnum holds fast but few of its pods when "stormy winds do blow"; only the Alder sets up its pert little catkins and laughs defiance at the blast. But in Italy, trees, like tired children too long kept awake, seem to fall asleep half-dressed. Loest trees hang out their great black beans amongst shrivelled leaves. The brown panicles of *Paulownia* wait to be pushed off by swelling buds. The beaded

Even so it would have been hard to recognise them had there not been now some weeks ago—a carpet of yellowed, wedge-shaped leaves spread beneath the trees, waiting for the garden barrow; and not leaves only, but an abundant harvest of Plum-like fruits, each containing one large kernel. Most of us know the fine tree at Kew, and it would be interesting to learn whether it ever fruits in our climate. I shall watch with pleasure the budding in the spring and for the flowers to follow.

The arrangement and planting of the Pincio has been done with infinite care, and calls for unstinted praise. When we consider the great difficulty of keeping a public garden—or, for that matter, any garden—year in, year out, at a high level of beauty, and the inordinate rage

Hex and fantastic forms of bird and beast carved out of the living green of Box or Yew. So rare even now is "natural" gardening, that it must have required courage to be its pioneer in a land where formerly "no tree or shrub dared to grow in its own natural fashion" without the intervention of the *topiarius*, or head-gardener, to shear it into shape.

Under such a shorn archway and canopy of Hex, indeed, we pass along by the *Passaggiata*, through the iron gate into the Pincio Gardens. There we bid farewell to *Messer Topiarius*. Trees and shrubs are no longer clipped or tortured. Clumps of Indian Fig (*Opuntia*) bask under the warm shelter of the wall, spreading their huge spiny joints to the sun, well set with unripe fruit. Groups of *Yuccas*, now past their

best flowering, still show many spikes in all stages, which only wait for spring to open, and wait in safety. It has been noticed more than once of late that Yuccas in English gardens are showing unseasonable flower-spikes. No doubt this is due to an exceptionally hot summer; but may it not be probable that in congenial climates they have no set time for blooming, being influenced, like bulbs of Eucharis or Pancratium, rather by the age of the offsets than by the season? Further on, Laurustinus in a sheen of metallic blue berries is an old friend in a new dress. At home the berries ripen—sometimes—but never with such lustre as this. By-and-by we come to some lovely Pepper trees (*Schinus molle*) with their graceful drooping branches and pink berries. This is a tree we must perforce do without. As far as I am aware, it succeeds neither in the sheltered gardens of Trecco Abbey nor on the favoured west coast of Scotland. Soon we turn into the garden proper, with its green turf, its shady trees, its groups of Palms, its flowering shrubs, and its climbers.

For the distinctive feature of the Pincio is to be found in the many happy unions between tree and climber, and an hour spent in noting down some of the combinations tried—some successfully, some less so—by Signor Cav. Palice, the skilful and enthusiastic Director-General of Public Gardens in Rome, is by no means time wasted. At the present moment the Winter Jasmine, in full flower, is charming, festooning here and there a deciduous tree with its yellow stars, or scrambling down the face of an Ivy-clad wall. This is a shrub, to use an antiquated phrase, that no garden should be without, and though we may be forgiven if we prefer variety where there is such wealth of beauty to choose from, yet it is surely true that this fine old winter-flowering plant is too much neglected. It is wonderfully lovely when it is given free license to drape as it will a bare and, perhaps, unsightly tree trunk, or to fall over, rather than to climb up, some crumbling wall.

A combination not so likely to succeed, perhaps, with us, but very good and effective, is an Acacia, leafless meanwhile, into which a Smilax has run rampant, showing off its stiff heart-shaped leaves and coral berries to great advantage. To note a few more. A Magnolia screens with its broad foliage the *Maurandya* winding up its stem. An *Araucaria*, at its last gasp, poor thing, is granted a beautiful screen for its woes in a strong Dundee Rambler or some such Rose. Passion Flowers twine about the bare stems of some of the conifers. Virginian Creeper saucily flings, in autumn, her crimsoned trails over the august boughs of Cedar of Lebanon. Scarcely a tree, in fact, but has its clinging companion. It is a whim of the *maestro*, and we thank him and enjoy it.

All these, however, are but experiments by the way. Roses climbing Roses of every sort—clamber into the trees; Banksian, Noisette, Cluster Roses, with evergreen foliage now and promise of flowers to come. And when the month of Roses is here, Queen Rose will hold her court on the Pincio.

On the crest of the hill, on the further side, looking away to the Borghese Villa, but within the precincts of the Pincio Gardens, a colony of majestic Italian Pines rear their noble columns. How many centuries they have stood there, keeping sentinel over the ages, it is hard to tell, but these ancient trees are solemn in their stately grandeur. For the Pincian Hill is historic ground. But here, too, the Roses have their way and wreath their long shoots about the rugged stems. There is a time to refrain from planting. Is not this one of such?

Roses here are scarcely seenly. One spot on all the hill might well be dedicated to shame and remorse for the crimes of human kind. But the crowd revels in Roses. It recks little whether Valerius dreamed, as he paced his beautiful alleys under the shade of such Pines as these, of the cruel fate preparing for him by greed of wanton covetousness; or of the stern decrees of justice which required the forfeit of the guilty life on the very site of the sacrifice.

"Wait till the Roses bloom," say the Romans; "then the Pincio will be in its glory." The sombre shadows fade—one is recalled to the happier Present and the life of every day. The carriages circle about the gay enclosure; the scarlet cassocks of the German seminarists gleam athwart the green vistas, and the band strikes up the cheerful strain of the march in "Carmen."

K. L. DAVIDSON.

Rome.

OUR GARDEN PLANTS AT HOME.

THE COMMON FERULA.

FERULA COMMUNIS is one of the most striking plants of the umbelliferous family. It is a native of the shores of the Mediterranean from Italy to North Africa, extending even to the Canary Islands. At La Mortola the plant is perfectly at home, attaining an immense size in favourable situations without any culture.

Early in February the roots begin to push up their leaves and soon form a mass of elegant bright green foliage. The stem reaches a height of 8 feet to 12 feet, and is much branched from the base to the top and clothed at the joints with smaller bract-like leaves supported by a long sheath; only the umbels at the top of the branches bear fruits.

T. HANBURY.

La Mortola, Ventimiglia, Feb. 22.

[We learn from Mr. Daniel Hanbury's "Phar-



FERULA COMMUNIS.

macographia," a book of vast research and exhaustive record of the history of drugs, that a plant of this family, *F. Sumbul*, produces *sumbul root*, used in medicine and perfumery; that *asafoetida* is a product of another, or rather of two others, of the same genus growing in the mountains of Beluchistan; the drug, which is in the form of a resin, being obtained by scraping or otherwise wounding the upper portion of the root after it has been laid bare for the purpose. Galbanum is another product of the *Ferulas*, and the ancient drug *ammoniacum* was obtained from *F. tingitana*, one of the Giant Fennels that adorn the rocky wastes in many parts of Northern Africa and some of the islands of the Grecian Archipelago. Eds.]

FORMS OF ANEMONE CORONARIA AND A. HORTENSIS.

THE bright-coloured Anemones of the south of Europe, which extend in a wild state from Spain to Palestine, are usually classified under the two species which Linnaeus established, *coronaria* and *hortensis*. Each of these, however, runs into numerous forms, and I cannot help thinking that some of the garden varieties owe their origin to hybridisation. There is a very elaborate paper upon the forms that grow wild in the neighbourhood of Grasse by the Abbé Pons, in volume 36 of the Bulletin of the Botanical Society of France, which should be studied by those who are critically interested in the subject. Here I will merely enumerate and briefly characterise the forms which have been treated by recent authors as distinct species, taking as my guide the new "Flora of France," by Rouy and Foucaud, still in course of publication, of which the first volume, which contains the Ranunculaceae, was issued in 1893.

Anemone coronaria is distinguished by its thin leaves with numerous narrow divisions, distinctly lacinated involucre, and 6-8 imbricated obovate-obtuse flower divisions (sepals), which are nearly or quite an inch broad in the ordinary garden form. Of this, Rouy and Foucaud admit nine varieties as follows:

1. *A. cyanea*, *Risso*; *A. coronarioides*, *Hairy*; *A. coronaria*, *Moggridge* (Cont. Fl. Ment., t. 51). — Flowers lilac, without any distinct star at the base, divisions 6-8, much imbricated. Anthers not apiculate.

2. *A. albiflora*, *Rouy and Foucaud*; *A. alba*, *Goaty and Pons*. — Flowers pure white throughout. Anthers not apiculate.

3. *A. rosea*, *Hairy*. Flowers rose-violet or paler, without a distinct basal star. Anthers not apiculate.

4. *A. fernensis*, *Shuttleworth*. This differs from the last by its more globular flower, with acute bright rose-red divisions, without a basal star of white.

5. *A. coccinea*, *Jard*. Flowers large, bright vermilion-red, without any distinct white basal spot. Anthers not apiculate. A common garden form, usually considered to be typical *coronaria*.

6. *A. Monansii*, *Hairy*. — Divisions of the leaves broader than in the foregoing; flowers violet, more or less deep in hue; divisions narrowed to a short acute point, no white basal star. Anthers not apiculate.

7. *A. grassensis*, *Goaty and Pons*. Flowers middle-sized, bright red, with a distinct white basal star, divisions oblong, acute. Anthers apiculate.

8. *A. ventricosa*, *Hairy*. Flowers large, white or yellowish-white, with a transverse red central band round the middle inside. Anthers apiculate. This is the form that is figured as

coronaria in the *Botanical Magazine*, tab. 841, and in Reichenbach's "Icones," tab. 4648.

2. *A. Rissonia*, *Jordl.*—Flowers large, mottled red and white, divisions pointed, basal star distinct. Anthers apiculate.

In *A. hortensis* the leaves are firmer in texture, with 3–5 wedge-shaped lobes, cut down slightly or deeply from the apex, an involucre often of three entire lanceolate leaves, and a flower with 8–18 spreading linear divisions about a quarter of an inch broad and pubescent on the outside. Of this, Rouy and Foucade admit six varieties as follows, which I am extending to seven:—

1. *A. stellata*, *Lam.*—Flowers 1–1½ inches diameter with 12 linear obtuse pale red divisions, without any white basal spot. This is the common wild form of the species figured by Moggridge (*Cont. Fl. Mentone*, t. 2), Sibthorpe and Smith ("Flora Græca," t. 515), and Reichenbach (*Icones Fl. Europ.*, t. 4649).

2. *A. grandiflora*, *Pons.*—Flowers large (reaching 3 inches to 4 inches diameter), violet or rose coloured, divisions broader, more acute, basal star none.

3. *A. fulgens*, *J. Gay.*—Flowers larger than in the type, bright red, without any basal star; divisions obtuse, ¼ inch to ½ inch broad.

4. *A. pavonina*, *Lam.*—Like the last, but divisions of the flower very numerous, linear. Both this and the last frequent in cultivation.

5. *A. variata*, *Jordl.*—Flowers 1½ inches to 3 inches diameter, rose-red or bright red, rarely whitish or lilac, with a distinct white basal spot; divisions 8–10, sub-acute.

6. *A. lepida*, *Jordl.*—Flowers 1½ inches to 2 inches diameter, violet outside, purple inside; divisions 8–10, oblong lanceolate, acute, whitish basal star distinct.

7. *A. Regina*, *Risso.*—Flowers 1½ inches to 1 inches diameter, divisions oblanceolate, acute, bright red, ¼ inch to ½ inch broad, basal star distinct, whitish or straw-coloured, figured by Moggridge (*Cont. Fl. Ment.*, t. 1) and called in the third division of his book *A. hortensis* var. *ocellata*. This, like *fulgens*, runs into a *pavonina* form, as shown in the top flower in Moggridge's figure.

A plant which Herr Max Leichtlin sent me some time ago from Beyrout must surely be a hybrid. It has a coronaria flower, bright red, with six obovate, obtuse, much imbricated divisions, a deeply lacinated involucre, and a thick leaf with three deeply lacinated wedge-shaped lobes. J. G. BAKER.

Kew, Feb. 27.

GARDENING OF THE WEEK.

KITCHEN GARDEN.

ASPARAGUS.

THE wintry weather experienced during February will have prevented ground work being attended to; but it frequently happens that a mild spring follows a hard or changeable winter, and there should be no delay in doing up the Asparagus quarters ready for the spring cutting. For some years I have advised growing this plant on the flat and giving more room than is often allowed. I am aware the latter advice is much easier given than carried out, as every inch of space must be made the most of. When the beds are hoed or pointed over with the fork they may have a dressing of soil and fertiliser, or, what is better, burnt refuse and food given as a top dressing. I am not in favour of manuring beds in the autumn; it is far better to feed during growth, and with the plants on the flat, and given ample space, it is a good plan to place well-decayed manure between the rows now; this soon gets pulverised by the weather, and acts as a mulch if

the summer should be dry. Of course, in feeding, a great deal depends upon the nature of the soil; if this be wet or clayey, the operation is better deferred for a time. New beds will need less food than old ones, few manures being superior to liquid from stables.

RHUBARB.

Where this is needed in quantities for forcing it is well to plant a certain number of roots every year. Few roots need better treatment, as though the plant will grow for many years in the same spot, nevertheless, by ample food and good culture a better return is secured from a limited space. The ground should be deeply dug, or, better still, trenched, and a liberal supply of manure worked in as the digging proceeds, and if possible a change of quarters is beneficial. An old root will cut up into a good number, each portion of root detached having a bud or crown, and the work is best done as early in March as possible, planting firmly at 4 feet to 5 feet apart. If manure can be spared, it is a good plan to cover the surface, as afterwards this acts as a mulch and encourages new surface roots. No stalks should be taken the first year if the young stock is needed for forcing, and only a little for those intended as stock plants, as it is better to draw from the older plants. An equally good way to secure plants or new stock is by sowing seed; this sown in good land will give a fair return in two years, and by sowing in a frame and planting out the seedlings in June, time is saved. Thin sowing is needed in any case, also early thinning of seedlings.

AUTUMN-SOWN ONIONS.

If not yet planted out in their finishing quarters, these should be taken in hand at an early opportunity, as the plants are making new roots and will need careful lifting. The plants should be planted on land richly manured and deeply dug, the food being placed well under the roots. In light soils it is advisable to tread the soil before planting. A liberal space should be given between the plants and between the rows, as it allows of working more freely and feeding later on. Onions delight in ample supplies of liquid manure and other food when in active growth. In planting, each bulb should have the roots carefully spread out, and each made firm as the work proceeds. G. WYTHES.

Syon House Gardens, Brentford.

FRUIT GARDEN.

GRAPES.

VINES in 12-inch pots should not be allowed to bear more than six or eight bunches, and if at the time of thinning more were left than the vines are capable of bearing, it will be well to reduce the number without further delay. Afford manure water frequently up to the time of approaching ripeness; it is better to give it weak and often than strong applications at long intervals, and changing the manure has a beneficial effect, at one time giving that from the drainage of stable manure, and at another a concentrated form that is known to be suitable to vines. If the pots in which the vines are growing are plunged in hothed material, maintain a regular moderate warmth of about 75° by frequently adding a little fresh manure and leaves. Suitable atmospheric conditions are the same as recommended last week for permanent early vines. They must be frequently examined as to the state of moisture of the soil; a lack of attention in this respect would ruin them altogether. They should be examined every day when the sun is bright, while in time of dull weather they will not be safe longer than two days together. When the soil is found to be only slightly moist, upon no account leave it till quite dry, but afford a liberal supply of water.

Vine eyes put in this season, as soon as the young growths from them are about 3 inches long and the roots begin to work round in the pots, are then in a suitable condition to be potted into 5-inch pots. Place an inch of crocks at the bottom, and use loam enriched with a sprinkling of bone-meal, potting firmly; afterwards plunge where there is bottom-heat in a light position in a forcing house.

"Cut-backs" is the name given to young vines that are cut down after the first season's growth, canes from which are grown and ripened the second season earlier than is easier done from eyes the first season; in their third season they are the most adapted for very early forcing. When the young shoots have grown to the length of 3 inches or 4 inches—which they have now done if they were placed in slight warmth a short time ago—if several shoots are developed on each, disbud to one, the strongest. This is the time to pot them; shake away all soil from the roots without injury and repot them, working the soil among the roots, using the same kind as was used for the eyes, and giving them a similar position. After potting give them a watering, but give it sparingly until new roots have taken hold of the soil. Put a stick to each before they are in danger of being broken off, and guard against overcrowding.

Plant one-year-old vines in recently made borders, laying the roots out straight in a hole previously made 4 inches deep, and as wide as the spread of the roots. Cover them with fine soil, tread firmly, and afford water to settle the soil. Maintain a sweet atmosphere, and temperatures ranging from 55° at night to 65° in the day, with a rise of 10° to 15° from sun-heat. It is advisable to plant the vines 4 feet or 5 feet apart.

Where it is intended to plant out vines in the month of May raised from eyes put in this year, push along with the work of preparing new borders in the manner described in a former calendar.

THE GRAPE ROOM.

As the season advances use less fire-heat, only employing it slightly when the outside atmosphere is damp, and doing without when it is dry. Examine the water in the bottles, and add some to those in which it is likely to sink below the base of the vine shoots. Do not omit to look over the grapes frequently for the purpose of cutting out all berries that have begun to decay. This season Gros Colman and Lady Downe's so far have kept very well, and the first-named has been of unusually good flavour. G. NORMAN.

The Gardens, Hatfield House, Herts.

INDOOR GARDEN.

EUCHARIS.

A FERTILE cause of *Eucharis* failing is the frequent potting which some growers deem to be necessary. My experience is that the best plants are those which are not often potted, and I would not advise potting any that appear to be doing well, for with healthy leafage and rational management flowers are sure to come, and there are few other plants which are so amenable to the will of the grower as are these. At the same time, to prevent actual starvation it becomes necessary to repot now and then, and I have found the best results and the least check to growth from potting in February. If the plants are from any cause unhealthy, I prefer to remove all the soil from the roots by immersing the ball in a tub of water for several hours, but healthy stock may be potted on intact, taking care not to over-pot. A fair amount of drainage is necessary, and over this some rough lumps of fibrous loam. The potting mixture may be two-thirds loam and the remainder equal proportions of peat and sand. Keep the bulbs low in the pot.

The lower the better, provided some soil is used between them and the drainage—it being a mistake to allow a big body of soil below them or to have their crowns above or near to the surface. After potting, half plunge the pots in a gentle hothed and keep the foliage fresh by frequent syringing. Of course, the plants are most easily grown in a house to themselves and kept to a stove temperature, but very good results may be had with a little increased trouble where there are succession vineries and a house the temperature of which does not fall below 50° in which to winter the plants.

CARE OF FORCED PLANTS.

Among the many plants grown for forcing there are sure to be some that will repay the trouble of a little care when flowering is over if room can still be found for them under glass. The latest batches scarcely suffer at all from the gentle forcing they get, providing they can be kept growing without a

check. Among the mollis Azaleas are some of extra good colour, and these should certainly be preserved. They may even be grown to give good crops of flowers two years in succession if not hard forced, though as a rule it will be better to give the plants a year's rest. The same may be said of the Staphyleas. Deutzias should, after flowering, have all the weak spray cut away and many of the old stems cut out entirely, with a view to encouraging young growths of a robust nature from the base. Solomon's Seal, now becoming popular as a forced plant, will form fresh buds after the roughest kind of treatment in the way of being hard cut, though next year's growth from such buds will only be medium sized, and without flowers they will give just the right sort of greenery for use in small vases of cut flowers.

Narcissi in variety, with the sole exception of the old Paper-white and the improved forms of it, Daffodils, and the latest forced Tulips, if assisted to ripen off gradually under protection, will be useful for planting out and embellishing the rougher parts of the garden or the spring flower borders, and even Lily of the Valley can be kept for planting with advantage where the out-door stock consists of the small variety so often seen, as the Berlin crowns when established give a much better class of flower.

J. C. TALLACK.

Shipley Hall Gardens, Derby.

THE EVENING PRIMROSE.

(*ENOTHERA LAMARCKIANA*.)

It is not often that one sees in gardens so favourable an example of the advantage of having one good thing at a time as is shown in the accompanying illustration. This fine *Enothera* is one of the best of the rather tall plants for such bold use in half-wild places where there is shade or half-shade.

It is a biennial, but as it sheds its seed freely, when once established in a suitable place there is no danger of its being lost. It is an improved form of *Enothera biennis*, a plant that is rather handsome when one sees it growing wild, but is far inferior to the garden kind. The careful gardener must look out for reversion to the type, which often occur. After a little practice one gets to know the rogue seedlings, when half-grown, by a certain suspicious greenness. The first open bloom, much smaller and rather deeper in colour than *En. Lamarckiana*, of course shows up the rogue at once, but by that time other things are growing tall and a plant may easily be overlooked, and then the garden is in danger of being overrun with seedlings of the more unworthy plant.

How beautiful a thing is this tall Evening Primrose in the late summer evenings, when its flowers, that are closed and drooping in the hottest sunshine, are wide open and giving off their delicate scent, or, better still, in the calm daylight of the early summer mornings before the sun is up.

If it is cut and put in water when the blossoms are fully expanded, they remain wide open, and will last in beauty for several days.

Index and Editorial Notices will be found amongst the advertisements.

NARCISSI FOR POT CULTURE AND EARLY FORCING.

THE present is, perhaps, of all seasons in the year the one when good and showy flowers with long stems are valued most, as the lengthy season of the Chrysanthemum is once more at an end, and the greenhouse and conservatory are in consequence rendered more or less destitute of useful flowers. Not that it is possible with anything else adequately to fill the gap thus caused, though it is possible for the interval to be considerably shortened. The only flowers that can thus quickly be brought into prominence, with due preparation, of course, are Narcissi. Not only are most of these showy to a degree, they are also rendered the more serviceable by being endowed with long and by no means frail stems. This, whether intended for the decoration of the greenhouse in pots or grown for use in a cut state, renders them more attractive and adds to their general decorative value. They remind us, too, of the coming spring. Forced flowers we have had to a greater or less extent for years; it has, however, remained for modern gardeners to show

moist enough for Daffodils." The soil being "moist enough" is often misleading, because at this time of year when gloom and moisture pervade the very air we breathe, it is not easy for soil to become dry, hence errors occur quite unintentionally. In the case of the Daffodil there is a great profusion of roots to be catered for, and moisture must ever play a leading part in building up good foliage and flowers.

Heat also is frequently misapplied. Only a year ago in calling on a large grower I found he had not only introduced his Daffodils to one of his hottest houses, he had also placed them on a strong bottom-heat. Unfortunately, they had been so treated for three weeks when I saw them, and their ruin was complete. The grower had been advised so to do as a preliminary to successful forcing. It required but little argument to convince of the error in such case. Needless to say, the root fibres were quite ruined and not an atom of top growth was made. Potting should be done early in autumn, so that a full complement of roots may be produced long before they are taken to the greenhouse. When taken thither the place should be cool and freely



A WALK OF EVENING PRIMROSE (*ENOTHERA LAMARCKIANA*).

what real value there is in this now large family, and how well they may be grown with care and discretion. Perhaps not the least important feature in the early forcing of Narcissi is the abundance of foliage obtained, which is not possible in all hard-forced flowers. Indeed, forcing injures many plants by blanching the blossoms and causing the leaves and stems to come pale. In the Daffodil family there is none of this injury by hard forcing and the foliage is as dark and handsome as the flowers generally are good. Naturally not a little depends on how the work is done, and of course in this as in other matters there have been failures as well as successes.

A very common error in forcing the Narcissus is that insufficient water is given at the root, whereas with good drainage it may be said that it is scarcely possible to err on the side of over-watering. Upon more than one occasion my opinion has been asked by those growing these flowers under glass for the first time, and invariably I find the soil too dry. In giving this opinion I have been met with the remark: "Oh, but that soil is moist enough for anything"; and my reply has been, "No, it is not

ventilated, closed by degrees and warmth administered in like manner. Assuming the bulbs may be introduced early in December and potted early, they will at that time bear a temperature of 45° to 50°, depending to some extent on external conditions. I have found it a good plan in dealing with these flowers to avoid much warmth till the flower-scape is free of the neck of the bulb. Great heat or sudden variations of temperature prior to this stage frequently results in failure, and even if a flower is obtained, in all probability it is a distorted one. When the flower-scape is free of the neck of the bulb, a little more heat may be applied, but there is no need where good flowers are required ever to exceed 55° at night.

I have already spoken of moisture at the root. Of equal import is atmospheric moisture, and on no account must this be neglected. Bottom-heat should never be employed; indeed I do not know a single kind that is assisted by it, while nearly all strongly resent it. A point of importance in forcing these flowers is that too frequently the value of the more plentiful kinds is overlooked, and it is worthy of note that what are considered the commonest

kinds are among the most serviceable for early forcing. Thus the better kinds may be reserved for more natural flowering later on. Even with our hosts of good Daffodils, none can surpass the following for the very earliest forcing. Ard Righ, or Irish King, and Obyvallaris or the Tenby Daffodil both coming very close together, and the well-known double Daffodil following about three days later. A grand kind when well done is Golden Spur, but this, as also does Horsfieldii, requires a little more time and is best regarded as semi-early. A very useful and graceful kind is Princeps; this comes away in advance of the last-named, and with gentle forcing produces splendid stems and foliage and blossoms of the most serviceable kind. Though a very short list, it will be found ample for very early forcing, avoiding more expensive sorts.

Hampton Hill.

E. JENKINS.

AN ARTIST'S NOTE-BOOK.

LILIA JONGHIANA.

IT was a fortunate day for Orchid growers when this beautiful Brazilian plant was lately re-discovered and imported in quantity; and, coming into bloom as it does between the autumnal-flowering *L. pumila* and the spring-flowering *L. majalis*, which it more closely resembles, it is of considerable value for early spring decoration, and

Aconite. For a description of it we refer our readers to Mr. Gambleton's note on p. 183, March 10.

IRIS STENOPHYLLA.

It is not often that such a distinct species is introduced as this new Iris, which was shown at the last February meeting of the Royal Horticultural Society by Messrs. Wallace, of Colchester, when it received a first-class certificate. No species can be compared with it except in size, and this is *L. alata*, but it is even more refined. The new-comer is without the rough outline of *L. alata*, nor does it possess the very broad blade to the fall of the latter. But in one feature it does suggest *L. alata*, and this is the way in which the claw from the lower side embraces the style, only that in *L. stenophylla* it is more uniform and definite, quite overlapping the entire upper surface of the style by the extended wings that meet on the central surface. The azure-blue, purple-shaded flowers are very beautiful, while the richly-coloured blade of the fall might be that of a handsome

view, do not quite agree with all that has been published on this subject. All the more am I thankful for the admirable words of Mr. G. D. Leslie (page 146), and am confident that many of your readers feel with me: "A garden is fenced in from wild Nature and for man's private use and enjoyment." It is so true! Wild Nature can never be our garden proper. I am leaving out of consideration those larger gardens or parks in the arrangement of which landscape effects can and must be studied, but allude only to those plots of ground which we know as a cottage or a villa garden. In these there is no room for wild Nature, however much we may admire her, though perhaps our love of her, of this inexhaustible source of ever-changing combinations of living form and colour, so fertile also of edifying meditation, should be felt to be the main impulse for the creation of our gardens. As we stand enraptured viewing a beautiful natural scene, our eye delights in the masterly contrasts of foliage and flower, of undulating turf, and perhaps winding waters and picturesque rocks. The beautiful picture attracts us to the spot, but and what a lesson to vain humanity!—the



LILIA JONGHIANA.

(Drawn by H. G. Moon from flowers sent by Mr. J. T. Bennett-Poe.)

also is likely to prove useful for hybridising. The first record of its flowering in Europe was in the year 1872, and it was figured in the *Botanical Magazine* in 1873, but for many years it has been little known but as a name. The blooms, of considerable size, between 5 inches and 6 inches across, are of a soft rose-purple tint, and produced solitary or in pairs, as in the case of *L. pumila*. The brilliant orange-yellow disc of the lip and the exterior blotch of yellow on the side lobes give it a distinct appearance. As yet it has not flowered in sufficient quantity to determine the extent of its variability.

J. T. BENNETT-POE.

ERANTHIS CILICICA.

SEVERAL notes have appeared in THE GARDEN lately about this interesting and rare Winter

Iris reticulata. The species is destined to become one of the most notable of the early bulbous group.

E. H. JENKINS.

[This beautiful new species is a native of Asia Minor, and is closely allied to *L. persica*, being similar in growth and very distinct in colour; the flower is nearly 4 inches across, and borne on a stem between 3 inches and 4 inches high, the standards of a soft blue shade, the falls intense blue bordered with white. EHS.]

FALSE IDEALS.

WITH the keenest interest have I followed the honest words written in your, or may I say our, GARDEN against supposed false ideals. I am a gardener, and perhaps for that reason looking at the matter from a different point of

our private use and enjoyment." Primarily the garden is for our private use; it is not for all; it is ours; every plant it harbours is our own; we know them all individually, for we rear them from year to year; we enjoy our garden, and no more noble purpose could it serve.

The arrangement of it cannot be but of secondary importance. We cannot reproduce the spontaneous vegetation of wild Nature, as we cannot replace the hand which created it. We may well preserve a wild scenery in larger parks; there we may even be able to create circumstances by judicious selection and planting, which, if left to develop naturally, may ultimately lose the mark of our handiwork; but we cannot plant wild Nature. Such an attempt would bear the stamp of absurdity on

its face, so let us not deceive ourselves with petty imitations.

The arrangement of the garden should be governed by good taste, of course, but not dominated by reasons of appearance. The often too narrow confines of the garden may, for the sake of the well-being of some of our dearest plants, dictate such grouping as is not exactly in accordance with our own ideas of harmony. If there is a tree too large or too thick for the healthy development of more dainty plants below or beside it, sacrifice it or parts of it. If the hedge interferes with any plants, let it be trimmed, and, lest it present an untidy appearance, be trimmed evenly all round. The arrangement is imperatively a matter of convenience also. The walks must be well made and well kept, for at all times must we be able to approach our friends. Tidiness is necessary for obvious reasons; so let the garden bear the marks of it. It gives a feeling of comfort to the one who feels responsible for the treasure the garden harbours. Let the lawn then be shorn and its edges be cut accordingly. Much the prettiest gardens are those in which the loving hand of their owners is evident. If close comparison is the object of the observing flower-lover, there cannot be any objections to formal rows of plants placed side by side.

Look through your own GARDEN. Your beds are of formal shape, scrupulously trimmed; even the giant Beech tree, which I could have admired so much in its broad spreading fulness, is mutilated in order to give prominence to the tiny Crocuses which it shelters. It is not your intention to curtail the tree, but branches were cut away to show us those pretty flowers, and your purpose justifies your measures. Thus let everyone's heart choose how and what to plant in his own garden. It will then be a natural garden; we shall then see no more imitation birds cut out of the Box bushes, nor shall we see the unhappy rock gardens any more, for which the rocks alone seem to dictate the name; nor the shrubbery robbed of its flowers by untimely trimming and the fruit tree mutilated by reckless pruning. We shall then see individuality and no more mere copying in the garden.



A RARE WINTER
ACONITE (ERANTHIS
CILICICA).

(Drawn at Kew by
H. G. Moon.)

To spread the knowledge of the requirements of the plants, to teach us their culture, to make us know the treasures which distant climes and countries produce for us, to show us the pretty flower which at our very door we are so apt to overlook, to teach us to see the beauty of Nature—that is a laudable purpose, and everyone will thank THE GARDEN workers for their patient endeavours in this direction.

Where the garden is looked at solely as a necessary environment for a dwelling-house, it is no more a garden proper, but a decoration to the main object; it is primarily then a matter of appearance and convenience. The purpose is a good one and worthy of the most hearty support of all, though different from the object of a true garden. For this decorative garden the gardener is generally called in to set out a few suitable trees and shrubs, and, perhaps, flowers. Here he should show his individuality; here he should show his art of combining to the best possible advantage the two purposes which a garden can serve. The success of his work is, of course, dependent on many circumstances; not the least is the goodwill or the purse of his employer. But remember, you may not always blame the gardener if you do not like his work; he is often, too often, the instrument only of his master—none more than he suffers if he has to work without his heart—and he should be spared the reproach if a commonplace result is the outcome of an unhappy compromise between his ideas of a good garden and the orders of his master. THEO. ECKARDT.

I PERCEIVE from the perusal of Mr. Leslie's letter on the above subject (page 146) that in my remarks upon the clipping of shrubs I was not sufficiently careful to observe the axiom, "Write not so that you may be understood, but so that you cannot be misunderstood." In deprecating the fashioning of disconnected evergreen shrubs into rounded mounds of greenery, a practice annually observed in innumerable English gardens, I had no intention of condemning the clipped evergreen hedge. There is no *raison d'être* for spherical or quaintly modelled shrubs scattered about the grounds, whereas in almost every garden dividing lines are necessary, and these may often be more fittingly formed out of living growth than with stone or bricks. A well-kept Yew, Holly, or Box hedge creates an admirable boundary, and, as Mr. Leslie says, no more effective background can be conceived than the sombre green of Yew for enhancing the charms of the "well-arranged herbaceous border," while such a hedge emblazoned in the summertime with the vivid scarlet flower-trails of the Flame Nasturtium is in itself an object of unsurpassable splendour.

As far as I am aware, the class that advocates the absolute and unrestrained rule of Nature in every part of the garden exists only in the imagination of the votaries of the artificial, who, in order to disparage the opponents of their style, set up an altogether false and exaggerated standard as being the aim of those who agree with Kingsley that "the further you get from Nature the nearer you get to bad taste," in order that they may demolish it by contemptuously describing it as "arrogant intility." As to lawns, I think most of us agree with Dudley



THE NEW IRIS
STENOPHYLLA.

(From a drawing by
H. G. Moon.)

Warner, that "one cultivates a lawn with great satisfaction, for there is nothing more beautiful than grass or turf." One of the primary objects of lawns and grass walks is to afford a cool and velvety surface for the foot during the heat of summer, and it therefore follows that the better a lawn is kept the more nearly it attains this desirable end. In the same manner garden seats, pergolas, summer-houses, bridges and fountains have one and all their uses, and if simply designed and not overlaid with trivial and needless excrescences, a practice too apparent in the so-called "rustic-work" that disfigures so many gardens, add to rather than detract from the beauty of their surroundings; while in respect to the value of water in the garden, one is inclined to echo Bernard Pallissy's words: "It is impossible to have a spot proper for a garden unless there be some fountain or stream passing through it."

I trust I have demonstrated that I am fully in accord with Mr. Leslie and his "wise little girl" in appreciating that "happy medium" which both he and I alike deem desirable, and I imagine that few, if any, lovers of Nature and of the garden hold a contrary view.

In my two notes on "False Ideals" I have taken exception only to the undue dwarfing and doubling of our garden flowers, to geometrical carpet bedding (while allowing that bedding and other tender plants are often of the greatest use in the garden), and to the clipping into unnatural shapes of isolated shrubs, for I am not at one with those who accept the dictum laid down in a recent work that "Yew trees trimmed close gain their full beauty." In conclusion, I think I may safely say that nothing I have written suggests the inference that I object to a clipped hedge in its proper place, to smooth lawns, pergolas, or to a fountain of artistic design, and if there be those who disapprove of these things I have yet to meet them. S. W. FITZHERBERT.

Iris reticulata major. We have received a boxful of flowers of this beautiful Iris from Messrs. Kelway and Son, Langport, Somerset. This is a much larger form than the type, but of the same warm colour and strong Violet fragrance.

ORCHIDS.

ORCHIDS AT OAKWOOD.

WYLLAM, a country village on the banks of the river Tyne, will ever be famous to growers of Orchids through that ardent hybridist, Mr. Norman C. Cookson. A bleak day in February, with the country covered with ice and snow, was not the best time to inspect a collection of Orchids; but there are always Orchids in flower in every establishment, and in Mr. Cookson's garden I found a wealth of beautiful kinds. The collection is almost entirely formed from seedlings raised in the Orchid houses, but a certain proportion is composed of fine varieties of the more popular species. In one of the Cattleya houses the eye is at once arrested by two of the finest varieties of *Odontoglossum crispum*, viz., *Cooksonii* and *Mundayanum*. The first-named, I believe, was obtained by Mr. Cookson from a small batch of imported plants. It was a small plant when first exhibited before the floral committee in the old Kensington garden of the Royal Horticultural Society, where it obtained a first-class certificate. By careful management and the most skilful culture, this one small plant has now developed into fourteen fine plants. It is well figured in the "Orchid Album," vol. iii., plate 118. The white sepals and petals are irregularly and heavily blotched with brownish crimson, the white and yellow crested lip being similarly blotched. The variety *Mundayanum* is also a distinct and striking Orchid. This is well figured in the second series of the "Reichenbachia," vol. i., plate 5. It is brownish crimson, with crimson-purple blotches, the latter showing unusually distinct on the back of the petals. I wondered at seeing these cool-house Orchids in the Cattleya house, but Mr. William Murray, the head-gardener, informed me that the flowers develop more freely in the higher temperature. I thought what splendid varieties might be obtained if the two forms could be cross-fertilised. Doubtless this has been considered in all its bearings, for handsome cross-bred *Odontoglossums* have been raised and flowered at Oakwood.

A handsome hybrid *Laelio-Cattleya* was in flower; this is a cross between *Laelia purpurata* and *Cattleya Dowiana*. It is some twenty-two years since the late Mr. Dominix proudly showed me a plant from this cross in flower under the name of *Laelia Dominicana*. He had sown the seed some sixteen years previously; that would give thirty-eight years or more since the cross-fertilisation. A similar cross was exhibited two or three years ago under the name of *Apollonia*, and received an award of merit from the Orchid committee. Later a still better form was exhibited by Messrs. Veitch under the name of *L. C. Jangleysensis*. This received a first-class certificate from the Orchid committee. It would be better to return to the early nomenclature. It is a handsome garden hybrid and delightfully fragrant. The white forms of *Laelia anceps* make a fine show in the Cattleya house. The variety *Schroederiana* is one of the best; the pure white flowers are marked with crimson lines in the throat. *L. anceps Percivaliana* is also distinct and pretty. I cannot hear that anything has been done in crossing these white *Laelias*; personally I own to continual failures with them.

Since writing the above paragraph Mr. John Seden has successfully crossed *Laelia anceps* and *Laelia purpurata*. The plant was exhibited by Messrs. Veitch on February 27 as *L. Edissa*; it is described on p. 172 of THE GARDEN.

The numbers of hybrid *Cypripediums* raised at Oakwood are legion, and still they come. *C. Sanderiano-Curtisii*, the most recent Oakwood acquisition, was well figured in THE GARDEN (p. 74), and *C. Sanderiano-superbians* is equally handsome. These *C. Sanderianum* hybrids are well described by Mr. Chapman in the same number. One of the most useful and handsome of the Oakwood *Cypripediums* is *C. Calypso* (Oakwood variety); it is a cross between *C. Spicerianum* and a good form of *C. Boxallii* the variety *atratum*, I think. The

vigour of the plants show that *C. Boxallii* is the seed parent. This is a matter of considerable importance, for unless the seed-bearer is vigorous, it is unlikely that the seedlings will either be vigorous or long-lived. A rather handsome hybrid was in flower, unnamed, between *C. Stonei* and *C. Argus*. The dorsal sepal has the distinguishing traits of *C. Stonei*, while the elongated lateral sepals have the spotting of *C. Argus*; the spots and blotches not so thickly placed as in the famous *C. Stonei platytenuum*, but reminding one of that variety.

One of the glories of the Oakwood collection of hybrid and bi-generic hybrid Orchids are the *Phaio-Calanthes*. As long ago as 1867 *Phaio-Calanthe irrorata* flowered in Messrs. Veitch's nursery at Chelsea by crossing *Phaius grandifolius* with *Calanthe vestita* var. *Turnerii*. Mr. Seden made a similar cross some time later.

There is now in flower some very beautiful *Phaio-Calanthes* at Oakwood. The variety *P. grandis* is a chaste and lovely thing; the sepals and petals are creamy white, with a soft rose-tinted lip. Some of the varieties are much darker than others, and it would be a mere matter of taste whether the light or dark forms were preferred. One very pretty variety had sepals and petals of a dark rose colour with a rosy red lip. These are crosses from *Phaius grandifolius* and Oakwood Ruby *Calanthe*. *Phaius Sanderianus* crossed *Calanthe* William Murray has produced a fine batch of seedlings; all are distinct and handsome. The rosy buff sepals and petals, with the spreading white lips of some of these, are great acquisitions to the large family of home-raised Orchids.

Most Orchid fanciers remember the sensation caused by the advent of *Phaius Cooksonii*, a cross between *P. Wallichii* and *P. tuberosus*, combining the characteristic features of both parents. The sepals and petals are nearest to *P. Wallichii*, with the handsome lip of *P. tuberosus*. *P. Normanii* was raised later from *P. Sanderianus* crossed with *P. tuberosus*. The progeny are again intermediate; some of the varieties are very beautiful, and even surpass *P. Cooksonii*. The interest in any collection of Orchids in the future must largely centre upon the seedling plants and in the distinct forms which are found in importations. I intended to have said something about the numerous fine *Calanthes* raised at Oakwood, but this must be left for a future occasion. J. DOUGLAS.

THE ROSE GARDEN.

ARRANGING ROSES IN THE FLOWER GARDEN.

SHOULD there be a rosarium in a large establishment, or is it preferable to group the Roses among the other occupants of the garden? The answer seems in favour of the latter, for one rarely hears of a really good rosarium. In years gone by, except during a short period, a Rose garden was apt to appear rather a dull spot, but this need not be so at the present day if preference is given to the glorious Monthly Roses, among which I class the Tea-scented as well as the Bengal or Chinese.

When a rosarium is formed it is a common practice to have a centre bed of standard Roses. I cannot say I admire this arrangement even if the trees grow freely, which, unfortunately, they sometimes do not. I would rather see a glorious mass of climbing Roses in the centre running over a bower or some old tree stumps. What a beautiful centre-piece for a rosery would be the fine specimen of Bennett's Seedling, so well depicted in the "Century Book of Gardening"! Certainly such kinds would not blossom for any great length of time, but they might be surrounded by dwarf Tea Roses that would go on flowering after the climbing Rose had ceased. As regards standards and half-standards, these seem to do more to beautify the rosery if allowed to develop into fine drooping heads, such as the William Allen Richard-son depicted in the work alluded to. It seemed

to me that a few such specimens as these were the one thing wanted to complete the harmony of the lovely Rose garden Mr. Tate has formed at Downside. Many of the fine climbing Tea and Noisette Roses should be more frequently employed as standards and half-standards; they make such graceful heads, much more so than the stiff, erect-growing Hybrid Perpetuals. Many Roses that are never thought of as standards, such as *Gloire des Rosomanes*, *Armosa*, the common Monthly, *Stanwell Perpetual*, *Longworth Rambler*, *Paul's Single White*, *Gyrus au Toplitz*, *Macrantha*, *Penzance Briars*, *Ayrshire* and *Evergreen* Roses, and many others, would make delightful drooping heads of bloom entirely free from any artificial appearance. If I were forming a rosarium I should not be anxious to dispose of the plants so that they could all be seen at a glance. To come upon a group unawares would give greater pleasure.

A delightful feature of the Rose garden at Kew is the grassy dell with Roses on each side. This dell, I am told, was once a gravel pit, and some hundreds of cartloads of loam were employed to form the huge mounds, which are faced with rugged stumps of trees. The *Crimson Rambler* grows with wonderful vigour in such soil, and many of the delightful early Roses, for instance, *Rosa lutea*, *R. hispida*, the *Carmine Pillar* Rose, Scotch Roses, also some beautiful new hybrids in the Japanese and *Boursault* tribes, here find a congenial home.

Now that we have our collections enriched with the pretty creeping Rose, *R. Wichuriana*, and its many lovely hybrids, unthought-of effects can be produced by their aid, for they will run about and root like Ivy and cover the earth with their charming flowers and refreshing glossy foliage. Neither in a rosarium nor, indeed, anywhere else does a bed of mixed Roses show to any great advantage. If I could only grow three plants of a kind, I should plant those three in a group by themselves. There is such a diversity and individuality among Roses, that they need to be so disposed to obtain the benefit of their full beauty. Many lovely Roses which are usually bunched up to a stake to form a pillar would appear far more natural if allowed to grow without this artificial support. In our hedgerows we see this wild, yet elegant, style to perfection, and what can be more lovely than the graceful fountain-like branches of the Dog Rose laden with their delicately fragrant blossoms in June?

I once saw a very pretty little rosery formed upon the side of a slope, surrounded by huge *Rhododendrons*. Of course the soil had to be imported for the rosery. It can be easily imagined what a fine background of foliage the *Rhododendrons* afforded, and they also acted as a splendid shelter from keen winds.

I think when a rosarium is formed upon an extensive scale many single specimens of evergreen and deciduous shrubs could be advantageously introduced without producing any incongruous effect. Of flowering shrubs, the most suitable would be well-developed specimens of such things as *Forsythia suspensa*, *Philadelphus speciosus*, *Spirea arifolia*, *Pyrus Malus*, *Scheideckerii*, &c., or graceful evergreens of the type of *Juniperus chinensis*, *Osmanthus ilicifolius*, *Thunbergia borealis*, *Phillyrea decora*, *Laurestinus*, *Yucca recurva*, *Pinus excelsa*, broad-leaved *Hollies*, *Weeping Spruce*, and others. Golden evergreens and bright-coloured flowering shrubs would be best avoided. I should plant weeping Roses rather extensively to relieve the flatness, and would endeavour to find space for one or two of the exquisite weeping deciduous trees, such as *Young's Weeping Birch*, *Weeping Cherry*, *Weeping Almond*, *Weeping Poplar*, *Sophora japonica pendula*, and others. Beautiful as they are, I think it is a mistake to crowd the rosarium with the strong-growing single Roses which have come so much to the front lately. The sunny side of a shrub border seems to be the most fitting place for such Roses unless space can be afforded to grow them as single specimens upon or in the vicinity of the lawn. The *Penzance Briars* are delightful as single specimens, and the same may be said of *Hebe's Lip*, *Macrantha*, *Janet's Pride*, *Andersonii*, &c. But what is to become of

the Moss Roses, the Damask, Mme. Hardy and Painted Lady, Maiden's Blush and Celestial, the Hybrid Chinese, Blairii No. 2, Coupe d'Hebe, and Charles Lawson, the York and Lancaster, and a host of other old favourites? I would suggest that they be grown as individual specimens. If no other place is available, put them in the herbaceous border, which surely is the most fitting place for them. Those who are not exhibitors, but who wish their gardens to appear beautiful, will doubtless accept these disjointed thoughts in the spirit in which they are written. A. R.

SEASONABLE ROSE NOTES.

Roses under glass started in December will now be in a forward condition; consequently, weak doses of liquid manure should be given at every other watering. Many growers believe in adding some good artificial fertiliser to the soil when repotting in July. This is an excellent practice, as the roots can utilise the food when required. One is apt to be too generous and afford more than is necessary, with the consequent injury to the small rootlets. A 5-inch pot of a good reliable phosphatic manure is ample to each barrowload of the compost, which consists of two parts of unsifted loam and one part of decayed manure. I refer to this now because if such stimulant were given at the time mentioned it is obvious that at this period weak doses only of liquid manure are required. Failing this addition, a sprinkling of artificial manure now will be necessary.

Watering the plants is work that should be carried out by a most careful workman. When the foliage is fully developed, Roses require plenty of water, but much of this may be given through their leaves, hence the need of a moist atmosphere. The soil should not be allowed to become thoroughly dry, but, on the other hand, it must not be over-watered. Water-tanks or barrels of water should be provided in each Rose house.

Roses planted out under glass are much assisted now by a mulching of cow manure and wood ashes in addition to the sprinkling of bone-meal they receive after pruning. The result is soon manifest in the splendid foliage, and it is surprising how little aphides infest thoroughly healthy foliage. When, however, they are observed, fumigate immediately. The syringe should be freely used on bright days. See that the water is forcibly directed to the under side of the foliage, for this is where the red spider lurks, causing discoloration and the untimely dropping of the leaves. A few pots of button-hole Roses placed in ainery just started will afford many useful flowers. The beautiful Sunrise, Isabella Sprunt, Niphetos, Safrano, Queen Mab, &c., are excellent for this purpose. Should no plants be available, a few might be purchased established in 8-inch pots. Such plants require no repotting. All that is necessary is to examine the crocks and clear them of soil, then remove an inch of the surface soil. Give a sprinkling of some good fertiliser, covering this with an inch of fresh loam and well-rotted manure in equal parts. For button-hole work very moderate pruning is best. Cut out the small twiggy growths from the centre and retain the remainder almost their entire length.

Hybrid Perpetuals, Hybrid Teas, Moss Roses, and the delightful China and Polyantha Roses, such as Mme. Eugene Rosal and Perle d'Or, which have been established one year and kept since November in cold pits, may now be given a temperature of 45 to 50 at night. I find hard pruning the best for such plants. Cut the one-year-old wood back to the second, third, or fourth eye, the topmost eye

looking outward. About twelve weeks will elapse between the pruning and the blossoming. As growths develop and flower-buds form, 60° at night may be given. This has a tendency to lengthen the stem, which is very desirable.

Roses grown for exhibition on the cool system should now be placed upon inverted pots or two bricks and a good watering afforded. Tie the plants out carefully, so that as the foliage develops it may get the full benefit of sunshine and air. A string is placed under the rim of the pot and the growths brought into position by tying raffia to their ends and securing this to the string. The final shaping of the plant is done with sticks as soon as flower-buds are visible. Roses that are now flowering afford wood for cuttings, which should be utilised if increase of stock is desired. I prefer cuttings of two or three eyes, and the healthier the foliage, the better will be the plants obtained. Insert the cuttings round the edge of 3-inch or 4-inch pots in a sandy compost. Of course, an ample supply of crocks must be previously placed in the pots. A 2½-inch pot inverted and

shows its vigour and profusion of big creamy-white spathes, which rise up above the glossy foliage, a wonderfully bold and rich effect against the leafy background. One may judge from the illustration that this Arum is perfectly happy here, and its bold beauty reminds one of the little fields of spathes in the sunny Scilly Isles and the southern parts of the English and Irish coasts. The Arum Lily is a thorough water lover. It inhabits the ditches of South Africa, and is there known as Pig Lily hardly an appropriate description of a plant so luxuriant and beautiful. It would be interesting to know whether the butter-yellow-spathed *C. Pentlandii* and others of this group have been tried in the open garden. Their intense yellow colour is hardly so beautiful as the rich creaminess of the type, but the colour is good, producing a striking picture when the plants are crowned with spathes. The Abbotsbury Gardens are amongst the most interesting in



ARUM LILIES IN ABBOTSBURY GARDENS.

placed on the surface of the cutting pot will keep the foliage from premature decay. All the foliage is retained on the cutting except the bottom leaf. This has the end leaflet removed. When the cuttings are dibbled into the soil, hold the pots for a few seconds in a pail of water, then plunge into bottom-heat of about 65° to 70°, the top-heat not exceeding 55°. I much prefer a frame placed over a hot-water tank in a greenhouse, but many use a manure bed, and, providing the latter is well made and carefully examined to see that the fumes are not injuring the cuttings, it answers very well. On bright days shade the cuttings and sprinkle with water morning and evening. Remove decayed leaves promptly. PHILOMEL.

ARUM LILIES IN ABBOTSBURY GARDENS, DORSET.

Not the least interesting feature of the beautiful Abbotsbury Gardens of Lord and Lady Ilchester is the growth of the Arum Lily (*Calla aethiopica*) in the water there. The illustration

the kingdom, and one day we hope to describe them more fully than at present.

MARKET GARDENS.

THE RATING OF GLASSHOUSES IN MARKET GARDENS UNDER THE AGRICULTURAL RATES ACT, 1896.

THE decision of the House of Lords in the case usually quoted as *Smith v. Richmond* (really the overseers of Worthing v. the district Surveyor of Taxes) is a somewhat serious blow to the market gardening industry.

Nearly a hundred years ago the courts recognised that the rule of law, that whatever was affixed to by a tenant to the land he occupied became the property of his landlord, and could not be removed by himself, wrought a great injustice to those market gardeners and nurserymen who spent large sums in the erection of hothouses and greenhouses for use in their trade. The Court of

Queen's Bench relaxed this rule, which long continued inexorable in the case of an agricultural tenant, and allowed the removal of greenhouses and hothouses as fixtures erected solely for the purpose of trade. This relaxation operated most favourably, and conduced largely to the development of the business or profession of market gardening.

By the Public Health Act of 1875 it was enacted that the occupier of any land used as a market garden or a nursery ground should be assessed to the general district rate of an urban sanitary authority, and to the separate rate made to defray the special expenses incurred by a rural sanitary authority, at one-fourth part of the net annual value of such market garden or nursery ground; or in the case of a rural district where no special assessment was made, such occupier should pay only one-fourth part of the rate in the pound payable in respect of buildings and other property. It then became a somewhat disputed question whether the occupier of a market garden containing greenhouses, &c., should not be rated on the full scale for such erections, and on the one-fourth scale for the part not occupied by buildings. The question came before the law courts in due course, and at last the Court of Appeal decided (in the case of *Purser v. Worthing Local Board*) where a piece of land had been almost entirely covered with greenhouses built on brick foundations, and used for the purpose of growing and forcing fruit and vegetables and flowers for sale, and the local board had rated the occupier upon the full annual value of the buildings instead of as a market garden, that the local board were wrong, and that the land must be rated as a whole as a market garden, for it did not become any the less a market garden because glasshouses were over it. This decision again proved a boon to the market gardening industry, and secured to it the same benefit as was given to agricultural land.

By the Agricultural Rates Act, 1896, the occupier of agricultural land is liable to pay, to any rate to which that Act applies, only one-half the rate in the pound payable in respect of buildings and other hereditaments which are not agricultural land. The expression "agricultural land" is defined in the Act as "any land used as arable, meadow, or pasture ground only, cottage gardens exceeding one quarter of an acre, market gardens, nursery grounds, orchards, or allotments, but does not include land occupied together with a house as a park, gardens other than as aforesaid, pleasure grounds, or any land kept or preserved mainly or exclusively for purposes of sport or recreation, or as a racecourse." Following the interpretation placed in the *Worthing* case on the somewhat analogous provision of the Act of 1875, many judged that even if a market garden were entirely covered with glasshouses it would still be a market garden within the meaning of the Act of 1896, and as such it would still be agricultural land, and entitled to the relief afforded to agricultural land by that statute. But they omitted to notice the full force of the provisions requiring that where buildings and agricultural land had been previously valued in one amount, and the value had been so stated in the valuation list of the parish, separate valuations of the agricultural land and the buildings were to be now made. For the purposes of the Public Health Act of 1875, farm buildings had been assessed separately from the land let therewith, and it had been decided that for the purposes of that Act greenhouses in market gardens were not to be rated separately from the garden, and so, in spite of the provision as to the separation of values, many contended that the market gardens must be rated as a whole, and that the occupier was entitled to an allowance of one-half of the rates to which the Act applied. As was inevitable, the matter came before the courts, but, singularly enough, it was *Worthing* which was again the source of litigation.

Robert Piper, a market gardener and nurseryman at *Worthing*, owned and occupied four acres of land, on which stood fifty-seven greenhouses or glasshouses built on dwarf brick walls in the usual way. Fifty-one of these houses were used for growing Vines, and six were Cucumber houses, within which were dwarf brick walls supporting corrugated iron sheets, upon which earth was

placed and in which earth Cucumbers were planted. These erections covered rather more than two acres, the remaining two acres being merely vine borders, paths, and stake-holes. In their statement the overseers of *Worthing* returned this holding as market garden and nursery ground, and made no separate estimate of the annual value of the buildings. The surveyor of taxes objected, and the assessment committee upheld his contention that the hereditament was not entitled to the relief the statement of the overseers would afford Piper. The overseers appealed to Quarter Sessions against the decision of the assessment committee, and the Sessions allowed the appeal. The court stated a case for the Queen's Bench, which came on before Justices Collins and Ridley, and these judges differing in opinion, the decision of the Sessions was confirmed. The Crown appealed, and the Court of Appeal set aside the order of the Court below and of the Court of Quarter Sessions, the Master of the Rolls and Lord Justice Rigby holding that the statute distinctly and explicitly directed that buildings and agricultural land should be separately valued, and that the antithesis between agricultural land and buildings was the very foundation of the Act. The case went next to the House of Lords, which, after taking time for consideration, upheld the decision of the Court of Appeal, the Lord Chancellor saying, "It is extraordinary that any claim should be made that what is here described is agricultural land. It would be quite as reasonable to claim that any building, however solid and substantial, used for agricultural purposes was agricultural land." He considered the terms "land" and "buildings," as used in the Act, were mutually exclusive of each other.

So, after much prolonged and expensive litigation, the question has at last been settled, and, although the decision of the House of Lords is at least logical, it will to some extent militate against the market gardening interest. To the layman there may seem some conflict between the decisions in *Smith v. Richmond* and *Purser v. Worthing Local Board*, but it must be remembered the cases arose under different statutes. Had the legislature thought fit, when considering the Act of 1896, to direct that all buildings on agricultural land (of course excluding dwelling-houses) used for the purpose of the cultivation of such land should be valued with that land, the agricultural interest and the market gardening interest would have received greater relief, and the principle laid down in the case of *Purser v. the Worthing Local Board* would have been carried to its logical conclusion. N. X. N.

THE FLOWER GARDEN.

THE DOUBLE ROCKET.

TO one like myself who takes a keen interest in the old flowers which have given delight to many generations of flower-lovers, but which are every now and again in danger of being overlooked, it has been a pleasure to see that my short note on the double Rockets has attracted some attention. Feel more than repaid for it by the pleasant letter it has produced from the Rev. Denis Knox, although it begins with a happy bit of badinage caused by a chance remark of mine that my taste was not quite in the direction of such flowers. I imagine that most of us who are fond of flowers and plants in general have to make a choice, which is only made with difficulty and often with sadness, as to which plants we can grow in our gardens. It is often not a question of what we would like to grow, but of what we have an opportunity of growing. I may, however, have been a little unfortunate in the phrase I used, as I certainly had no wish to lead anyone even to think that I did not care for the double Rockets, though that choice which has to be made by all of us has inclined me more towards the cultivation of alpenes. If I have seemed to disparage the Rockets, which I am not prepared to admit, I am quite willing to atone for it, although I feel that I have done these flowers a good turn.

Like Mr. Knox, I feel that flower-colour descriptions form very dangerous questions to touch upon, and it is just possible that the old Rocket variously called crimson and scarlet may be the one of which Mr. Knox speaks as the old double lilac, and a plant of which he has most kindly offered me. If I can again get hold of the old double crimson, I shall hope to have the pleasure of sending it to him for comparison. It is, however, remarkably difficult to lay hold of, and the friend who had it last year has lost his plant, but as he had given one to another friend, I hope to secure it yet. The late Mr. Cameron, of Kirkintilloch, had it last year. This double crimson Rocket was quite well known to some of our older writers, and some in more recent times have also spoken of it, in some cases as the double red. There is no doubt that it exists, though it is possible that the vagaries of colour-nomenclature may have been such that it may prove the same as Mr. Knox's.

The old Scotch White is a dwarfier and more compact plant than that which was figured in *THE GARDEN* the other day. It is not, however, dwarfed to the degree which is properly condemned in the article on "False Ideals." It is still in cultivation, though much scarcer than the other white forms.

It is probable that there are more varieties of the double Rockets in existence than some suppose. Another variety of which I have known for some time, but which I have been unable to hear of in gardens at the present time, is one with flowers which are variously described as striped or variegated with purple and white. I have never heard of anyone who has this Rocket at present, and it seems to have escaped the notice of Mr. Knox in his search for the various double forms. I hope that I may not incur the displeasure of any other flower-loving reader by the remark that I am not favourably impressed with the description of this Rocket. Still, I should like to see it, as it forms one of those links which connect us with those of like tastes who loved their gardens and their flowers in days long gone by, when flowers were scarcer than now, and when times did not afford so many opportunities for gardening.

I have to thank those who have written in *THE GARDEN*, as well as those who have written me privately about the Rockets, for their useful notes.

S. ARNOTT.

Corsehorn, by Dumfries, N.B.

A SPRING-FLOWERING KNIPHOFIA.

K. PRIMULINA is now in great beauty with me in a greenhouse from which the frost has just been kept out during winter. When I first got it I had it in the open ground, but, finding it did not flower till winter, I potted it, and find it is a good pot plant for winter or early spring. The colour is a clear, bright primrose-yellow, and the spikes last a month or more in full beauty. *K. Nelsonii* is also a very good pot plant, though in hot summers like the last it flowers well in the open ground. It varies much from seed, and the dwarfier varieties should be selected for potting. Whether it will survive a hard winter remains to be seen, but, if not, it is certainly worth a place in a frame. *K. caulescens*, which I have lost in hard winters previously, seems to have got through this one successfully, and should flower in May and June. H. J. ELWES.

THE FLAME NASTURTIUM.

(*TROPEOLM SPECIOSUM*.)

By some mischance, *Tropaolium tuberosum*, on the culture of which in South Devon I lately contributed a short note, was indicated as identical with its far more showy sister, *Tropaolium speciosum*. The latter, well-named the Flame Nasturtium, is far less amenable to successful culture in the south-west than is *T. tuberosum*, which, as far as I know, has no equivalent English designation. In the north, especially in Scotland, the Flame Nasturtium grows like a weed and affords sheets of glorious colour, but in the south-west it is the exception to see it displaying its brilliant charms in avarant abandon. Being extremely anxious to establish the plant in the garden, I tried it in a

dozen dissimilar sites, in all but one of which, although carefully attended to, it eventually died; in the remaining one, however, it became thoroughly established, and for the past three years has flaunted the splendour of its vivid bloom-trails during the summer months, followed later on by its less striking, but still decorative, blue seed clusters. The soil in which the plant in question is growing, in a north-east angle of a wall, is shaded by another low wall on its southern side, and never receives direct sunlight throughout the entire year. At a height of 3 feet or 4 feet from the ground-level the shoots grow into a fuller light, and as they ascend further emerge into the full sunshine in which the mantling blossom glows with almost dazzling effulgence. A porous compost, consisting of leaf-mould, loam and road grit, which is kept fairly moist during the summer, apparently suits this specimen to perfection, but as an exactly similar compost was employed in the cases of the failures, it would appear that in this instance it is to site rather than to soil that success is due. This *Tropaeolum* possesses such eminently attractive qualities that it is well worthy of an exhaustive trial, even in districts where its culture is beset with difficulties, since success will amply repay any trouble involved in its establishment. S. W. F.

South Devon.

CHERRY TREES IN BLOSSOM.

No fruit tree seems to show such a bountiful mass of bloom as does the Cherry; and as it is generally the largest of fruiting trees (except, perhaps, some of the great west country Pear trees), the large area on which the mass of bloom is displayed is all the more striking. In company with such a blossoming tree the homeliest of farm-buildings will form a delightful pastoral picture of early summer; while the great wild Cherries of the woodlands, scarcely inferior in size to the largest of our forest trees, deck the wild groves with wide-spread clouds of blossom, while the nightingale is pouring forth his song.

RONDELETIA CORDATA.

In the temperature of a stove, or even in that of an intermediate house, this *Rondeletia* is flowering freely, and a very ornamental subject it is, though very rarely met with. Last spring, however, at an early meeting of the Royal Horticultural Society some good examples were shown, and attracted a considerable amount of attention. It forms a bold-growing shrub clothed with stout leaves, the largest being about 6 inches long and half as much in width. The terminal clusters of flowers remind one to a certain extent of the *Laurustinus*, and, like that well-known shrub, they retain their freshness a considerable time. In the bud state they are deep pink, but the interior of the flower visible after expansion is bluish, with a quantity of yellow hairs in the middle, thus forming a golden centre. Even in the neighbourhood of London it is, after all the fogs we have experienced this winter, in good condition, thus proving it to be of robust constitution. In the "Dictionary of Gardening" two species, *R. cordata* and *R. amena*, are given as natives of Guatemala, but I fail to see any difference between them as generally met with. Though now included in the genus *Rondeletia*, these plants were formerly known as *Rogeria*, a name still retained in gardens with that charming cool house shrub,

R. gratissima, a native of Mexico. This has deep green leaves, and flowers even more nearly resembling the *Laurustinus* than those of *R. cordata*. They are borne during the winter and early spring. *R. speciosa* or *cordata*, with vermilion flowers, is the best known of the genus. H. P.

CORRESPONDENCE.

CRINUM CAPENSE SEEDS.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—Two short notes have lately appeared in the columns of THE GARDEN respecting the seeds or bulbs borne on the umbels of the *Crinum*. Whether these bulbs are, as surmised by Dean Herbert, attached to withered seeds or no, I am unaware, but for all practical purposes the products are

but little if at all affected, as three out of four seeds that I placed on trees on Christmas Day some years back germinated and made good plants. The underside of the crease formed by the junction of a smaller and larger branch is the best site for the location of the seed, as in such a position it is less likely to attract the attention of birds. A covering of muslin or clay has been recommended as a means of preservation from winged marauders, but if attached as above suggested the majority will remain intact. Some advocate slitting the bark and placing the seed in the cut, but seeds merely adhering to the outer surface of the bark germinate with equal freedom. F.

MUTISIA DECTURRENS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I should like to point out to "A. R. W." that this lovely composite is quite hardy when planted against a wall without protection of any kind above. Your correspondent infers that the overhead shelter is more or less necessary. This is not so. I have grown it in a rather cold northern district, where the plants flowered each year and where overhead protection was unknown. I believe that stonework or brickwork is helpful to the plants, and as a fact I have never tried to grow the plant without such aids. As "A. R. W." points out, there is always difficulty in obtaining supplies, and the suckers are not easily removed with roots attached. I tried many of these before I hit upon the following plan, which, however, requires both care and patience. It is the most successful way I know, and a goodly number were secured with nice roots. A large pocket on the rockery was selected; this was purposely made more shallow by laying bricks in cement below; then followed a thin layer of soil, peat, loam, sand, and charcoal. Now the plant was put in position, being laid on the side of the ball so that the growth should trail over the rockery. The rock pocket was stone on all sides, and when a little fresh soil was added to the plant, a block of sandstone was placed on the top of the ball of soil. The object of this was to attract the sucker-like stolons to the stone, from which they would naturally emerge to the light. When a few points could be discerned pushing through the front, it was considered the time to act, and when the upper stone was lifted off it was found that the suckers had first arisen to the stone, then travelled along and out into daylight. This gave a clear course for treatment, as previously the chief drawback



IN CHERRY-BLOSSOM TIME.

bulbs, which, if planted in the autumn, make good growth the following summer. The white variety of *Crinum Moorei*, known on the Continent as *C. Schmidtii*, also bears these bulbs or seeds in quantity in warm and sheltered situations, thereby affording a far more rapid method of propagation than is admitted of where *bona fide* seeds are sown. S. W. F.

SEEDS OF MISTLETOE.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—On page 132 "Medway" asks for a few Mistletoe berries when ripe for sowing. Some advocate the months of February and March as the best season for propagation, others as late a date as May or June, but there is no reason why berries should not be rubbed on to the bark of such trees as it is wished to furnish with this parasite at any time they may happen to be handy. Though, doubtless, germination is retarded by mid-winter propagation, the fertility of the seeds is apparently

was the necessity of digging among roots and suckers to examine them to see if any were rooted, always to the danger of the plant. This danger was now disposed of at a single blow, and it could be seen whether the suckers were rooted and ready for removal without danger to the parent plant.

These suckers do not root quickly, and I found it hastened matters to just crack the skin with the knife and cover with sand or sand and cocoa-nut fibre refuse. Water was given, and the suckers were then covered up with the stone and left for three months, by which time most were rooted well enough for detaching, which is best done quite early in autumn or in spring. That this is a slow method I am quite willing to admit, but it is the best and the least fraught with danger to the old plant. I have often thought it remarkable that I have never once seen any seeds of this lovely plant offered for sale. Surely such could be had with a little trouble, collected, of course, in the native home of the plant. Always and ever a scarce plant in cultivation, there are many who would like to

possess it could be obtained. Possibly the Kew authorities with their unique correspondence abroad could lend a helping hand by endeavouring to obtain seeds of this plant. E. H. J.

Hampton Hill.

CAN WE IMPROVE OUR ROSE EXHIBITIONS?

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Although during the last two or three seasons great improvements have occurred in the style in which garden Roses are arranged at the exhibitions, there yet remains something to be done before anything like perfection is reached in the displaying of this our favourite flower. To say the least, we are not artistic enough. Monotonous long rows of boxes on monotonous tables have had their day. Let us contrive something better. I do not say we can improve upon the box plan if the fat monstrous blooms are to have it all their own way; but why should they? The general public do not ask for these monstrosities. Frequently in the crush of a Rose show I have heard an exclamation of pleasure pass the lips of visitors who have turned aside to admire groups, naturally arranged with all the delightful buds and foliage retained, even if the individual blossoms were not quite so perfect. This has led me to think that something was wanting different to the orthodox style with which Rose societies regale their patrons. There still remains much to be done before a Rose show is the delightful thing it is possible to make it.

Can any Rose grower deny that the decorative Roses—that is to say, those kinds that bloom freely and almost continually—are not in fashion? Although fashion in flowers is to be deprecated, I cannot shut my eyes to the fact that for once the general public are right. Bold masses of exquisite Teas, Hybrid Teas, and China Roses are much to be preferred to the stiff, although perhaps individually superb, Hybrid Perpetual. But are these decorative Roses displayed to the best advantage at a Rose show? No more handful adequately portrays the beauties of such Roses as Mme. Eugène Rosal, Queen Mab, G. Nabonnand, Camoens, Marquise de Salisbury, Mme. A. Chatenay, and such like beautiful flowers. Therefore, why not invite exhibits of say one hundred sprays of these Roses, cut with long stems and tastefully arranged in vases hidden in mounds of moss? In the matter of grouping, when one visits an early exhibition like that at the Temple Gardens, is it not the tasteful arranging of standard, pillar and bush Roses, which enables the exhibitor to introduce all tribes, that appeals to the majority of the visitors rather than the huge specimen, however magnificent? Therefore, why not try (we who as a nation are probably the largest growers of the Rose, although the Russians run us rather close) and arrange a Rose show upon broader lines, so that those who desire it can form an idea how this beautiful flower may be made to embellish the garden?

In the first place, the exhibition must needs be arranged in a tent; and, speaking of tents, cannot our tent makers invent something to prevent the oven-like atmosphere often too apparent? The Rose is not a flower that will stand excessive atmospheric heat. A cool, showery day sees Roses in greatest perfection; still, as we cannot make the weather, let us try and do something to mitigate the nuisance complained of. Supposing, then, the Crystal Palace authorities provided a tent located upon the grass, with a covered way leading thereto as a provision against storms, and that this tent be put up a day or two in advance, so that all who cared to make an effective group could have plenty of time in which to carry out the work. In arranging a large group everything in the shape of vases, &c., should be placed ready at least the day before the show, excepting, of course, the cut flowers. Prizes should be offered for groups of bush, standard, pillar, and climbing Roses in pots, such groups to be augmented by means of great bunches of cut Roses in vases and other receptacles. Blooms cut with 1½-foot to 2-foot stems would not only be an object lesson (for the novice would learn how to prune the various forms and tribes), but

the show could be rendered artistically beautiful with pillars of Pezance Briars and other delightful single and semi-double Roses. Standards of some of our loveliest Hybrid Teas should be shown, and bushes of many tribes such as the tiny Polyantha, the charming Moss Rose, the delicate tinted Maiden's Blush, the unique coloured Austrian Briar, the robust rugosa, and a selection of the worthiest of the Roses usually seen at Rose shows. Now, objections will be raised, such as the season being too late for pot Roses, or that it is too expensive to move them about. But such a show, to catch the garden Roses at their best, might be held in June; then the difficulty of exhibitors taking about with them vases, epergnes, &c., to exhibit their flowers in, and many similar objections would be sure to arise.

As to pot Roses being over, I maintain that they could (by growing them out of doors) be had in bloom by the end of June. As to the expense of cartage, this would no doubt be considerable for many rosarians, but the enthusiast would surmount difficulties of this kind. As to the early-flowering garden Roses being over, why, then have two, or even three exhibitions, so that all growers and all classes of Roses would have a chance of being represented. Surely an early Rose show is worthy a better fate than the usual Drill Hall company, or rather non-company. There is no better place around London for such an exhibition as I have in my mind than the Botanic Gardens, Regent's Park. Could not arrangements be made with the Royal Botanic Society that would allow the early shows to be held there? Those undulating banks covered with Roses such as I have attempted to describe would be a creditable sight, worthy of a country that claims the Rose as its national flower. As to the expense of the exhibitors carrying about their own vases, &c., this should not be necessary. Let the various societies provide them. They would surely show better taste in their selection than many individuals whom I have seen arranging their beautiful Roses in ugly blacking-bottles. It would be interesting if this subject were ventilated before the time came round for the making of schedules. I am afraid that as at present constituted Rose committees consist of men not exactly averse to garden Roses, but who pin their faith to the show Rose. I am not unmindful of the arguments of our exhibitors that Rose shows are established to encourage good cultivation. Granted that this is so, does not the striving after size rather tend to create apathy against all the lovely gems that are not grouped under the heading of show Roses, and also in careless arrangement of their plants in the garden. One noted grower has asserted that he would not mind growing his Roses alongside a bed of Onions, provided he could obtain good Roses. I opine this would not be the opinion of individuals who care for fragrance in a Rose before even form.

PHILOMEL.

[We print our correspondent's letter as it stands, although we do not entirely endorse some of the statements it expresses. For one thing we think that the function of a well-organised show of any popular flower—and who shall say that the greater of our Rose shows are not well organised?—has not so much for its object the pleasing or tickling of the shallow taste of a general public or any sort of recognition of passing fashion, as an honest and thoughtful intention to demonstrate what in the way of Rose culture is most worthy of effort, and what result of effort is most worthy of commendation.]

We most earnestly desire to approach the large subject of the influence of shows, as one of the most powerful agents in horticultural education, in a spirit of careful thoughtfulness, and above all things to abstain from delivering hasty and ill-considered judgments. We believe that in the shows of some flowers, especially those of Curnations and Chrysanthemums, practices are allowed and even encouraged, and aims are held out as admirable that we hold to be of doubtful soundness. But in the case of Rose shows we have never seen, although perhaps not quite worthily placed in their stiff little stands, other than flowers of individual beauty, and we have never seen prizes awarded to other than blooms whose production should most justly be the pride of their growers.

With regard to our correspondent's suggestion that more should be made of the free-growing Roses, though we think with him that the Teas might be shown in large free bunches in all their beauty of length of branch and freedom of flower, and bud and leaf, yet we believe that even could his desires for better tent-ventilation and more time for arrangement both be provided, it would still be almost impossible to show cut branches of the more rambling of the free Roses, other than Teas and their allies, in anything like good order. For the display of these at shows we shall have to depend as heretofore upon those who will grow them in pots for the purpose. We also fear that no earthly power will prevent a tent from being hot in June and July. It is at best only an unavoidable makeshift.

For the most favourable display of flowers there should be a substantial building, abundantly lighted like a picture gallery; and until such a one arises, as a worthy and well-deserved adjunct to the possessions of the Royal Horticultural Society, we shall have to be contented with, and even thankful for, the temporary tent and the venal Drill Hall. Meanwhile, we shoot our arrow of suggestion into the air, hoping that its flight may perchance project its harmless point into the heart of some patriotic millionaire with horticultural sympathies, and may guide his thoughts into such a desirable channel for the flowing forth of some superfluous wealth, as might be provided by the presentation and endowment of such a building.

We shall hope to have something more to say on the subject of Rose and other shows before long.—Eds.]

RANUNCULUS LYALLII AT HOME.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Under this heading "E. W." contributes some remarks concerning this handsome New Zealand flower in your number of October 7 last. Two or three of his remarks evoke these comments. He says, "Reliable information concerning it seems of the vaguest description." About two years ago I sent you a note, which you published, giving such reliable information as one who has often seen it at Oira Gorge and other places in our Southern Alps, and who has grown it for many years, might be expected to furnish. Yet, notwithstanding this, the notes which have recently appeared in your pages show that growers have either overlooked or disregarded the information I supplied. "E. W." speaks doubtfully about this plant being an annual growing in marshy situations and in stony ground. I may, perhaps, be allowed to say that the plant is not an annual, does not grow in marshy situations, nor is stony ground a necessity. It grows best in a peaty soil with abundant moisture and thorough drainage. What I have to contend with in my garden is that the tuberous root gradually rots away, which I attribute to the circumstance that instead of the soil being frozen, as it must be in winter in the mountains, it is then too wet, and is too much baked in summer. My plants often start growing in winter in a half-hearted sort of way instead of coming away with a strong growth in the spring. If any of your readers wish further information, I would refer them to my former note. Perhaps you could append the exact date.

Dunedin, N.Z.

[The note appeared on p. 164, vol. liii.—Eds.]

WINTER ACONITES NOT FLOWERING.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—“W. P.” inquires the reason of the plants not flowering year by year. If the plants are really in full leaf as stated, and indeed they should be so now, it is obviously a case of overcrowding, for which lifting and replanting is the remedy. This, however, cannot well be done until the foliage is again mature and ripened off. It will be advisable not to replant the tubers at once, but to give them a good rest of at least six weeks in quite dry earth, or even spread out thinly in shallow boxes. This simple, though very welcome, flower is rarely seen to good advantage. This is as frequently due to

deterioration of the tubers as it is to uncongenial soils. Deterioration is brought about in many ways; for instance, many amateurs in wishing to extend the culture of this plant in the garden will lift a few clumps for transplanting just as the leaves are beginning to decay. These clumps may or may not be divided into one or more parts, and here is the beginning of the end. If divided, they reap for a time the advantages that fresh soil and position impart. If not freely divided, then deterioration is always more certain and more rapid. This is due to the way the tubers cluster in an established root clump, and if carefully examined it will be seen that only a few of the outer tubers in the clump flower at all. Each year this becomes worse.

Hampden Hill.

E. H. JENKINS.

STERNBERGIA COLCHICIFLORA.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Has any reader of THE GARDEN any knowledge of the above plant? It was introduced more than sixty years ago by the Hon. W. F. Strangways, and illustrated in the *Botanical Register*, No. 2008. In appearance it is not unlike a *Merendera*, but yellow instead of purple. It is an autumnal bloomer.

T. H. ARCHER-HIND.

FRANCISCEAS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Can any of your readers give me information about growing these beautiful flowers? I have two large flowering plants and one of the smaller variety. They "flower themselves to death," as the gardener says, but make no growth and are very leggy. They are kept fairly cool, but go into the warm house to set the buds, and when flowering are placed in the conservatory.

M. E. H.

[These plants are predisposed to flowering most profusely. In the cases of both the large and small flowering varieties, the method to adopt in order to obtain good wood growth is to pick off the flower-buds and place the plants in a warmer and more congenial atmosphere. Treat them as if they were Indian *Azaleas* after flowering so as to secure the same ends. The "leggy" appearance may be overcome by judicious training and tying, bending the shoots down and around the stakes; by this means back growths may be induced to break forth. The best soil for the Francisceas is turfy fibrous peat and sand, potting firmly, but not too often. We are glad to see that these charming plants are not altogether lost sight of. The fragrance alone of *F. uniflora* (syn., *F. Hopeana*) is quite sufficient to recommend it. Eps.]

CROCUSES IN MACEDONIA.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—The illustration of "Crocuses under a Beech tree" and the editorial note thereon reminded me of a never-to-be-forgotten picture which I saw last year during the month of March in Macedonia. A friend and I were riding from Piriend to Pristina, accompanied by zapchieks, or Turkish mounted police, to whom we had in vain endeavoured to give the slip. After reaching the summit of a range of hills, and just as we were beginning to descend the further side, we entered a dense wood of magnificent old Beech trees. There was truly enough "no fresh sward or Bramble tangle, or brake of other bushy growths," but the ground was yellow with thousands upon thousands of Crocuses, flourishing "in the carpet of dry rotting leaves." We stopped our horses to feast our eyes upon the glorious colour. My friend observed, after a moment's silent admiration, "Why, I thought that no flower would grow under Beeches!"

It may be worth mentioning, however, that although pretty blue clumps of *Scilla bitolia* were common enough on the treeless hill-top, growing there side by side with and in greater luxuriance than groups of Crocuses, they did not share the partiality which the latter conceive for the shelter of the Beeches; only a few isolated specimens of them were to be seen in the forest itself.

ROLLO MEYER.

SCENTED-LEAVED GERANIUM LADY SCARBOROUGH.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Will any reader of THE GARDEN who successfully grows that beautiful sweet-scented Geranium named Lady Scarborough tell me how to grow it well, giving details as to propagation, soil, summer and winter treatment, and the temperature it should be kept in during the winter months, as I find that it is a difficult plant to grow in the same way as the zonal varieties? P. J.

[The variety in question is not by any means one of the easiest to keep in the best of health. It is not alone in this respect, for there are a few others belonging to this attractive section which are quite as uncertain as regards their constitution. We have found the best remedy to

be to grow such as Lady Scarborough as if it were a Cape Heath or New Holland plant, and never to adopt the same method of culture as that accorded to the show or fancy sections, or, on the other hand, to the zonal Pelargoniums. By potting firmly from the cutting stage in good loam and leaf-soil, never attempting to excite growth unduly by the use of liquid or artificial manures, as in the case of other Geraniums, it is possible to keep the delicate growers in a much better state of health. It should not be inferred by this that no stimulant is advisable, but when applied the plants should be well rooted in their pots, and then only a very occasional and weak application is recommended. Instead of the pruning, as in the case of show or fancy Geraniums, a regulation of the growth by pinching, as in the case of Cape Heaths, is the better plan to adopt. In fact, in every respect, excepting the soil, treat them as if they were Cape Heaths. It is always a good plan to have a fresh batch of cuttings struck every season in order to be able to dispense with the sickly ones. Caution is also necessary not to overpot these delicate growers. One of the most fragrant (and a charming plant when in flower) is Countess of Devon; it is a variety but little known, but well worthy of extended notice. The only drawback to its culture is its rather delicate constitution. Lady Scarborough may be propagated in the spring in a slight warmth, or in the summer when the wood is well ripened the same as show Geraniums are treated. In the summer thorough exposure to light and air is essential. The greenhouse during the winter is quite warm enough. Eps.]

Hibbertia dentata. This is a delightful climbing plant for a small greenhouse, as it does not need much space for its development, and not only does it bloom during the first three months of the year, but its young foliage is also very attractive at all seasons, being of a bronzy red tint. The saucer-shaped flowers, about a couple of inches in diameter, are of a bright yellow colour. T.

NEW AND RARE PLANTS.

SOME NOTES ON NEW PLANTS.

The following new plants are announced by Herr Max Leichtlin:

Aster Fendleri (A. Gray).—A native of North America. A low-growing species of the group of Ericoideae, with much the aspect of *Diplopappus linearifolius*, with violet flowers.

Asclepias Hallii (A. Gray). Flowers with a greenish white corolla and purple lobes. In appearance this much resembles *A. Sullivantii*. It is found near Denver, on Upper Arkansas River.

Onopordon brachiatum. A native of Pisidia. This is a fine species with rose-coloured flowers, with a thick white down over the stems or branches.



LIATRIS GRAMINIFOLIA VAR. DUBIA IN HERR MAX LEICHTLIN'S GARDEN AT BADEN-BADEN.

Monardella mucronata (A. Gray).—This is figured in 100th volume of the *Botanical Magazine* on plate 6270, and has bunches of tubular scarlet flowers.

Aconopsis grandis. This is a very fine specimen found only in Western Sikkim, but plentiful there. The flowers are solitary like those of *M. simplicifolia*, figured in Catheart and Hooker's work, and are 5 inches in diameter and of very deep blue colour. It is quite one of the finest of the Himalayan species. W. E. GUMBLETON.

Liatris graminifolia var. *dubia*. This genus contains several very beautiful species, such as *pseudostachya*, *graminifolia*, *scariosa*, *magnifica*, *elegans*, and *punctata*, which are all welcome garden plants, their bright-coloured flowers having

a long duration, and, notwithstanding a certain stiffness, they have a graceful appearance. I find the best of the tribe is *L. graminifolia* var. *dubia*. From a full-sized root emerge four to six stems 5 feet to 6 feet in height, clothed half way up with grass-like bright green foliage, the upper 2 feet showing a dense, well-furnished spike of bright deep purple flowers, which last about three weeks. They are at their best in September.

Honour to whom honour is due! I do not wish to adorn myself with others' plumes! Referring to the article on p. 156, I beg to state that I am not the raiser of *Gladiolus princeps*. It was raised by my friend, Dr. W. van Fleet, and I have only been instrumental in the case by furnishing the materials to effect the cross. The female parent is *G. cruentus*, and the male a *gandavensis* variety. *Balkan-Balkan*.
MAX LEICHTMAN.

BOOKS.

Bulletin of Miscellaneous Information, Kew.—We regard the books issued occasionally from the Royal Gardens, Kew, as most important contributions to the horticultural and botanical library. This bulletin is a "list of published names of plants introduced to cultivation from 1876 to 1896," and is undoubtedly a guide that everyone should possess who is interested in the nomenclature of plants. It is a trustworthy reference, of value to the private cultivator as well as the nurseryman. In the preface by the director it is mentioned that "the new plants of 1876 to 1885 were catalogued for 'The Gardener's Year Book' by Mr. N. E. Brown, F.L.S., an assistant in the herbarium of the Royal Botanic Gardens, as unofficial work. He proceeded on a definite plan, which has been continued since. It was, therefore, considered advisable in preparing the present list to start with the new plants of 1876. The lists published in the Kew bulletin are now prepared as routine work by the staff. In addition to species and well-marked varieties, hybrids, whether introduced or of garden origin, have been included where they have been described with formal botanical names. Mere cultural forms of well-known garden plants are omitted for obvious reasons. In every case the plant is cited under its published name. These are largely provisional and often wildly incorrect. When first introduced into cultivation the merit of many new garden plants depends solely on their foliage. Their true botanical affinities cannot be ascertained till they flower, and in some cases many years may elapse before this takes place. A striking instance is afforded by *Talisia princeps*, now known to belong to Sapindaceæ; it had previously passed in gardens under the names of *Theophrasta pinnata* (Myrsinaceæ) and *Brownea princeps* and *B. erecta* (Leguminosæ). . . . The total number of plants catalogued for the twenty-one years which is covered amounts to 7600. The majority of the actually new plants included have been derived from the United States, Colombia, the Malayan region, and the Polynesian Islands, all areas known to be rich in species and still imperfectly explored botanically. The orders most largely represented are all monocotyledonous; they are Orchidaceæ, Liliaceæ, and Araceæ. This is, however, only significant as representing the present drift of horticultural taste. The two first are especially popular in the British Isles for the sake of their flowers, and the latter on the Continent for their foliage." The director also adds: "As an index to the horticultural literature of recent years it is believed that it will be found of practical utility." Of this we feel assured.

The Hop.—This is an excellent work, dealing thoroughly with the plant from all aspects, and the author, the editor of the *American Agriculturist*, has not been content with regarding the Hop from the American standpoint, but obtained contributions from various countries, including

Britain. It is full of illustrations, the majority interesting, though not always reproduced in the best way. With regard to this country the author says, "About two-thirds of the usual Hop area is confined to Kent, the other counties being, in order of importance, Hereford, Sussex, Worcester, Hants, and Surrey. Following the period of high prices, the English crop reached a total extent of 70,000 acres in 1886, but has steadily declined to about 50,000 acres during the closing years of the century."

SOCIETIES.

NATIONAL DALLIA SOCIETY.

WITH the view of drawing attention to varieties of the best Cactus type (as distinguished from the many so-called decorative Dahlias), the committee have drawn up a list of Cactus Dahlias. The list is subject to annual revision, and for the year 1900 is as follows:—

CACTUS DALLIAS.

Alfred Vasey	Lady Penzance
Arachne	Laverstock Beauty
Augustus Hare	Lucius
Bertrice	Mme. Medora Henson
Bridesmaid	Magnificent
Britannia	Major Weston
Capstan	Mary Service
Casilda	Maurice S. Walsh
Charles Woodbridge	Mayor Tuppeney
Cinderella	Mrs. Barnes
Comtess of Gosford	Mrs. Carter Page
Comtess of Lonsdale	Mrs. J. J. Crowe
Cycle	Mrs. John Goldard
Ebony	Mrs. Leopold Seymour
E. J. Deal	Mrs. Saunders
Elsie	Mrs. Wilson Noble
Emperor	Night
Ethel	Ranji
Falka	Regulus
Fantasy	Starfish
Finsler	Stella
Green's White	Sybil
Harmony	The Clown
Harry Strudwick	Tillie
Innovation	Vincetom
Island Queen	Viscountess Sherbrooke
J. F. Hudson	Wm. Fresseder
Keynes White	Zephyr

THE OFFICIAL CATALOGUE

of the National Dahlia Society, issued during the summer of 1898, contains an account of the Dahlia: its bibliography, selected lists of the best varieties of each type (show, fancy, pompon, Cactus, decorative and single Dahlias, the latter grouped as self, fancy, Tom Thumb, and Cactus varieties), together with an alphabetical list, with name of raiser and date of introduction of Dahlias of all sections at present in general cultivation in Great Britain. Selections of varieties which make an especially effective display in the garden are given, as well as of those most suitable for exhibition.

N.B. A supplement has been prepared by a sub-committee during January, 1900, and contains revised selected lists, which are particularly necessary in the case of the rapidly developing Cactus varieties.

HAMPSTEAD HEATH PROTECTION SOCIETY.

THE third annual general meeting took place on March 1 last. Letters were read from Mr. Ernie Hoare, M.P., Sir S. Hoare, M.P., Mr. G. D. Leslie, R.A., and Mr. David Murray, A.R.A.

Mr. E. E. Lake, the chairman, in his opening speech mentioned the interest taken in the preservation of the natural aspect of Hampstead Heath as a heath, not a park, by the late Duke of Westminster.

Mr. H. F. Pooley, hon. secretary, spoke of the necessity of stopping any shooting of rubbish on the Heath. The London County Council had agreed that this is to be absolutely forbidden, and had ordered the removal of some mould and clay placed on the "Horse Ring" on the East Heath. The Parks Committee had thanked the secretaries for informing them of cinders being deposited on the East Heath, and assured the society that they are "most desirous that nothing shall be done to interfere with the amenities of the Heath."

Mr. Basil Champneys, in moving the election of Lord Mansfield as patron of the society, spoke of the loss that the public had sustained by the death of the late Duke of Westminster, who helped so many good causes. He reminded his hearers of the Duke's generosity on the occasions of the laying of Parliament Hill Fields and of Golders Hill for the public. He congratulated the society on having a neighbour and helper in Lord Mansfield.

Col. Grant Gordon, in seconding, mentioned amongst other subjects the great importance of the proper treatment of trees. In Scotland, he said, forestry was considered as an art and deeply studied.

Mr. Figgis said that there was a widespread interest in our beautiful Heath. Many of the London County councillors had taken a great deal of trouble about the proper treatment of it. As an example, he mentioned that as he was crossing the summit of the Heath at half-past eight one morning, he was hailed by Mr. John Burns, M.P., L.C.C. "Hallo! What are you doing here?" said Mr. Figgis. "Oh! I have come up to see how you are going on here, and whether the Heath is all right," said Mr. Burns.

Other interesting references to the Heath at the meeting are referred to on page 193.

ROYAL HORTICULTURAL SOCIETY OF IRELAND.
THE spring show of this society will be held in the Royal University Buildings, Dublin, on April 11, and promises to be the finest display for many years.

SHERBROOKE HORTICULTURAL SOCIETY.

WE have received the splendid schedule of prizes offered at the forthcoming shows of this society. The spring display will take place on April 4 next, and the 26th annual floral fête on August 22 and 23, when prizes to the amount of about £1000, with gold and silver medals, &c., will be offered.

BRISTOL GARDENERS' ASSOCIATION.

THE usual fortnightly meeting of the society was held on Thursday, 8th inst. A large attendance was presided over by Mr. Charles Lock. Mr. R. Stewart, Sneyd Park, provided the paper on the subject of "Peaches and Nectarines." He disclaimed at the outset any intention of dealing with the culture of the fruits in the open air, and confined his remarks to orchard-house culture. He described the structure he thought most suitable, the method of preparing the borders for planting, the soil best suited to the plants, and the time and manner of planting. He also gave a good deal of information respecting the pruning and training of trees, root pruning, dislodging, and thinning of fruit also, urging care in watering, that the trees may never get quite dry on the one hand, or very wet on the other. A good discussion followed, and Mr. Stewart was accorded a hearty vote of thanks on the motion of the chairman.

THE SCOTTISH HORTICULTURAL ASSOCIATION.

THE usual monthly meeting was held at 5, St. Andrew Square, Edinburgh, on the 6th of March. Mr. D. P. Laird, Vice-president, in the chair. There was a good attendance. Unfortunately, Mr. Arnott, the well-known expert on bulbs and hardy plants, who had promised a paper on the Crocus, was unable to be present through illness, but his able and elaborate paper was well read by the secretary, Mr. R. Laird. Mr. Arnott plunged at once into his subject, on which he has long been an authority, and fortified himself by references to Dean Herbert, Mr. Maw, Mr. Baker, as well as the 16th volume of the *Gardener's Chronicle*.

"The Crocus, especially the Safron Crocus (*C. sativus*), has long been cultivated. Crocus sativus has a literature of its own, in respect that it has been the subject of works devoted to it, just as the genus as a whole has received full treatment at the hands of Mr. George Maw, whose monograph of the genus is likely to be ever looked upon as a noble memorial of the author's research and perseverance. Those who have seen it will realise the difficulty one has in following in his footsteps, and in presenting to you a necessarily condensed account of the plant which was so fully treated of by Mr. Maw in that work. As almost everyone knows, the ancients had a simple and convenient, albeit a poetical, way of accounting for the origin of the Crocus as well as that of other flowers. There is more than one version of its first entrance into the realm of flowers. It was said to have owed its origin to the youth named Crocus whose love for Smilax was rejected by that fair dame, and who was changed by the gods into a flower to signify unrequited love.

"However ready we may be to smile at the apparent childishness of these fancies of the ancients, yet we feel that they give interest to our glowing Crocus, even if the traditions and fables mostly refer to the Safron Crocus of autumn, and not to the flowers of spring with which we are most familiar." Mr. Arnott then gave lengthy and interesting poetical references to the flower.

Mr. George Maw says the centre of the area of Crocus distribution roughly centres round the Mediterranean and Black Sea coasts. The same authority rightly says that the district which includes Greece, the Greek Archipelago and Asia Minor may be called the metropolis of the genus. The most western species known to him was *C. clusii* in Portugal; *C. alatavicus*, the most north-easterly, is from the Ala-tan Mountains of Central Asia. Since his various writings were compiled a new habitat for the Crocus was found in Afghanistan by the discovery of *C. speciosus* Aitchisonii, which represents a Crocus that is apparently rather widely spread.

Then Mr. Arnott wrote of the botany of the Crocus, and said that those who wish to master this should turn to volume 16 of the *Gardener's Chronicle*, where the subject is exhaustively treated by Mr. Maw. Dean Herbert and Mr. Baker are also great authorities on the subject.

"At this season we naturally think most of the Crocus of spring, which delights us with its beauty and its brilliant or quiet colouring when early spring appears. I sometimes think what a glorious effect could be produced in the beautiful Princess Street Gardens by a free use of the Dutch Crocuses. They would in no way be incongruous even with those rocks and that grey old castle which tower above the gardens and this historic city which is so dear to every Scotsman worthy of the name. They would give the passers-by a gleam of that floral beauty which has so powerful an elevating influence.

"It is needless to expatiate on the beauties of the best known of these Dutch Crocuses. In addition to those from Holland, which are so plentiful everywhere, there are some pretty varieties, such as George Maw, which is white, with a golden band and peach segment; Leedsii, which has small flowers, purple, tipped with white; which reminds one of the Dutch variety known as Ne plus Ultra; leucorhynchus, a prettily marked variety, and several others. It always appears surprising to me that it seems to be thought that this Crocus is not susceptible of further improvement. I think we could do with more substance in some of the flowers, and we might not only raise flowers with new markings or tints, but others flowering earlier or later. In reading an old horticultural magazine lately I came across an article by the late Mr. T. Francis Rivers, in which he spoke of raising Crocuses from

* Bulletin of Miscellaneous Information, Kew. Eyre and Spottiswoode, East Harding Street, Fleet Street, E.C. Price 1s.

† The Hop. By Herbert Myrick. London, Kegan Paul, Trench, Trubner and Co. Price 7s. 6d.

PLANTS BEFORE THE ROYAL HORTICULTURAL SOCIETY.

Pentapterygium serpens. It is fortunate that an enthusiastic grower such as Mr. Bennett-Poe has taken the culture of rare hard-wooded plants in hand, and saved them from extinction as far as the English garden is concerned. He exhibited at the last meeting of the Royal Horticultural Society a specimen of this rare plant, and was given an award of merit. It is a native of the Eastern Himalayas, and a remarkably distinct plant in growth and form of the florets, the stems, being arched and sparsely clothed with leaves, strongly reminding one of those of the *Ledum*. The flowers are tubular and brilliant vermilion-red with deeper lines. In a note some time ago in THE GARDEN it is mentioned that "In the warm conservatory or greenhouse, given a special position, this plant would prove highly attractive at this season of the year. The root-stock is large and tuberous, requiring a pot of large size and a peaty soil perfectly drained."

Odontoglossum elegans (Eastwood Park variety).—This is a beautiful form of the natural hybrid which is supposed to have originated by intercrossing *O. Hallii* and *O. cirrhosum*. In growth and flowers the parentage of the species is plainly shown. The sepals are each 2½ inches long, pale yellow, blotched and spotted with brown, the petals being broader than the sepals, slightly lighter in colour. The lip is 1½ inches long, pale yellow in front, and in the centre there is a blotch of dark brown, with yellow on the basal area. There is also a rich yellow, streaked with brown, tuft of hairs on the disc. The plant carried a six-flowered raceme. It is a distinct and desirable addition. From the collection of Baron Schroeder, First-class certificate, Royal Horticultural Society, March 13.

Lælia Jonghiana. This is a very old species; it has been scarce for many years, but recently re-introduced in quantity. The sepals and petals are pale rosy blue, the lip crested on the margin, pale rose, becoming white in the central area, the side lobes rose, shading to yellow at the base. There are seven longitudinal raised and crisped ridges traversing the base. The plants exhibited carried single-flowered racemes. From Major Joicey, Summingdale Park, and Mr. H. T. Pitt, Stamford Hill. Award of merit, Royal Horticultural Society, March 13. This is figured on p. 202.

Lælia Jonghiana (Temple's variety). This is the finest form we have seen; the flowers are 7 inches in diameter and deep rosy blue, darker than those of the type. The side lobes and base of the throat are orange. It is a most desirable form. From Mr. Temple, Leeswood, Groombridge, Sussex (gardener, Mr. E. Bristow). Award of merit, Royal Horticultural Society, March 13.

Odontoglossum crispum Oak-field Sunrise. This is a remarkable form of *O. crispum*. The sepals are 1 inch long, ¾ of an inch broad, and creamy white faintly tinted with rose. The petals are 1½ inches long, almost wholly chestnut purple, tipped, margined and mottled with creamy white. There is a raised ridge running through the centre of the dark area, terminating in a prominent point to each of the petals. The lip is white, spotted with purple, becoming yellow on the crest. There are numerous brown lines on the disc at the base. The plant carried a six-flowered raceme. It is an interesting and uncommon kind. It was exhibited by Mr. T. Baxter, Oakfield, Morcombe, Lancashire. We have no doubt that when the plant gets stronger it will greatly improve, and a higher award, which its distinction merits, will be given. We understand the plant originated with Messrs. J. Cowan & Co., of Liverpool, who sold the plant to the present owner for a sum exceeding £200. Award of merit, Royal Horticultural Society, March 13.

Dendrobium Burberryanum (D. Findlayana D. Donnianum). This, as the parentage indicates, is a secondary hybrid, and was raised in the collection of the Right Hon. J. Chamberlain a few years ago. It is one of the most distinct and desirable of the *Dendrobium* hybrids. The sepals

are 1½ inches long, deep rosy purple, becoming lighter at the base. The petals are as long as the sepals, nearly an inch broad, white at the base, becoming suffused with rosy purple, which is more intense at the apex. The lip is upwards of an inch broad, and at the apex there is a broad tip of intense purple, the whole of the central area and side lobes being white. There is a slight trace of yellow around the small maroon discs at the base. The habit of the plant and shape of the flowers show the intermediate characters of the parents used in its production. The plant was exhibited by Sir T. Lawrence, Bart. (gardener, Mr. W. H. White), and carried four flowers. Award of merit, Royal Horticultural Society, March 13.

OBITUARY.

DEATH OF A DISTINGUISHED SCOTTISH GARDENER.

It is with deep regret that we have to record the death of Mr. William Hugh Gorrie, late gardener to Sir William Hozier, of Mauldslee Castle, on the 9th inst., aged sixty-five years, after a painful and protracted illness. Mr. Gorrie was well known throughout Scotland as one of our most successful gardeners, and by his urbanity and kindly nature commanded the esteem of all who had the privilege of his acquaintance. His success in horticulture has been exemplified in a marked degree where it has long been much in evidence at Mauldslee. The deceased was associated with horticulture from childhood, and his opportunities were great, which he embraced with zeal, and he early showed decided talent as a keen cultivator. He had capital training under his father, who was gardener at Polmaise, near Stirling, for many years. After making the best of his time as an apprentice and journeyman, he went as foreman to Luchie, East Lothian, and was afterwards foreman at Tynningham, under the late Mr. Lee. From there he went as head gardener to the late Colonel Ferguson, of Raith, Fifeshire. That proprietor being a keen lover and liberal supporter of horticulture, Mr. Gorrie had very favourable opportunities of turning his talents to good account, and Raith under Mr. Gorrie's management attained an amount of fame seldom equalled in the north, which attracted visitors from long distances to see the decorative work which was year by year to be witnessed in the beautiful flower gardens. Mr. Gorrie was at all times treated by the gallant colonel as a trusted friend, and very deservedly was the honou conferred upon him. When the colonel died, Mr. Gorrie (after ten years of distinguished service as a gardener) left and went to Sir W. Hozier, of Mauldslee Castle, Lanarkshire. The gardening at Mauldslee for thirty years (the period of Mr. Gorrie's management) has been of high-class order. He was devoted most sincerely to his excellent employer, who could appreciate the services of a first-rate gardener. Mr. Gorrie's services as a judge were much in request at the great northern shows, and by reason of his sound judgment and painstaking efforts as a censor he commanded the implicit confidence of those who had the privilege of his services. The deceased has left a widow and grown up family to mourn his loss.

Carron, Falkirk, N.B.

M. TEMPLE.

G. J. SYMONS, F.R.S.

ON Saturday afternoon last this well-known meteorologist passed away at the age of sixty-two. He was the founder of the British rainfall organisation, and at the age of eighteen joined the Meteorological Society, founded a year previously by Mr. Glaisher, and quickly became one of the Registrar-General's meteorological reporters. This office he occupied until his death. In the *Times* it is mentioned that in 1860 he published his first annual volume of the "British Rainfall," which contained records from 168 stations—namely, 163 in England and five in Wales, there being none for Scotland or Ireland. With persistent energy he continued for forty years to develop this unique organisation of

voluntary observers. His last published "British Rainfall," for 1898, contained records from 2545 stations in England, 237 in Wales, 436 in Scotland, and 186 in Ireland a total of 3404 stations. In 1866 he began the publication of *Symons's Monthly Meteorological Magazine*, which has been continued up to the present time. It is claimed for him that at the time of his death he was the head of one of the largest purely volunteer organisations in existence, having over 3000 observers in all parts of the kingdom. His annual digest of their records is a standard work, in which not only meteorologists, but civil engineers, sanitary experts, and others place unquestioning confidence. Throughout the forty years of his work, Mr. Symons, whenever possible, adhered to his custom of giving in the *Times* a summary of his data respecting the year's rainfall. These observations became especially valuable during the cycle of dry years such as 1890-99.

E. J. LOWE, F.R.S.

MANY botanists and horticulturists will hear with sincere regret of the death of this great Fern authority and meteorologist, who passed away at Chipstow, Monmouthshire, in his seventy-fifth year. It is interesting to know that from 1842 to 1882 Mr. Lowe kept a daily record of meteorological observations, and was one of the founders of the Meteorological Society. Of his work amongst Ferns and grasses we shall write at further length than is possible just before going to press, but may mention that amongst his more important contributions were "Ferns, British and Exotic" (1856-60), "A Natural History of New and Rare Ferns" (1871), "Fern Growing" (1895), "Beautiful-leaved Plants" (1866), "British Grasses" (1858), and "Our Native Ferns" (1869).

ANSWERS TO CORRESPONDENTS.

Names of plants. J. E.—*Dendrobium longicornis*; the pinkish-white flower is *Saccolabium giganteum*.

Roses infested with thrips (M. E. H.).—During the last two or three seasons this pest has been very troublesome owing in a great measure to the drought. Roses in such dry positions as the walls of dwelling-houses and greenhouses fall an easy prey to the ravages of this insect. They rarely attack thoroughly healthy plants. As they congregate only on the underside of the foliage, means must be taken to drive them out of this location. We have found flowers of sulphur one of the best remedies. Place some in a sulphur duster and apply vigorous puffs immediately under the foliage until a perfect cloud is produced. Repeat this operation at frequent intervals. Some one-year-old soot scattered among the branches is another excellent preventive. You would do well to prune your plants rather severely this year, and induce a free, healthy growth by applying liberal doses of water and liquid manure during the growing season, as well as good syringings with rain water every fine morning and evening.

Owing to great pressure on our space, we have been compelled to hold over many replies to questions until next week, when all will be dealt with.

SWEET PEA EXHIBITION.

MESSES. JAS. CARTER & Co. are offering a handsome commemorative cup at the Sweet Pea bi-centenary exhibition, to be held on July 20 and 21 next at the Crystal Palace, for the best display of Sweet Pea blooms. Quality of bloom, not mere quantity, will be considered in awarding the cup.

ROSE SHOW FIXTURES IN 1900.

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| June 27. | Salisbury (N.R.S.) and Richmond, Surrey. |
| 28. | Canterbury. |
| 30. | Windsor. |
| July 3. | Gloucester, Harrow and Sutton. |
| 4. | Croydon, Hereford and Reigate. |
| 5. | Bath and Norwich. |
| 7. | Crystal Palace (N.R.S.) |
| 10. | Wolverhampton. |
| 12. | Brentwood, Eltham and Salterhebble. |
| 18. | Caniff. |
| 19. | Birmingham (N.R.S.) and Helensburgh. |
| 24. | Tilshelf. |

Shows lasting two days.

Shows lasting three days.

I shall be glad to receive the dates of any other Rose shows (or horticultural exhibitions in which Roses form a leading feature) for the next list of Rose show fixtures, which will appear early in April. EDWARD MAWLEY

Rosbank, Beckenstead, Herts.

THE GARDEN.

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[MARCH 24, 1900.

KEW AND ITS WORK.

THE botanic gardens at home and abroad show stronger evidence than at any period of their history of a desire to render a knowledge of plants more easily and pleasantly acquired. We are reminded of this by the recent issue from the Royal Gardens, Kew, of two books of reference, "Hand-list of Tender Dicotyledons" and "Bulletin of Miscellaneous Information," which is a list of published names of plants introduced to cultivation from 1876 to 1896. These have been reviewed in their proper place, but it is pleasant when an opportunity is thus conspicuously given to make further reference to the Royal Gardens than is provided by a mere review of books identified with a botanical establishment.

No scientific or horticultural library is complete without the hand-lists of plants issued occasionally since 1894 from Kew, the various families being grouped in their natural orders, and species and varieties set out without inflicting the weary task of removing a crust of dry scientific dissertations to extract the kernel. The object of these hand-lists, explained in the first of the series upon "Trees and Shrubs Grown in the Arboretum part I, Polypetalæ," has been fulfilled, and the directors' wish, that "they will be found useful in indicating to visitors interested in particular groups of plants the species which Kew already possesses," should remind visitors to Kew bent upon extending their knowledge of plants that these lists provide a trustworthy and handy guide. They have unquestionably rendered more easy the work of "establishing an approximate standard of nomenclature which is often much confused in gardens and too frequently erroneous." In the preface of the first volume (1894) it is mentioned that "a rough census of the species and distinct varieties of plants cultivated at Kew gives the total as approximately 20,000. Of these, 3000 are hardy trees and shrubs."

It is needless to state that the lists are the result of years of persevering and painstaking work, which is repaid by the greater interest shown in plants cultivated at Kew and other botanic gardens. We are thankful for the liberal policy adopted by the director of late years. Kew is no longer, as we have before mentioned, a living herbarium of plants displayed in lines and patches, but a beautiful garden of flowers. An atmosphere of downright earnestness pervades the whole establish-

ment, in the labours in the gardens, in the herbarium, and in those useful agencies, such as the Kew Guild, in which the permanent officials associate themselves with the young men who are equipped in the gardens for their duties at home and in distant lands. This brotherhood is maintained in after life, to the advantage of the entire organisation. One has only to read the journal of the guild to understand the advantage of this friendly intercourse between the authorities and past workers.

At this season, when the awakening of spring bids the flowers open to the sunshine, Kew is a garden to visit as frequently as time will permit. One never walks through the pleasure ground, arboretum, or houses without discovering some rare and interesting plant unknown to us before, and seekers after novelties—flowering, may be, for the first time in England—will, as our records in *THE GARDEN* show, be richly rewarded. The Croci now spread their yellow carpet over the grassy slopes of the mound near the Cumberland Gate, and beds of distinct species and varieties are in full beauty elsewhere, each kind so grouped that the gardener may see to what useful purpose the plant may be put in his own domain.

It is the more practical and poetic aspect of Kew, if we may thus express ourselves, that must not be forgotten when considering its great importance as a centre of botanical pursuits. The wonderful variety of trees and shrubs, hardy plants, and things requiring artificial conditions is rendered more easily understood when the hand-lists are studied also hand-lists that may be regarded as indices of the collections under cultivation.

The Royal Gardens are interesting to the keen observer at all times, but the "opening of the flower season" is naturally more pleasurable to the visitor than the winter, when the silvery bark of Birch and crimson stem of Willow add their note of colour to the harmony of browns and greys. When the Croci have flowered, the Daffodils in their thousands bend their stems in the wind. Daffodils planted in the grass to make sheets of colour, and saturate the breeze with perfume, until the misty azure of Bluebells in the woodland and in the charming grounds surrounding the Queen's cottage compel our attention.

With the drowsy summer days the Water Lilies upon the water surface idly float, opening in the heat of the day those scintillating masses of petals that have given new interest to the pond and lake, hybrids grown

in all their best forms at Kew, to show to the thousands of visitors from all quarters of the globe their value and beauty in enriching the home garden and public park.

It is a pleasure to praise where praise is due. There is no rigid adherence to the traditions of the past, but the director and his assistants have during past years transformed the gardens into a place more beautiful and interesting than many a private domain where botanical science is not expressed in the plants set out in bed and border. Those who wish to be critical may declare that this flower beauty is provided at the nation's expense. True: but a nation does not bestow artistic instincts upon the individual. If Kew were as ugly as the conventional cemetery, we have little hesitation in saying that the public generally would consider that botanical research necessitated a sacrifice of a plant's individual beauty. But it is not so, and from this time until winter again robs the tree of its leaves and bids the flowers depart until summer skies again brighten the earth, there is no more interesting and beautiful spot for its flowers in the British Isles.

Of the flowers in the grass we shall write more when the Daffodils and the Tulips have expanded in their thousands. This is a distinct and precious form of gardening that of recent years has increased the charms of many a private garden, and is carried out in its fulness at Kew.

THE ROYAL HORTICULTURAL SOCIETY & THE PROPOSED NEW GARDEN.

CONSIDERABLE anxiety is felt apparently in some quarters, judging from recently expressed opinions, that the Royal Horticultural Society is likely to definitely settle an important undertaking without consulting the Fellows. But we think this is an entirely wrong conclusion to accept, if we remember rightly, of the matter discussed at the annual meeting a few weeks ago.

The president, in carefully chosen words, stated that the scheme of the new garden had developed no further than that the council were seeking for some good site, and when that had been regarded as likely to prove suitable, the proposed measures to adopt for its purchase would be laid before a general meeting. Our excellent contemporary, the *Gardener's Chronicle*, protests "most earnestly against the view taken that the adoption of the report of necessity carries with it acquiescence in the details of a scheme which was not, and has not been up till now, laid before the Fellows. How can the Fellows acquiesce in anything

which is unknown to them!" But little more than a month has passed since the annual meeting, and the stipulation that the Fellows would be consulted in due course, and their opinions considered to guide the council in their efforts to act rightly, we consider a guarantee that nothing will be accomplished in any way to repeat blunderings and an utterly false policy, which for many years before 1887 well-nigh wrecked the entire organisation.

We know our contemporary has the welfare of the society deeply at heart, and, being mindful of the bitter experience of the past, which can only be looked "back upon with feelings of abasement and humiliation," is anxious about the future. We have full confidence in the men leading a society whose watchword is "Horticulture," and feel assured that no attempt will be made to establish an elaborate school of horticulture, or undertake any Utopian schemes likely to spell bankruptcy and dishonour, but simply to acquire a new experimental garden for the furthering of the society's work, a proposed departure cordially supported by the annual meeting.

We ardently hope that the School of Horticulture will at no distant date be established, but this is a matter that can rest until something more definite can be decided than a few maybe hastily expressed ideas as to its important bearing upon the horticultural industry in this country, and we are not surprised that its establishment with the funds of the society should arouse the "gravest apprehensions" of our contemporary. To embark upon this undertaking hurriedly would mean disaster, but it is not too much to hope that from the school, for such it may be called, at Chiswick there may arise a more substantial structure under the care of the Royal Horticultural Society.

The future of the Chiswick Gardens must be considered at no distant date. It will be hard to part with gardens of historic interest, and identified with the Royal Horticultural Society throughout the most interesting period of its existence. We hope that they may be spared for other work than mere experiment and trials, and if it be possible to save them, we feel certain everything will be done to accomplish this end.

The president, council, and secretary have shown themselves equal to the tasks before them in the near future: they have resented the Royal Horticultural Society from its slough of despond and restored it to the full confidence of the Fellows and all who are interested in horticulture in this land and many countries abroad. We feel assured they will not fail at this interesting phase of a new departure to celebrate a centenary which should gather round the society scientists and horticulturists from all quarters of the globe.

BEST APPLES FOR BRITAIN.

EARLY.

Dessert.

Irish Peach. Lady Sudeley.
Mr. Gladstone.

Cooking.

Cullin Pippin. Lord Grosvenor.
Keswick Codlin. New Hawthornden.
Stirling Castle. Manks Codlin.

MIDSEASON.

Dessert.

Allington Pippin. Cox's Orange Pippin.
Blenheim Orange. King of the Pippins.
Cockle Pippin. Margil.
Worcester Pearmain. Ribston Pippin.

Cooking.

Bismarck. Striped Beaufin.
Lady Henniker. Tower of Glamis.
Lord Derby. Warner's King.
Wellington.

LATE.

Dessert.

Adam's Pearmain. Fearn's Pippin.
Barnaek Beauty. Hornead's Pearmain.
Baumann's Red. Reinette du Canada.
Winter Reinette. Scarlet Nonpareil.
Claygate Pearmain. Sturmer Pippin.
Dutch Mignonne. Winter Ribston.

Cooking.

Alfriston. Newton Wonder.
Bramley's Seedling. Norfolk Beaufin.
Lane's Prince Albert. Sandringham.
Wellington.

FRUIT GROWING IN BRITAIN.

AN important subject is written about in your leading article of March 10, and the way you have considered it will doubtless stimulate those who have an interest in fruit culture. The remarks are most opportune, as only a few weeks ago a gentleman greatly interested in fruit drying was invited to be present at a meeting of the fruit committee of the Royal Horticultural Society, he having a most improved system of drying fruit. He said that he would take an immense quantity of fruit, which unfortunately could not be forthcoming. I am glad you have alluded to the difficulties or cost of transport. This, of course, may be met by having centres to prepare the fruits for drying, and the gentleman referred to exhibited specimens greatly superior to foreign productions. This shows what an opening there is for quantities of fruits of all kinds.

A better time could not have been chosen to refer to the lack of good fruits in our markets, as at the present moment it is only seen in small quantities. I am aware that salesmen favour the imported supplies, and in a measure this has been brought about by our own careless culture, for if the grower could send up a regular supply of the popular kinds there would be a corresponding demand. Of course there are occasional new introductions that find favour for a time, and some are then lost sight of, but the grower would soon find this out, and not put all his eggs into one basket. It is not safe to rely upon one kind, as in some seasons it may fail, and if more kinds are grown a crop may be obtained from one or other every year. I think it a safer plan to grow both cooking and dessert kinds, as frequently the latter crop when the former fail, and *vice versa*. An instance of failure has come under my notice. It was caused by planting young trees in an old orchard. This rarely pays, and it is far better to give the trees a fair chance by not mixing them with old ones in a crowded orchard.

Of course many growers will not agree with the list given. Worcester Pearmain is omitted, and though this is excellent in its way, it is not of first-rate quality. The prices, however, that this variety obtains in the market are astonishing, especially if the fruit is grown on a warm, loamy soil and well coloured; it is also most valuable to the large grower through being early. Till we get another kind of superior quality that crops as freely, I fear growers will not cease growing it in quantity, as the trees crop so freely. Among the culinary early Apples Manks Codlin has been omitted, but it is valuable for its earliness. I admit the Keswick is similar, but so far I have found the former more profitable, its great drawback being that it only fruits every other year, but by growing Lord Grosvenor, also an excellent Codlin, the grower will have two strings to his bow. Allington Pippin is mentioned in the list. I have no knowledge of this as a market variety, but if it is as free cropping as it is handsome, it should be a favourite.

I am glad the subject of keeping was mentioned, as this is a point worth more than passing notice. We do not want elaborate or costly stores, but at the same time it is useless to keep fruit that will

not sell. Appearances go a long way, and a dull, poor-looking fruit, though it may keep well and be of good quality, does not sell so readily as a bright Wellington. Unfortunately, so many of our handsome Apples, for example, Gascoigne's Scarlet and Washington, are not so free cropping or such good keepers as might be desired, and the tendency of the fruits recently introduced is strongly in favour of colour, but they lack flavour and keeping qualities. I am aware this remark will not meet with the approval of those who exhibit, but my note more concerns the producers of quantities. There are many fruits in the article referred to that are well worth the attention of growers, but I have already taken up too much space. From my own point of view, I greatly value your selection of cooking Apples. Norfolk Beaufin is none too free, but Lane's Prince Albert makes up, and the newer Newton Wonder promises grandly.

FRUIT GROWER.

CORRESPONDENCE being invited on the selection of varieties of Apples suitable for market purposes, perhaps a few remarks on some sorts not mentioned in the issue of March 10 may prove useful, particularly as they are largely relied on by some of the most successful market growers in Kent.

Referring in the first place to early dessert varieties, no reference is made to Mr. Gladstone, which is one of the earliest late Apples we have, and largely grown for market purposes. The fruit, which ripens in July and August, is highly coloured and carries a rich bloom; the flavour is good, and the variety is free in bearing. I know several growers near the south coast who pin their faith on Mr. Gladstone because it comes in early, and there is a ready sale for it when Kent and Sussex watering-places are filled with visitors in August. I notice also that Worcester Pearmain is omitted from the list, and in this we have one of the most popular market dessert Apples in cultivation. Many Kentish plantations are devoted entirely to this variety, which is amongst the most profitable of September Apples. Its flavour is inferior to some others, but the fruit is highly coloured, and this has its effect on the sale of dessert Apples; moreover, the tree is a sure and prolific bearer, and its habit of growth leaves nothing to be desired as a bush for plantation work. The fruit is sold direct from the tree, and the fact that plantations of Worcester Pearmain are increasing in Kent is evidence of its suitability for market purposes.

Turning to early cooking Apples, I note the absence of Ecklinville Seedling, which is a household word amongst the fruit growers in this county on account of its suitability for fruit plantations and market sale. In the neighbourhood of Sittingbourne I am acquainted with large plantations of this useful Apple, which bears freely and can be sold direct from the trees. Ecklinville may not be a favourite with all growers, and the fruits of this and other large culinary varieties are said to sell best in the northern markets, but, considering the freedom of its growth and its excellent bearing qualities, I do not see how Ecklinville Seedling could well be left out of a select list of early cooking Apples for market.

It is obvious that to a market grower the time taken by varieties to come into good bearing has to be considered, and such a variety as Blenheim Orange would be more popular if it gave a quicker return. No one says a word against Blenheim Orange as a dessert Apple, and a well-established orchard of it is very profitable, but other sorts coming into bearing more quickly are preferred before it. Bramley's Seedling is not grown so largely as it would be if it were not for the same reason. Among late dessert Apples, Baumann's Red Winter Reinette and Hornead's Pearmain are well spoken of by some growers. KENTISH MAN.

WITHOUT doubt there are far too many worthless or third-rate Apples in cultivation, but there is this consolation, that no one need grow them. But, unfortunately, all the preaching in the world in reference to improving our ways in Apple culture and varieties grown seems wasted on the many.

Yet, again, there is consolation in the undoubted fact that a few do benefit by good advice, and follow it. But we find, write what may be with respect to Apple varieties and their too great abundance, that others still come. How many new varieties, or old ones resuscitated, have received awards of merit during the past autumn and winter it is hard to say, but at the present rate of progress we seem to be adding from sixteen to twenty fresh varieties or names to our already overloaded lists.

It must not, however, be assumed that the granting of an award of merit to a variety signifies first-class quality. Would that it did, then we should see our existing Apple stocks greatly improving. Practically such an award means that the variety is about as good as the average, and no more. But we have, indeed, more than enough varieties of average quality. We want more of exceptional merit, and it would be a good thing were none now so honoured except they were such. When we note the first-class certificates awarded, then is increase found to be very slow. That fine dessert variety Charles Ross is, so far, the only one that during the past season obtained so high an honour, and it is earnestly hoped that in the future it may be found what this award anticipates. There is in relation to so many varieties this fact to be admitted, that whilst some few seem to do pretty well everywhere, not a few very fair varieties will not do so. Then is it found advisable to grow such varieties as will do well, and it is because of that we find, as Mr. Parker mentions, some that are little known generally having high reputations in various localities.

But beyond these there are myriads of varieties that should be marked as worthless when compared with the much superior ones we have even in abundance. Down to the end of the year, what with early and second early varieties, it is possible to have scores furnishing useful fruit, yet few may be of first-class excellence. The real test of quality, whether of keeping or of flesh and flavour, is found in the early months of the new year, and of cooking fruits, what Apples from January to June are better than Alfriston, Prince Albert, Newton Wonder, Wellington, Mère de Ménage, Norfolk Beaufin, Northern Greening, Hambleton Deux Ans, and Bramley's Seedling? Some would perhaps add French Crab, but it is only of third-rate quality. From this list a choice selection may be made of five or six to suit all positions and give a long succession of fruit. All are great croppers, good cookers, and, in cool places, long keepers. But in relation to keeping qualities, it cannot be too strongly urged that perfect maturation is absolutely essential. The very best keeping Apples are, of ordinary late varieties, those which grow in ample sunshine, are allowed to hang as long as possible, and if the weather be dry, the tree roots get occasional soakings of water. When varieties of this character fail even in cool places to keep well, in the majority of cases the fault lies in too early gathering and root-dryness.

Now of dessert varieties that can be had good for table from January to June it grow under the conditions mentioned, Cox's Orange Pippin, the most delicious of all Apples, will always be good till the end of February, possibly even later. But whilst that variety is so good and crops abundantly, how poor relatively seem the best of all others. Cox's Orange has probably the yellowest flesh of all Apples, hence its delicious flavour. It is a pity that raisers of new Apples lose sight so much of that consideration. After that there is no variety that gives better flavour late than does the old Cockle Pippin, a capital variety that everyone should grow, and to succeed that, none again are better than Sturmer Pippin. Few dessert Apples will keep better than the last mentioned.

Of other good late ones, Braddick's Nonpareil, Rosemary Russet, Claygate Pearmain, Duke of Devonshire, and Adam's Pearmain are excellent through this late season. Good late eating Apples should possess fairly soft and easily masticated flesh, be of fair flavour, brisk and juicy. We

seem to have much to learn yet both in maturing fruits on the trees and keeping them well in the store, but on this latter head doctors differ amazingly.

A. D.

ALTHOUGH, as Mr. Parker has pointed out (p. 157), we do not want such a multitude of Apples as are now grown, experience shows that it will not do to be too drastic in cutting down the list. No doubt in good Apple years there comes a time when one wishes that the number of varieties was not so great, and that the bulk of one's crop was made up with only a few of the most popular sorts, but in scarce seasons there is often need to be thankful that the orchard contains some others besides these. I never found Norfolk Beaufin so certain a cropper as Mr. Parker appears to have done, and if it were so generally, there would be little need to look any further for the latest keeping Apple. Easter Pippin was a far more certain cropper with me, and I should always include it in a selection for very late keeping. Again, Wellington is by no means a sure cropper, though it is certainly the king of cooking Apples where it can be grown, but the tree is very liable to canker on some soils, and is generally looked upon as uncertain. For myself, however, I have no fault to find with it, as in Suffolk on a very light soil and here on a heavy one I have found it do well.

I should like to add to Mr. Parker's list of dessert Apples the name of Lamb Abbey Pearmain. I think this is the very best flavoured dessert Apple that can be grown for an April supply, and this was evidently the opinion of the judges in the Veitch flavour competitions some years back, when it was placed first in competition with good Sturmers and others. Lamb Abbey Pearmain is a crisp-eating Apple and juicy to the last. The tree is a good, but not quick grower and very fruitful, the slowness of growth and upright habit making it an ideal tree for a garden or fruit plot where space is limited.

J. C. TALLACK.

GARDEN THOUGHTS.

THE JOYS OF A GARDEN.

GARDENING is indeed one of life's purest pleasures, and a not altogether selfish one, inasmuch as those who look on the flowers we grow possess them also; their beauty brings a free gift to all who can receive it. It is not in the multitude of our blossoms, nor yet in the extent of our gardens, that the joy exists, for a simple cottage garden with its clambering Rose and clinging Vine, its sweet Lavender and fragrant Pinks, still wet with the morning dew, will oftentimes afford happiness far beyond that given by the rich acres enclosed within some stately garden wall. No, it is the love for the beautiful that the simple flowers themselves are able to draw forth in which consists our richest gain. It is the continual symbolic lesson of plant life, the perpetual teaching of our own hearts from them, how difficulties may be overcome, adverse circumstances contended with, and how fulfilment may be attained, if not by the visible crown of success, yet by the enrichment of our lives through the increase of our powers of steadfast endurance, patient labour, and abiding hope learned by working.

In the beautiful garden of human souls we should not always judge people by what they are, but by what it is possible for them to become; and so in our gardens of blossom we should press forward towards a high ideal, not only in the arrangement of our plants as to harmony of colour and balance of line and form, but in the fuller development and evolution of the plants themselves, so that the world may be the richer for our passing through it. For

may we not be as a high priest in our gardens, so that the marriage of our blossoms shall give us a yet fairer progeny with which to catch the sunbeams in their growing petals, and drink the dewdrops in their burnished cups.

The birth of a new Narcissus after seven long years of waiting from the date of seed sowing is a joy as great as that experienced by a scientist when in his laboratory he makes a new discovery after many years of research and toil. Hearing a physicist lately describe his sensation of rapture on such an occasion, I felt it to be similar to what I had experienced while watching the first petals of a Narcissus unfold new as yet to the world.

The procuring of a plant is often thought to be all that is necessary, and that success is sure to follow. But not so. The labour of love only begins with the possession of a plant. At once its life is assailed if it be not helped and cared for in its early efforts of growth. If there be a hot sun at planting time, the evolvets get parched and the leaves drop. A cold wind may shrivel up the foliage; later on a frost may blight it. If none of these things occur, then comes the insidious slug, that devours every attempt at fresh growth while the plant is still young and tender; or, in like manner, the green fly, arriving, sucks away its juices. Then the soil may not be suitable—too sandy or too heavy, too damp or lacking moisture, too calcareous or having over-much peat. Again, the position may be unfavourable—over-exposure to sun and wind, or too much shade. But it is the overcoming of these difficulties that gives gardening one of its special charms. Failure should ever act as a bracing wind, giving renewed force with which to press onward with joyful endeavour. A. L. L.

THE LATE E. J. LOWE.

By the death of Mr. Edward Joseph Lowe, which we could only briefly notify in our last issue, the horticultural world loses one of its most prominent workers, and the lovers of our native Ferns will especially miss him as one of the pioneers of varietal discovery, culture, and hybridisation, and owner of probably the finest collection in the country. No one who attended the Fern conferences of 1890 and 1892, held under the auspices of the Royal Horticultural Society, can forget the marvellous display of British Ferns of which he was the main exhibitor, nor can they forget the number of forms shown which had practically originated under his care. Mr. Lowe's position enabled him to pursue this special hobby of his (among many others) without limit of space or accommodation, and his residence for the past eighteen years in a climate peculiarly congenial to Fern life aided in their development, so that not merely fine forms, but robust and perfect specimens abounded both in his spacious gardens and in the houses and frames devoted to them. For about half a century the study of Fern life was his favourite pursuit, and the credit is certainly due to Mr. Lowe of having been the first to demonstrate incontestably the possibility of crossing and hybridising Ferns by his production of a hybrid between two diverse forms and species of *Polystichum*, viz., *P. angulare Wakeleyanum*, a cruciate form of one species, and *P. aculeatum densum*, a congested form of another, the result being a cruciate *aculeatum*. This was followed by an immense number of successful crosses mainly between varieties, the record of which is given in his last work, "Fern Growing," written to illustrate his theory of "multiple parentage," which, however, the scientific biologist declines to accept as established despite the very singular results which Mr. Lowe produced in evidence. Decidedly the most striking hybrid, however, is that between the Hart's-tongue and *Ceterach officinarum*, evidence of which, fortunately, is in the writer's hands in the shape of fronds, though the plant itself has perished. It is hardly necessary for us here to recall his published contributions to Fern lore: "British

Exotic Ferns," 8 vols., "Our Native Ferns," 2 vols., and "New and Rare Ferns," 1 vol., all splendidly got up and profusely illustrated with coloured and other plates. His last work, "Fern Growing," is on the same lines and completes the dozen. As a still more popular book his descriptive pocket catalogue of British Ferns is known far and wide. Ferns, however, as we have said, did not constitute by any means his sole pursuit. The crossing of flowering plants was also a hobby of his. His name is known to many in different connections altogether. Thus the short biographical notice of his death in the *Times* refers solely to his meteorological repute, and, save in the case of his publications, ignores his botanical research almost entirely. Biology in all its phases interested him, and upon his beautiful estate near Chepstow the visitor passed from one branch to another with curious indiscriminateness; here a basket of curious hybrid Ferns, there a bed of equally odd and mixed flowers, and yonder would be pointed out some equally curious developments in crossed cattle, pigs or fowl of all descriptions—a very menagerie of the unexpected. As a result of his position, leisure, and these varied tastes, we find that he figured as a Fellow of many prominent scientific societies, being elected F.R.A.S. in 1848; Fellow of the Royal Meteorological Society, of which he was one of the founders, in 1850; F.G.S. in 1853, and F.L.S. in 1857. He was also a member of the Conchological Society, and F.R.H.S., a J.P., and D.L., a list which is sufficiently illustrative of his scope of study and activity. In addition to the publications named above we must cite "Beautiful-leaved Plants" and "British Grasses," also finely illustrated, and forming with his Fern books a series of volumes at once handsome and valuable.

C. T. D.

SAXIFRAGA BURSERIANA.

I am pretty confident, as the result of considerable experience with this plant here, that the difficulty in its culture referred to by "H. K. M." in his interesting note of the 10th inst. is easily met (in the south at any rate) by the means indicated by Mr. H. J. Elwes in his valuable note in the same issue (p. 185) on "Hardy Plants in Pots." It is simply "glass protection from winter wet." The coincidence of these two notes in the same number of *THE GARDEN* is perhaps a little curious and felicitous.

I have now hundreds of this delightful plant just passing out of bloom and in the best of health and vigour, and I doubt if I have this year had less than 10,000 flowers, perhaps 20,000; it would be hard to count them. They are the accumulation of five or six years, and are the progeny of a few hundred ill-conditioned scraps, which it needed two or three years of care to bring into health. Now the stock, once established, grows with perfect ease, the one essential seemingly being that (of course without including air supply or permitting fire-heat) the plants are kept dryish from about October to February.

In the open here, speaking broadly, the plant has failed or ill-thriven, as with others it generally does. But it is obvious to observe that there can be no objection at all to planting it out upon the rockery yearly, even to bloom there if so desired, and replacing it in pots in October. By its compactness the plant lends itself with the greatest ease to this treatment, and though it is a decidedly slow grower, it is long-lived. I have several probably eight to ten years old.

Further, and quite evidently, the necessary glass protection may be given *in situ* upon the rockery in more than one easy mode, and I cannot doubt that in a really cunningly constructed rock garden projecting ledges or stones might be made to serve the same purpose as glass, though these would generally have to be made movable in summer, for free air as well as the other conditions indicated by "H. K. M." are doubtless necessary.

I have many distinct varieties in my collection, which ought to be called (but that I hate multiplying names of mere varieties where avoidable) *nana* or *pygmaea*, *acaulis*, *fimbriata*, or *laciniata*. This year I am hybridising the *Burser*

Saxifraga with other species, although there are not many of these early-flowering enough. One would be glad then to get again the lovely but scarce *S. Boydii*. I mean the original clear yellow-flowered form.

Besides other varieties such as indicated above, much, even extreme, variation in the size of the flower is noticeable, as also in the precocity of flowering. Again, speaking broadly, the larger-flowered varieties seem to be the earlier flowered, and *vice versa*. But, of course, though the difference in the size of the flowers is even enormous if we compare the extreme ends of the chain, the sequence of sizes is pretty complete. There is nothing that can be called a true botanical difference between them, and (as in many other cases) I think it might have been well if for the "major" varieties the nurserymen had dispensed with the added name. However, I know there are two sides to that question, and that it may be as well thus to be able to bar the poorer small-flowered forms in ordering. In my own collection (an accident of their origin) large-flowered forms

removable glass, although the pot helps to a convenient mobility. Subject to that I agree in every word he writes.

An amateur of my acquaintance many years ago did take up that culture, preached it, and believes and practises it still to some extent, to his own delectation. But Mr. Elwes would be astonished at the quiet contempt this amateur has had to endure from many of his visitors. I should say that nine out of ten of alpine plant-lovers were also lovers only of culture in the open air. This amateur, too, had a nursery, and nothing, he fancied, damaged it in reputation more than the ability of competitors to say that he grew alpines under glass. It mattered nothing that he grew them also in the open, and that those which he grew under glass others rarely grew at all, or grew ill. But that is by the way.

Many years ago I wrote for the Royal Horticultural Society and printed a paper on houses for alpine plants. It was not very good, I know, and I have not reprinted it; but it was, perhaps, suggestive, and has been helpful to some; and if



POLLARD OAK, 20 FEET ROUND AT THE SMALLEST PART.

very greatly predominate, but I fancy myself singular in that respect.

One wishes that the few who have kept their *Saxifragas* in health and in the open for many years continuously (for there's the rub) without glass winter protection would kindly help us to a similar success with them by a careful statement not only of their locality, but of all the conditions under which they have succeeded. I suspect, though I do not know, that shade given during the heat of summer, so given as not to sacrifice exposure and free air, may, as in the case of some other alpine, be among these conditions. A plain fact forgotten by many when discussing the suitability of a climate for such cultures is that while pre-eminently suitable by its comparative dampness in summer, it is pre-eminently unsuitable for a like reason in winter, and another similarly forgotten (but, I take it, tolerably certain) allied fact is that, as regards soils, the soil most suitable in summer, say, chalk, strong loam, or other of a moisture-holding nature, is, for the same reason, precisely the worst in winter.

Mr. Elwes is wondering why some "amateur does not take up the culture of early-flowering hardy plants in pots," &c. Probably he means under glass, and I will so presume, for there is nothing much gained, that I know of, by the mere pot as distinguished from planting out under

anyone thinks of following Mr. Elwes's advice and (that it even might be useful to him I will be glad, if I can, to hunt up a copy and send it to him on application. But the paper is somewhere in the journal of the Royal Horticultural Society.

Witherbury, Guildford. H. SELFE-LEONARD.

[An illustration of *Saxifraga Burseriana* major was given in *THE GARDEN*, March 10, p. 183. We are pleased to know that recent notes upon it have created interest. *S. Burseriana* is a beautiful flower of late winter days, and is grown at Kew under glass in the hardy plant house, as well as in the rock garden. *Ens.*]

PHOTOGRAPHING PLANTS.

At a recent meeting of the Linnean Society a very interesting paper was read by Mr. J. C. Shenstone on photographing plants, and more particularly our wild ones. Of these he exhibited a collection of photographs that he had made containing no less than 700 species. Many of the photographs were most admirable, and gave a much better idea of the plant than the usual figures, or even dried specimens. Some of the photographs were thrown by means of a lantern on to a screen, and also figures from books (which are usually considered to be very good ones), and it was very interesting to see how much more life-like the former were than

the latter. In order to obtain a picture of the plant in as natural a position as possible, Mr. Shenstone places his camera vertically with the lens downwards, and lays the specimen beneath it on a horizontal surface. In this way it is easier to arrange the specimen so that it does not look stiff or unnatural than it is in a vase, when the weight of the upper part of the plant may cause it to assume an undesirable attitude. Mr. Shenstone also threw upon the screen a series of photographs of our native plants growing in their natural habitats. These showed the natural growth and ordinary surroundings of the plants in the most delightful manner, and were much admired. He described the difficulties he met with in obtaining these views, or rather portraits, and said he hoped next season, with improved apparatus and his previous experience, to obtain even better results. A series of these photographs, particularly of the gathered specimens, would be of the greatest use to students, who would find them in many ways better than the dried-up bits of plants of which a herbarium generally consists, and which at the best give but a poor idea of their real character. It is to be hoped that some day Mr. Shenstone will see his way to having these photographs reproduced so that they may be published. It would be very useful if botanists who are travelling in foreign lands would bring home with them a series of photographs of a similar nature. Those who are obliged to stay at home would then have a much better idea of the flora of other countries than they can have at present. Miss North's collection of drawings at Kew is admirable for this purpose, but naturally it only covers a very small portion of the field that is open to photographers. There is, however, room for much good work in this direction in our own country.

ANCIENT POLLARD OAKS AT HAYES, KENT.

WHAT are commonly called the old Oaks at Hayes are really situated on a piece of West Wickham parish adjoining Hayes Common, which was bought by the Corporation of the City of London from the late Sir John Lennard, and was dedicated to the public. The Oaks are very old. The writer has been informed that they are mentioned in Doomsday Book as the old pollard Oaks at Hayes, and those who should know and have examined them think



ANCIENT POLLARD OAK ON HAYES COMMON, KENT.

they are probably more than 1800 years old. Until about thirty years ago they were regularly pollarded, and for the sake of future generations it is a pity that the practice has been given up, for their heads have now grown so large and heavy, that the fine old stems will probably be split before very long, and then the trees will cease to exist, though if they were pollarded, their vitality is so great that they might live for many a year to come. To give an idea of their size, one is 20 feet round at the smallest part, another 20 feet 9 inches at the smallest part, another 25 feet 7 inches at the smallest part, and another 18 feet 5 inches above the knob at the right, but measured round the knob is 28 feet 4 inches, and an enormous massive root or stem goes down to the foot-path. They are growing on pebble gravel of great depth.

Hayes Place, Kent.

E. H.

HISTORY OF THE KNOWLEDGE OF THE FERTILISATION OF FLOWERS.

THAT the sexes of plants were to a limited extent known to the ancients is seen in the writings of Pliny and others. Thus Pliny says, copying from Theophrastus: "The more intelligent inquirers into the operations of Nature state that all trees, or rather all plants, belong to either one sex or the other and this manifests itself in no tree more than in the Palm." Linnaeus also records how the Arabians from time immemorial fertilised the Date, while the Persians did the same for the Turpentine tree, and the inhabitants of Chios the Mastich, these all being unisexual. Bacon, following Pliny, expressed his belief that all plants must be sexual, and hints of it are not wanting by Shakespeare in the "Winter's Tale." Thus Perdita speaks of "streaked Gilliflowers which some call Nature's bastards," the mixture of colours apparently suggesting a crossing between two whole-coloured kinds, a fact which Prof. R. Bradley showed to result from crossing a yellow with a red Tulip in 1725 ("Discourses on the Four Elements as they Relate to the Growth of Plants," by R. Bradley, Professor of Botany in the University of Cambridge). Again, Shakespeare speaks of "Pale Primroses that die unmarried."

The distinctions between male and female plants were, however, excepting in the trees mentioned, very fanciful both with the ancient and mediæval writers. Tournefort, even in 1730, follows the ancients, though the true nature of the sexes was well understood at that date.

Tradition records that Sir T. Millington, Savilian Professor of Botany at Oxford, was the first, since Bacon's time, to point out the true function of stamens and pistils. This was in the year 1676; but Grew and Ray soon after showed they understood it; while Vaillant, the French botanist, was evidently perfectly familiar with the fact in 1718.

Bradley, too, at this time was quite aware of the existence of varieties which he describes as fertile by crossing as well as hybrids; these he believed to be always infertile, like males (Op. cit., p. 87 seqq.).

In 1769, Linnaeus wrote his "Dissertation



POLLARD OAK, 28 FEET 4 INCHES ROUND

on the Sexes of Plants," and in 1790 Dr. J. Rotherham contributed a pamphlet to the subject in opposition to those who still disputed it, entitled "The Sexes of Plants Vindicated."

Bradley exemplified male and female flowers by such as those of Hazel. Bi-sexual flowers he called androgynous, but Linnaeus termed them hermaphrodite. The former were fertilised by the wind, but the latter he regarded as always being self-fertilised, though crosses could arise by the aid of the wind, as in producing striped Tulips.

In describing the subsequent behaviour of the pollen, Linnaeus thus records his observations on the Jacobean Lily, *Amaryllis* (*Sprekelia*) *formosissima*: "A drop of limpid fluid exudes from the stigma at mid-day, is re-absorbed about 3 p.m., but re-appears at mid-day following. If we shake the anthera over the stigma, so that the pollen may fall on this limpid drop, we see the fluid soon after become turbid and assume a yellow colour, and we perceive little rivulets, or opaque streaks, running from the stigma towards the rudiments of the seed." Linnaeus also notices the shrivelled pollen-grain, which, he adds, refutes the idea "that the pollen passes into the stigma, pervades the style, and enters the tender rudiments of the seed."

The above is interesting as being the first recorded observation of what we now know were the pollen-tubes; but the prevailing idea was that "an extremely fine exhalation only or 'aura' passed from the pollen to the embryo."

Having only simple microscopes to work with, the subsequent details of ovular impregnation were unknown. With regard to this, a great controversy arose somewhere in the forties over Schleiden's contention, that the embryo was formed within the enlarged end of the pollen-tube itself. Hensley and other botanists, however, finally brought the controversy to an end by proving that the egg-cell was always outside the tube and within the embryo sac itself.

The first botanist to perceive the adaptations in the structure of flowers to insects was Sprengel ("Das Geheimniss der Natur," 1793), who illustrates numerous cases specially facilitating intercrossing by insects.

The subject was not taken up again till Darwin published his book on "The Fertilisation of Orchids" in 1862. Since that date the fascinating pursuit has attracted the attention of a host of observers. The question soon arose, that since Nature has adopted three methods wherewith to secure the fertilisation of flowers, viz. by wind, insect, and self-pollination, which gives the greatest benefit to plants?

Andrew Knight soon found in his experiments early in this century with crossing cultivated plants, as also Dean Herbert in the thirties, that they were greatly "improved" thereby; so that the former experimenter came to the conclusion that a "cross should take place between neighbouring plants of the same species."

In 1862 Darwin came to the same conclusion, which he expressed in a converse way, that "Nature abhors perpetual self-fertilisation." He, however, admitted subsequently that this was too strongly expressed. Indeed, it is now seen that it is totally false, and that self-fertilisation really prevails in Nature.

In 1876 Darwin published his book on "The Effects of Cross and Self-fertilisation in the Vegetable Kingdom," in which he enumerates a vast number of experiments and their results. Unfortunately, his bias towards the imaginary advantage of intercrossing runs through the

book, so that he quite failed to see that his own experiments tell against his theory to a very damaging degree.

Darwin's erroneous inference arose, like Knight's, from his experiments being made with the more highly coloured and conspicuously flowering plants well adapted to insects rather than with plants bearing insignificant and minute flowers, such as Groundsel, Shepherd's Purse, *Solanum nigrum*, &c. It is true

When, therefore, we look to Nature and compare results between conspicuously and inconspicuously flowering plants, we find that the latter far outnumber the former in individuals where any species exist in tolerable abundance. Secondly, the geographical distribution of the former is limited, while that of the latter is cosmopolitan; and that if "garden plants" and "weeds" are left to struggle for an existence, the latter soon prove



FOXGLOVES IN A COPSE ON THE EDGE OF DARTMOOR.

he found that by carefully crossing plants artificially—not in the haphazard way it is done in Nature—he stimulated them to grow finer and produce more seed; but, as a rule, he did not pursue his experiments long enough to discover that these "improvements" were only temporary; nor when he did so, did he sufficiently observe—what, indeed, his own experiments proved—that after a short time the comparative results (as in weight, height, quantity of seed, &c.) gradually declined, till it not only equalled, but even sank below the results derived from continuous and artificial self-fertilisation. Hence the advantages, if any, from intercrossing must be considered from two points of view, viz. from the cultivator's and from Nature's.

In the view of the florist, he wants to enlarge the flower, to heighten and increase the varieties of colour, &c.; such he calls "improvements," often producing doubles, which of course more or less does away with the seed. To gain these ends he crosses varieties and species, avoiding self-fertilisation, except when he wishes to fix some particular "form." But after having devoted himself to improving some particular species or variety he finds he can get no further. As often as not the seed becomes poor, and he sometimes loses his stock altogether.

In Nature, things take place differently. The two "ends" of plant-life are that the individual may live a healthy, vigorous life, and before it dies may leave plenty of good seed. It cares nought for "beauty" unless it tend to these two ends.

themselves to be the masters of the situation; so that the "useful" and the "beautiful" succumb to the vigorous ascendancy of the humble and insignificant self-fertilisers.

Thus, for example, Hooker records finding Chickweed in Auckland, Campbell, Falkland and Kerguelen Islands; while *Solanum nigrum* occurs in South Australia, Tasmania, or New Zealand, the islands of Socotra, Andaman Islands, Japan, Hong Kong, and the Galapagos Islands, as well as abundantly in Europe. Further details will be found in the author's paper on "Self-fertilisation of Plants" (*Trans. Linn. Soc.*, 2nd ser., bot. p. 317).

Next come those regularly pollinated by aid of the wind. It might be thought that the chances of securing the pollen on the stigmas would be small; but facts are opposed to that *à priori* assumption, for I find that common Woodrush (*Luzula campestris*) is found in South Australia, Tasmania, New Zealand, South Africa and South America.

I have in my possession specimens of *Rumex Acetosella* brought by Mr. Darwin from the Falkland Islands, *Urtica urens* from the same, and also from Monte Video. These wind-fertilised herbs are all insignificant, but they are in no sense deficient in vigour, and propagate with the greatest facility.

On the other hand, nearly all ordinary more or less conspicuous insect-fertilised flowers belong to plants whose geographical distribution is greatly limited, the number of individuals being comparatively restricted.

GEORGE HENSLEY
(To be continued.)

FERNS AND FOXGLOVES IN DEVON.

THE banks of the Dart and the borders of Dartmoor are a happy rambling-ground for those who love to see our wild Ferns and many another good plant in their native luxuriance. Nowhere do they look more beautiful or more flourishing than springing up among the great moss-grown boulders, that are in themselves reservoirs of that constant moisture that such plants delight in.

In the picture of Foxgloves standing so finely against their background of cool rock and quiet woodland, it looks as if Nature had made a special effort to place a grand group of a handsome wild thing in order to teach us how to do our wild gardening.

THUNBERGIA ALATA AND ITS VAGARIES.

SOME few years ago I planted some extra seedlings of *Thunbergia alata* in a dark sunless corner to grow up wires, and the plants did well and behaved much as the ones under glass, which were also grown in the shade. The same year I saw the edge of a sunny stage covered with *Thunbergias* grown in 4-inch pots, and getting the full benefit of every ray of sun. The result was a splendid crop of blossom and myriads of red spider. The hanging growth suggested a "new plan" to me, and the

next morning I found that the extreme ends of the shoots had turned completely round and were pointing north again, and in a day or two the shoots doubled back and began to climb up themselves, merely to get away from the sun as I at first imagined. The real reason, however, appeared to be that the only way that *Thunbergias* can give their blooms the curious tilt from the main stem is by making all their growth in one direction, namely, the direct opposite to the place whence comes its main allowance of sun. Now I always plant at the bottom of what I want to cover, and the plants do as I wish, always provided they can grow away from the sun. Bearing this peculiarity in mind, I know of no better annual for covering the front of rockwork or patches of resting bulbs, and yet I have never seen the plant grown in the open except in my own garden. It is worth while it only to see how different the plant looks when growing clean, from the specimens one sees under glass, which are nearly always covered with spider, or thrips, or both.

Browallias have of course the same tilted flowers, and in a minor degree I have noticed the same inclination on their part to slant their shoots away from the sun so as to get the blooms at the right angle.

The whole thing seems most interesting, for the flowers must have assumed their tilt for some reason, and as a consequence the plant has to conform to a certain style of growth. One wonders what the reason was and what the earliest ancestors of the modern flower were like, and how they grew in times of which we knew nothing.

planted, while those on the west seemed undecided what to do, and finally joined the tangle on the north. I have only once had trouble with spider on plants grown in the open, and fancy then it was my own fault for keeping the seedlings pot-bound too long before planting out.

Norton Abbot,

B. D. WEBSTER.

BOOKS.

Hand-list of Tender Dicotyledons.*

We have come to look upon these hand-lists issued from the Royal Gardens, Kew, as friends, and now welcome another volume of the same character as the useful series that has preceded it. In an excellent preface the director mentions that "Tender dicotyledons, though not the most conspicuous, are the most numerous in point of species of plants grown under glass at Kew. They are cultivated with various objects; many for the beauty of their flowers or fruit, others for their useful properties, others, again, for their scientific interest." A note occurs upon the Himalayan *Rhododendrons*, which we extract as likely to greatly interest those of our readers who cultivate this beautiful group of shrubs. Of course the note concerns the *Rhododendrons* in the Royal Gardens: "The first Himalayan *Rhododendron* was introduced in 1818, when Dr. Wallich sent to this country seeds of *Rhododendron arboreum*. One of the trees raised from them had reached at Kew in 1880 a height of 23 feet. In the years 1847-51 Sir Joseph Hooker, during his memorable travels in the Sikkim

Himalayas, sent home seed in quantity of a large number of fine species mostly new to science. With few exceptions these found a congenial home in the open air in Cornwall. At Kew their cultivation presented considerable difficulties. While they will endure without suffering a tolerably rigorous winter without protection, they come into growth too early for the average English climate, and are therefore peculiarly susceptible of injury from the frosts and cold winds of spring. Of late years they have been grown at Kew with moderate success under a frame which could be enclosed with shading material during the critical period. For open-air gardening reliance will have to be placed on hybrids, which combine the floral beauty of one parent with the hardy constitution of another; of these the fine cross raised at Kew, *Rhododendron kewense*, which in most years flowers profusely in the *Rhododendron dell.* is an example. Some of the older crosses, such as *R. altaicense* and *R. Nobleanum*, still retain too much inherited precocity of growth. The completion of the temperate house afforded an opportunity of cultivating these magnificent plants with more success than had been previously possible at Kew. The conditions of the main body of the building had not proved very suitable to them. The winter temperature was

too warm to allow of their receiving a complete rest. Their growth was in consequence not properly matured, and the plants eventually became weakened and exhausted. It was therefore decided to devote to them the new north wing of the temperate house, which was completed in 1899, where they could be grown without any heat at all. In this they were associated with *Camellias*,

* Hand-list of Tender Dicotyledons. Sold at the Royal Gardens; unbound 2s. 6d., bound 3s.



WILD FERNS IN DEVON.

following year several plants were set out in early spring at the edge of a line of red sandstone which faced due south, my hope being that the orange and white flowers would be well set off by the coloured stone. Here came the trouble. Tumble down over the stones they would not, but shoot away due north and climb over the plants at their back they were only too ready to do. At first I did not see the reason, and putting the affair down to mere "cussedness," I pulled some of the stronger shoots over and pegged them down. The

It is only right to add that with a north exposure you get a downward growth, so it is not a mere question of the plant being so much of a climber as that it refuses to be a tumbler. I have proved this by planting the edge of a tub with *Thunbergias*, the result being that the plants on the south side grew upright, then inclined over to the middle, and finally fell away over the north edge, where the original and proper inhabitants were already doing the same thing. The plants on the east side fell over for the most part where

Bamboos, and other plants representative of the Indo-Chinese region. As soon as the north wing was given up by the contractors it was furnished with great rapidity, largely due to the generosity of Mr. D. B. Shilson, of Tremough, Cornwall. This county thus repaid its debt to Kew, from which, as stated above, it originally received the plants when introduced by Sir Joseph Hooker. The late Mr. Shilson, father of the present owner of Tremough, was one of the first to take up their cultivation. "Several of the plants" transported from Cornwall to Kew are said to have required a separate railway truck each, and were nearly 2 tons in weight." Another prominent feature in the house is a large Camellia 15 feet high, removed from a private garden in Kensington Palace Gardens, where it had been grown by Mrs. Falk, who presented it with other plants to the Royal Gardens."

Flowers of the Field.—This much enlarged edition of an old book that most truly deserves its steady popularity has been entirely rewritten and revised by Mr. Boulger. The present edition includes the Sedges and Grasses. The veriest beginner can recognise the familiar wild plants from the distinct woodcuts, while a careful study of the introduction, which offers firstly an explanation of terms, and secondly and thirdly a brief classification and directions for identification, gives as concise and lucid a preparation as such a work could well have. It is a book for all children who love wild flowers as well as for their elders, and though it is a serious botanical volume, its teaching is presented in a form that seems to avoid nearly all that is dull and dry while retaining all that is interesting and instructive.

The Century Book of Gardening.—This book, which has been appearing in weekly parts, is now published in volume form, and will be found a comprehensive guide to all interested in gardening in any of its phases. A considerable feature is an alphabetical list of hardy perennials, with notes upon culture and the best kinds, but alphabetical arrangement has been followed wherever possible, whilst the index will assist further in identifying plants about which information is desired. The following quotation from the introduction shows the object of the work: "It is to help the home gardener that this book has been prepared. Here, whether his garden be large or small, it is confidently believed that he will discover what he requires. The arrangement is simple—alphabetical wherever possible—and information is given in the simplest way and in a manner that everyone can understand. Our gardener loves his garden and its flowers and fruits with a pure enjoyment for their own sake. He is a botanist, perhaps, though not one of those who

Love not the flower they pluck and know it not,
And all their botany is but Latin names.

However, here the aim has been practical, and hard technical terms are avoided wherever that could be done. The whole work of the flower, fruit, and vegetable garden has been considered from the very beginning, and the laying-out and draining of the land, up to the gathering of the blossoms in the borders, of fruit from the orchard or hothouses, and of kitchen products from the useful garden beyond. The steps that are to be taken to give variety, charm, and character to the garden, the means that conduce to success, and the dangers and pests that invade, have all their place in this book. Again, every aspect and variety of gardening, it is believed, has been adequately treated according to its importance." Amongst the contributors are the following: Mrs. Earle, author of "Pot Pourri from a Surrey Garden," writes upon "Shrub Borders and Hardy Flowers"; Mr. F. W. Burdidge, M.A., "Tender Plants for the Summer Garden"; Mr. S. W. Fitzherbert, "Rock Garden Plants"; Mr. W. Paul and Mr. Edward Mawley, secretary of the National Rose Society, "Roses and Rose Gardens" and "Exhibition Roses" respectively; Mr. James Douglas, "The

Carnation and Picotee"; "Chrysanthemums," Mr. E. Beckett; "Orchids," Mr. White, Orchid grower to Sir Trevor Lawrence Bart.; "Ferns," Mr. C. T. Druery, F.L.S.; "Trees and Shrubs," Mr. Bean, of the Arboretum, Kew; "Suggestions for Planting Trees and Shrubs," the Hon. Vicary Gibbs, M.P.; "Insect Enemies and Friends and Fungi," Mr. G. S. Saunders; and "Fruits," Mr. Geo. Banyard; whilst other practical writers include Mr. Wythes, gardener to the Duke of Northumberland; Mr. A. Dean, Mr. H. T. Thomas, &c. The book is copiously illustrated, not merely with beautiful garden views, but also with portraits of individual plants, which of course are more helpful in identifying a flower than a volume of description. Each department receives its due share of attention, and the illustrations are spread evenly over the pages. No one subject is more freely illustrated than another, the object throughout being to produce a thoroughly reliable book of reference upon horticulture in general. The names of the contributors are a guarantee that this elaborate horticultural guide may be considered trustworthy,

justifying its already widespread reputation as "a comprehensive work for every lover of the garden." It forms one of the *Country Life* series of horticultural and scientific works. The cover is printed in three colours, and the artistic excellence of the volume makes it an appropriate gift book to those who appreciate gardening beautifully portrayed in hundreds of varied pictures. It is edited by Mr. E. T. Cook, and published at the offices of *Country Life*, 20, Tavistock Street, Covent Garden, W.C., and Messrs. Geo. Newnes, Ltd., 7-12, Southampton Street, Strand, W.C. Price 18s. nett.



SPRAY OF CINERARIA SHOWING THE FORM OF THE FLOWER.

NOTES FROM NURSERY GARDENS.

CINERARIAS AT FARNHAM ROYAL.

DURING this season of the year a bright flower is the Cineraria, and seen in its full variety of form and colour at the early spring exhibitions. We were reminded that Cineraria time had come by a group exhibited at the first March meeting of the Royal Horticultural Society by Messrs. J. James and Son, Farnham Royal, Slough, and the accompanying illustration represents a spray cut from one of their plants. Of course a photograph unhappily fails to show the colour of the flower, but its perfect form is revealed, and in its wonderful symmetry and substance there is undeniable charm. True the flower is formal, but a formal Cineraria is a "thing of beauty," and a rebuke to those who think the essence of loveliness is in the flower that displays a wilder and more graceful expression.

A dashing beauty is revealed by the Cineraria,

and the houses at Farnham Royal are masses of brilliant colours, painful almost in their intensity, masses kept distinct to show the fulness of the superb variety and depth of colour. Here is a group of intense purple-blue, there a tint as light and pretty as the Forget-me-not blinking in the spring sunshine, and maybe a house entirely filled with pure white and cream-coloured flowers, or flowers in which blue margins the petals. Warm rose, pink, deep maroon, intense blue, pure white-margined flowers and intermediate shades of many kinds are represented, the heavy burden of blossom almost hiding the rich green leaves.

A walk through the houses at Farnham Royal is an interesting lesson on what we have on many occasions spoken about, namely, the great work that has been accomplished in moulding a flower into the form it is desired to assume. There is wonderful colouring and even more wonderful breadth of flower, many individual blooms measuring nearly, if not quite, 5 inches across, without in any degree developing a coarse texture. All this is the result of years of patient work in striving to reach an ideal in view, and hence as the years speed on departures occur from existing types. A conspicuous feature of the Farnham Royal strain is the dwarf growth of the plants, and this is maintained with increasing massiveness of the flower clusters.

But Messrs. James and Son have shown no standing still, as the newer hybrid forms are grown well, many interesting and important forms appearing in the later displays. We enjoy these hybrid Cinerarias, their gracefulness and delicate beauty; and whilst thus expressing admiration for this more recent development of the Cineraria, urge that there is ample space in our greenhouses for both sections. We must have the brilliantly coloured and dashing Cinerarias so long associated with the name of James, and also the quieter and more graceful forms which have been already illustrated in *THE GARDEN*.

CORRESPONDENCE.

(The Editors are not responsible for the opinions expressed by their correspondents.)

**MORÆA IRIDIODES
MACLEAI.**

[TO THE EDITOR OF "THE GARDEN."]

SIR.—In reply to the inquiry of "J. C. L." concerning this fine plant (see p. 90), I have long cultivated it, having received seeds of it from Durban Botanic Garden about fifteen years since, but I have no memorandum of the exact date of its introduction. My largest plant, in a 12-inch pot, has a perfect sheaf of scapes, most of them 4 feet to 5 feet high. Nearly all are branched, and have as many as six to eight nodes, from the uppermost of which a flower is produced each season. I do not know on what grounds your correspondent regards it as a hybrid. Mr. J. G. Baker, in his monograph of the Iridæ, classes it as a form or variety only of *M. iridioides*. I believe the seeds were sent me by the late Mr. McKen as those of a plant indigenous to Natal; further, its fertility and free reproduction by seed seem to negative the theory of its hybrid origin.

Ipswich. W. THOMPSON.

**SEEDLINGS OF JAPANESE ROSE.
(ROSA RUGOSA.)**

[TO THE EDITOR OF "THE GARDEN."]

SIR.—About eight years since a friend sent me a berry of red *Rosa rugosa*. I sowed the seeds carefully, and grew about two dozen plants, but the flowers were all the same colour. The plants made great bushes, but were slow in flowering, and then did not do so profusely.

R. M. S.

[The paucity of blossom upon seedling plants of this species, especially when the seedlings have not been transplanted, is one great drawback to this method of propagation. Plants that are produced from layers or by budding, flower and fruit very freely. We should advise you to lift these seedling bushes next autumn, cut away some few inches of their roots, especially the long tap ones, and replant, taking care to spread out the roots horizontally, and see that they are not buried more than 2 inches or 3 inches below the surface. In the following spring entirely remove some of the growths where crowded, and cut back the remainder about half their length. Retain those growths that have laterals, and shorten the latter about half their length. This season you may induce the plants to flower if you bend down at once some of the growths within about 18 inches of the ground, remove a few of the centre shoots, and the remainder just merely cut off the extreme ends.—Eds.]

CULTURE OF PHAIUS TUBERCULOSUS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—I should be much obliged for a few cultural notes upon this *Phaius*. I have an imported plant on a block (breaking). What is the best treatment?

F. H.

[*Phaius tuberculatus* is one of the most difficult of the Madagascar Orchids to deal with. It requires a higher temperature than the other species, with an abundance of moisture both at the roots and in the atmosphere, especially during the growing season. The plants usually grow well in a hot, moist corner of a stove or in the Phaknopsis house. The compost for potting should consist of two parts fibrous peat to one of chopped Sphagnum Moss. After the rhizomatous tuber has been fixed in position, cover the surface of the potting compost with living Sphagnum. The pots should be amply drained, and if a sprinkling of finely broken crocks is mixed with the compost, it assists in keeping the material open and porous. Water always with soft rain water, which will encourage the growth of the Sphagnum, as hard water quickly destroys its vitality and it soon decays. One of the greatest difficulties in the successful culture of *P. tuber-*

calosus is to keep the plants free from thrips and red spider. For the destruction of the former fumigate occasionally with XL All vaporiser, and spray the plants at least once a week with the wash prepared by the same firm. For red spider wash the leaves occasionally with a soft sponge. In bright weather spraying the plants overhead once or twice a day will be found beneficial. Arrange the plants close up to the light, either on inverted pots or by suspending them from the roof. Do not take the plant from the block if it has become attached thereto, but plunge block and all into the potting compost. A shallow pan or basket is the most convenient for the purpose if suspension is necessary.—Eds.]

NARCISSUS PALLIDUS PRÆCOX.

[TO THE EDITOR OF "THE GARDEN."]

I HAVE to thank the various correspondents who have so kindly given their experiences of *Narcissus pallidus præcox* in response to my request. It would, I think, be of some service if a few more would do so in order that we might, so far as the peculiarities of gardens permit, arrive at the causes of success and failure. The last note, that of an experienced and careful observer, refers to the question of the greater adaptability of some of the forms to cultivation. This is a most important point, and is worth considering by those who have failed with this Pyrenean *Daffodil*. I have several forms here, but all seem equally easy to grow; while with one of your correspondents the only one that appears to have any constitutional vigour is that with a suspicion of buff and with greater substance in the petals. It may be that those of us who live in the north can grow this *Daffodil* with more ease than some further south, and this is one of the things I desire to ascertain. Even the palest forms of *Narcissus pallidus præcox* do quite well here, and seeds sown in the open germinate, and in due course produce flowering plants of at least equal vigour to those imported from their native habitats. It will be a favour if correspondents from some other districts than those whence reports have already come will help in our consideration of the problems presented in growing this charming *Daffodil*.

S. ARNOTT.

Cursesthorpe, by Donfries, N.B.

FLORAL CLOCKS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—The reference which Canon Ellacombe has made (see page 189 of THE GARDEN) to the "Philosophie Botanica" of Linnaeus is, of course, quite right; but there is a further question which may be raised, and about which he has said nothing: What exactly did Linnaeus mean by his own words? I am indebted for this observation to the very interesting book on "Flowers and Flower Lore" by the Rev. Bilderie Friend, in which he quotes, on page 335, a passage from Dr. Cooke to the following effect: "It was a happy idea of Linnaeus to construct a floral clock with the hours representing the opening or closing of certain flowers." It was also the same botanist who applied the name of "meteoric flowers" to such as closed and expanded periodically, at or near the same period of time, or such as appeared to be influenced especially by the definite atmospheric changes in opening or closing. Pretty and poetic as such a theory may be, it is doubtful if it extends beyond this. A dull day and a bright sunny one, a dry morning or a moist one, will certainly not produce the same results. The opening and closing, depending so much on light and temperature, will be related more to the bright clear sky and the warm genial atmosphere than to the particular hour of the day. Admitting all these influences and conditions, it is doubtless true under a normal condition there are many flowers which open and close nearly at the same time, or within an hour. It might be said that certain flowers have a manifest tendency to open or close at or about a certain time unless this tendency is disturbed or thwarted by special interference. Probably this was all that Linnaeus ever intended, and that his design was to indicate that some flowers expanded with the first break of day, others not until noon, and others again in the evening or

during the night. It would seem then after all that we cannot set our watches by Linnaeus's floral clock, but if only tendencies are to be regarded, it is not difficult to name a few things which have an inclination to open or shut at or near to a given time. The Morning Glory speaks for itself; *Tragopogon*, which is so very oddly though suitably named "Go-to-bed-at-noon," seems to have a preference for a different hour; *Chlorogalum pomeridianum* keeps fairly well to its designation as an afternoon flower in my garden; and the Evening Primrose (*Oenothera*) generally, but by no means always, waits for some few hours afterwards before it puts in an appearance, and many other instances of preference might be given. But it would be an erratic sort of clock that moved about in this way, and punctuality would go to the wall if only tendencies were regarded. I wonder if the Father of Botany kept his engagements with a floral clock.

St. John's, Ryde, I. of W. HENRY EWBANK.

APPLES UPON WALLS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—In his notes on page 127 Mr. Coomber advances some very clear and practical reasons for and against the adoption of Apple culture on walls. The instance quoted from Crimmonogate, Aberdeenshire, is a case where the shelter of walls gave the desired results after repeated failures with culture in the open ground. In the southern and western counties of England wall culture does not receive much attention, because good fruits can be obtained otherwise, but there are instances even in these counties where an enhanced quality is produced thus. In the palace gardens at Wells, Somerset, there was a fine tree of Peasgood's Nonsuch which at one time gave some magnificent fruits that found no rival at many shows, including that held by the Royal Horticultural Society at the Crystal Palace. This was in the late Bishop Herve's time. They were not only remarkable for their great size, but for their handsome shape and rich deep colour, which constituted an ideal such as few, even the Kentish growers, could approach. This tree occupies a west aspect, one, it may be said, that is much more suitable than a southern one, by reason of the susceptibility of the fruit to sun-scald when exposed. In these gardens I found on taking charge there were some young trees of Cox's Orange, King and Ribston Pippins planted on a south wall, but they never paid for the space occupied, fruit-bearing being very sparse, though in one season a few very fine Cox's Orange were matured. Curiously enough, too, on this hot wall American blight made a most desperate effort to defy attempts to exterminate it by winter dressings and summer syringing with insecticides. I have not seen young trees so badly crippled with this pest on open bush or other trees. Careful pruning of the summer shoots is needful to prevent injury to the fruit, as if the shoots are closely pruned during a sunny period, the Apples are sure to suffer from sun-scald. There is no doubt but that a finer and more delicate skin and clearer colour are the outcome of wall culture, exactly in the same manner as in the case of Pears, though for dessert purposes their quality may not be proportionately enhanced. Mr. Coomber does well in advising the Paradise stock for this kind of Apple culture, as on the free stock the trees become very robust, and need much attention at their roots to keep them in a fruitful condition. It is not often that space can be afforded for these on walls, nor, except for special purposes, is it necessary except in the northern counties, in Scotland, or cases such as those instanced by Mr. Coomber in his recent notes.

W. S.

W/7s.

SILENE MARITIMA FL.-PL.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Photographs if well done are as often as not base flatterers of men and flowers. What more charming picture could one have than that of *Silene maritima* fl.-pl. in THE GARDEN of the 17th inst., and yet when one sees the plant in the life one immediately thinks that the whole thing is a mistake. The Bladder Campion that one sees growing in sheets on the cliffs nowhere more

beautiful than at Tenby is a lovely thing, a harmony in pale green and grey. The double form is nothing but a dirty Mrs. Sinkins growing amid foliage and in a manner that does not become it. In a wild state the Bladders stand more or less erect and wave with each breath of wind, thus producing the wonderful shimmering effect which is their chief charm. The double form has perforce to hang its towzled head for very shame and heaviness, and a more dismal, bedraggled object after rain one seldom sees. Surely this is a plant that is best left undoubled. Grow the single one by all means, and plant near it Thrift and the wild Sea Wallflower, which are its natural companions, and be content; the double one, never.

I have mentioned Tenby and its cliffs. In spring and early summer, that is, until the summer droughts come and the famed Tenby snails commence their annual devastation of plant life, there are few places in which Nature displays such a blaze of colour. What with Thrift and Valerian, Gorse and Broom, Bracken and Brambles, Bladder Campion and Wallflowers, there is a constant and ever-changing mass of colour, and when one begins to clamber among the rocks and on the top of the downs, one finds many a lovely and uncommon plant that is unnoticeable from below. The little Scilla, for instance, that grows all over Giltia and on Caldy Island, and the name of which I do not know, is a charming thing, and the flowers of the Blueberry that grows freely on part of the Castle-hill. The sandhills are covered with the sweet Sand Rose, and later on one may find colonies of the dainty Lady's tresses *Orebia*. The Tenby Daffodil as a wilding is almost extinct. I have only twice seen it wild, and probably the last have been grubbed up long since.

It seems sad that a flower with a choice of two romantic origins should so disappear. There are two stories told of the way the bulb reached Tenby. The one more likely to be true is that some hundreds of years ago a Portuguese galleon

was wrecked off the village of Penally, a place a mile from Tenby, and that the crew were drowned, while some bulbs were washed ashore and grew, thus becoming the ancestors of the race. The other is that one of the old lords married a Portuguese wife, who brought some bulbs with her to remind her of her home, and that from her garden the plant escaped. Both the stories are pretty enough, and, wisely enough, agree in giving Portugal as the original home. Anyhow, there is not a more satisfactory Daffodil for early work. It forces so easily, and to-day (February 26) I have it in full beauty in the open.

Hovecroft.

B. D. WEBSTER.

HARDY FUCHSIAS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Mr. Tindall Lucas's description of his fine shrubby outdoor *Fuchsia globosa* at Hitchin, Herts, is indeed interesting. If that kind does so well, why not others of similar character, especially *Riccartonii* and *crallina*? It is strange, seeing how beautiful these comparatively hardy Fuchsias are, that they are not planted throughout the southern counties in warm positions. Certainly during some three or four winters we have not had intensely severe frosts; indeed, the chief harm to shrubs of any kind during winter is done after a cold, wet summer and wood is soft and badly matured. But I should, apart from that consideration, regard it as good practice to cut back the previous season's growth fairly well each spring, as likely to conduce to stronger growth and more free and continuous blooming. So treated, few plants more readily respond than do these so-called hardy Fuchsias, for then they make beautiful objects.

D.

SHEARING SHRUBS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I read with much pleasure "W. R.'s" protest against the use of the shears in pruning shrubs. The practice is unfortunately so common

in my locality, especially in public gardens, that all beauty, natural form, and individuality in the shrubs grown in these gardens are quite destroyed. Everything is sheared over annually into a rounded form. Evidently the garden authority here and in many other places apparently has no other ideal but a rotund one. Doubtless the plea is that time will not permit quite pruning; but that is not a good excuse, as with proper knifeing, so as to retain intact the natural form of the shrub, such pruning need be done only about every third year. The force which did so much to kill the old style of summer hedging is badly needed now to launch a crusade against the "shear" abomination seen in shrubberies.

Kingston.

A. D.

AN ARTIST'S NOTE-BOOK.

PAUL'S SINGLE WHITE ROSE.

THIS Rose is a seedling from the Hybrid Noisette *Boule de Neige*; its charm is the contrast between the pure white flowers and the blackish or dark-coloured stamens and the light green foliage. Its autumnal flowering character and semi-climbing habit render it one of the prettiest of Roses for a 5-foot to 6-foot hedge. When the shoots are carefully trained along two cross posts, no further support is necessary. Here it grows just behind a low hedge of *Rosa rubrifolia*, and the contrast is charming. My firm sent it out in 1883, so it is an old Rose.

G. PAUL.

FONTIN'S LILY OF THE VALLEY.

WE have referred on a previous occasion (*THE GARDEN*, September 4, 1897) to this beautiful variety of the flower of the woodland (*Convallaria majalis*). It is unnecessary to describe the variety at length, as the illustration shows its distinctness and beauty. The "bells," as the individual flowers are popularly called, are large, very open, pure white, and accompanied by broad rich green foliage, whilst the flowers are as fragrant as any other form of the Lily of the Valley. We have now several distinct varieties of the Lily of the Valley—Berlin, Dutch, Victoria, and last, but not least important, Fontin's, which, though a somewhat recent acquisition, will probably be as largely grown as any in the near future.

FLOWER GARDEN

FRAME VIOLETS.

AN interesting article on the culture of Violets in frames for continuous winter blooming appears in the *Revue Horticole* for March 1 from the pen of M. A. Millet, the Violet specialist of Bourg-la-Reine, near Paris. He writes as follows:—

"Some persons do not obtain good results from the culture of Violets under glass, which often arises from giving them too much



A SPRAY OF PAUL'S SINGLE WHITE ROSE.

(From a drawing by H. G. Moon.)

care. There is no need of too much heat or of any hotbed; they need but little care, but one must begin it a long time in advance, and now is the best time to commence. In order to obtain fine Violets under glass from the end of September to the end of spring, one must carefully raise the plants beforehand. Violets should be increased each year by a division of the plants in March or April, when they may be planted in the open air in the vegetable garden like common vegetables. They should be kept very clean throughout the summer. About August it is necessary to remove the first formed runners; these runners planted as cuttings will make good plants the following year. After this removal the growth of the Violets enters on its most active period. They now grow rapidly and form their hearts and their flowers; a large number of buds accumulate, and from this time onwards continue to develop themselves. It is then that the plants should be put into frames. In the case of Parma Violets this should be done from October 15 to 31; in the case of other varieties, about November 15. You should at the same time remove any runners formed since the main stripping; then, as they have been flowering since September and we do not wish to stop this bloom, we should lift them in small clumps, removing all leaves that are old or too large, and plant them in frames which have been prepared for this purpose on good ordinary soil which is neither too light nor too heavy. The frames should have a southern aspect. From forty to sixty clumps may be planted in each frame according as the varieties are of weak or vigorous habit of growth. Thus, with very little trouble fine Violets may be had all through the winter. It only remains to give some attention to cleanliness and health and to remove any leaves that turn yellow, thus allowing the air to circulate freely between the plants. Ventilation should be freely given during mild weather. A mat may be thrown over the frames when the weather is severe. It must not be supposed, however, that if this were not done that the plants would perish; they would only bloom a little later in the season. In order to secure a consecutive and uninterrupted gathering of flowers I shall here mention the varieties which give the greatest satisfaction under glass. First, Parma Violets, well treated, produce flowers from October to April with the exception of the variety Comte de Brazza, which stops blooming from December to the end of January; then come three or four sorts generally known as perpetual four-season Violets; lastly, and above all, our beautiful and large-flowered varieties which bloom from October and November, with a reduced production during December and January, followed by an abundant bloom up to the middle of March or even later. These include such as La France, Dybowski, Princess Beatrice, Comtesse Edmond Dutertre, La Luxonne and l'Inépisable. To these may be added, if a little more trouble is taken in protecting them than the others, some later blooming sorts, as Victoria, double rose colour, Belle de Chateaux, double white, and others. Those readers requiring further or more detailed information as to varieties or culture are referred to M. Millet's pamphlet entitled "Les Violettes," price 1s. 6d. This may be obtained from any bookseller in Paris, or direct from M. L. Bourguignon, Maison Rustique, Rue Jacob, 26, Paris.

COLUMBINES FROM SEED.

SEEDSMEN are naturally and appropriately calling attention to Columbine seed, especially of the hybrid strains, and are reminding the public that the time for sowing seed is near. If the public want to have something especially beautiful in gardens next year, they should accept the recommendations, readily purchase seed, and sow it in due course. Aquilegias, so much better known by the million as Columbines, present in their hybrid forms very material advance upon the original species. Beautiful as are *chrysantha*, *corulea*, *Skimmerii*, *canadensis*, or the fine-flowered, but somewhat shy *glandulosa*, the hybrids that have been obtained by intercrossing the finest of the Canadian species are much stronger, very

floriferous, and bloom with much more continuity, whilst in size and beauty of flower and variety of colouring none of the originals can equal them. Columbines seed freely, and anyone who may have good varieties can perpetuate them readily in that way. But the plants are essentially perennial and practically evergreen, for no sooner have the flower-stems been cut down than new leafage is formed, and clumps of such leafage make very pleasing objects in flower borders during the winter. The plants will do well in the same place for three or four years, when they need lifting, dividing and re-planting, as being gross feeders they in time impoverish the soil. But it is a good plan to either purchase seed of a fine strain yearly and sow it, or else to save a few pods from some of the best and most beautifully coloured flowers. Where soil is naturally good the seed may safely be sown out doors during the month of May, but being hard shelled it is well to keep the soil moderately moist and also to shade during hot sunshine; but it may be safer to sow in shallow pans or boxes and stand them in a cool frame until germination has taken place, as unless the grower can give attention to outdoor sown seeds in the day, a few hours' scorching may result in failure. But such may be the case with many other seeds just when germination commences, and it is a primary cause of failure with them amongst amateur gardeners whose vocations take them from home in the daytime. But it is well to know that seed germinates most readily when light is excluded, and light becomes needful only when growth has commenced. With ordinary care, let the conditions of sowing be what they may, plenty of strong seedlings should result by the end of July, and then it may be wisest to dibble out 6 inches apart into a good piece of ground where somewhat shaded for several weeks, and then by October they will have become strong, well-foliaged clumps fit to lift with balls of soil, and be planted where they may be wanted to bloom. The average height when in flower to which these hybrid Aquilegias attain is 3 feet, and their position in the flower border should be regulated accordingly. Plants put out 18 inches from a path on either side in rows, and the same distance apart, form singularly beautiful features, the free growth, wonderful floriferousness, and quaint forms of the flowers, allied to variety in colouring, constituting a charm that has no formal associations. Even if the plants be put out across a garden quarter in rows 4 feet apart, they are not less pleasing. Only those familiar with the wondrous beauty and variety found in hybrid Columbines can realise their



FONTIN'S LILY OF THE VALLEY.
(From a drawing by H. G. Monn.)

value as hardy garden flowers. Many persons familiar only with the old heavy and dull-coloured garden strain, having never seen the beautiful hybrids, may not care for Columbines at all. To them the newer strains, if they would but grow such, would come as a revelation. There are many hardy plants readily raised from seed, and thus obtained cheaply, that will beautify gardens delightfully, yet how seldom have they been found in ordinary gardens. After all, gardening is with the many greatly behindhand.

A. D.

ROSE MME. FERNET-DUCHER.

This delightful Hybrid Tea is one of the very best as a decorative variety where a mass of white is appreciated. It has all the attributes of a bedding Rose, with stiff, vigorous, but not rampant growths, and each one is crowned with a fine truss of blossom. The flowers, although only semi-double, have such a wonderful petal, that three or four expanded at the same time upon each corymb produce a fine effect; and as there are numerous creamy yellow

buds ready to take the place of the older blooms, the display is kept up for some time. Although Teas and Hybrid Teas are seldom unprovided with fresh growths to confirm their perpetual flowering reputation, something may be done to prolong as it were the first effect. Instead of allowing every growth to develop its blossom, stop two or three of such growths by cutting away the truss of bloom as soon as it is visible. This action will enable the shoot to ripen more quickly, and new growths will start earlier than if they had blossomed, with the result that as soon as the first blooms are over we have other growths to take their place.

There must be a close kinship between this Rose and *Gustave Regis*, but although a first-rate grower, it has not the half-climbing habit of the latter. As a cool greenhouse plant it would be charming, the shelter from the wind enabling the blooms to develop to such an extent, that one would scarcely recognise the Rose when seen under these conditions. P.

GARDEN DESTROYERS.

LEAF-CURL IN PEACHES AND NECTARINES.

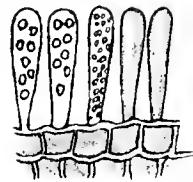
(*EXOASCUS DEFORMANS*.)

DIRECTLY the Peach and Nectarine trees begin to come into leaf, various persons are sure to write to *THE GARDEN* about this disease, and as most of them by their remarks show that they do not in any way recognise its true nature, it may be interesting to your readers to give a short account of this pest. The injury it causes is generally attributed to cold winds or draughts of some sort. No doubt certain conditions of the weather are more favourable to the growth of this fungus than others, a sudden fall in the temperature after mild weather, during which the leaves have opened, being particularly liable to cause an attack. Still, if this fungus was not present in the tissues of the tree, no atmospheric conditions would cause the disease. Peach leaves are often attacked by aphides, which cause the leaves to curl more or less, and the two kinds of attack are

sometimes mistaken for the same, but the difference as a rule is easily detected. The "curl" is rather of a different nature: it has not the same puckered appearance, and though in both cases the diseased part of the leaf may turn red at last if caused by aphides, it never assumes the pale sickly green colour that it does from being infested by the fungus, nor has it the almost velvety appearance.

It happens not unfrequently that a tree may be infested by both pests, for insects often seem to prefer plants that are not in very robust health to those that are. The leaf-curl fungus attacks Peaches, Nectarines, and Almonds. How it gains access to the tissues of its host is not at present very certain, but it probably does so through the leaves. Having once established itself in a tree, there is no means of eradicating it except by cutting off the parts infested by it. The fungus lives throughout the year in the shoots and smaller branches, pushing its growth into the young leaves as they are opening, which causes a very abnormal growth of their tissues. The cells in the parts of the leaves between the veins growing much more rapidly than the veins, causes the leaves to become crumpled. These portions of the leaves are also much thicker than the other, and eventually the diseased parts become covered with a delicate bloom, the result of the spore-bearing part of the fungus being pushed through the surface of the leaf so that the spores can escape. The section of the leaf shows the little spore-bearing cases technically known as "asci," which cover the surface of the diseased part of the leaf, very much magnified. Each ascus or case contains at first only eight spores, but these increase by budding until the case is full. When ripe the spores are liberated and are carried about by the air, infecting any leaves they may meet with.

As to the best way of dealing with this pest, probably the most useful is to cut off any shoot that bears infected leaves as far back as possible, so as, if possible, to remove all the infected wood and burn it. Any leaves which are diseased that may have fallen should be gathered up and burnt. Spraying with Bordeaux mixture as the leaves are opening, and again in about three weeks' time, is useful in destroying any spores that may be carried from other trees. There is no method by which the fungus while in the shoots of the tree can be destroyed, so that when once a tree is infected, unless the diseased portions can be cut off, the fungus is almost sure in time to kill the tree. A certain amount of shelter to the trees in inclement weather as the leaves are opening, so as to prevent any checking of their growth taking place, is most useful, and should always be provided if possible. Though such precautions may appear to prevent an attack, it should always be borne in mind that they do not kill the pest, but merely prevent it from growing into the leaves and bearing fruit, just as some plants will not flower in seasons that are not



SECTION OF PART OF A PEACH LEAF, HIGHLY MAGNIFIED, SHOWING SPORE CASES ON SURFACE.

congenial to them, for the pest remains in the shoot or shoots all the same. G. S. S.

THE FRUIT GARDEN.

PLUMS FOR PRIVATE USE.

WHEN going through our Plum plantation, a market grower condemned some of the varieties as unprofitable. He was probably looking at the matter from a market point of view, and thought other than the best kinds for that purpose, such as Rivers' Early Prolific, The Czar, and Victoria, scarcely worth growing. The chief object of a private gardener when planting, however, is not a question of pecuniary profit, but how to keep up a regular supply of good dessert and culinary fruit over as long a period as possible; and in order to do this it is expedient to include amongst his selection some that are not the best adapted for commercial purposes. The method to adopt in order to achieve his purpose has to be governed by circumstances, and it may be an easy or difficult task according to the situation, &c., of the place in which it has to be accomplished.

The supply can be lengthened by forcing trees in pots. We used to devote a house to this purpose, and I can, from experience thus gained, understand Mr. Hudson eulogising the practice, as he recently did in the pages of *THE GARDEN*, and agree with his views respecting the advantages attending it. Most growers, however, have to depend upon outdoor trees for their fruit, and have sometimes, owing to the fickleness of our climate, to face disappointments. Spring frosts are often destructive, more especially in low districts. We have striking experience of this owing to the wall trees being placed in a much lower position than is the plantation of bushes; the former have to be while in blossom, and usually for some time after, well protected, while the latter without protection are rarely even slightly injured by frost, illustrating the utility of a sound choice of situation. In most cases the best way of securing satisfactory crops of good varieties is to plant a selection of both bush, pyramid, and wall trees, placing such as the best early and late Gages, with *Leckworth Imperatrice*, *Coe's Golden Drop*, and other late kinds, upon walls, and growing the more hardy varieties as bushes. Under good management in favourable positions most kinds can be grown to great perfection as bushes and pyramids, and enormous crops are produced by these means. We find no cause to complain about the bearing properties of even such as *Early Transparent Gage* and *Coe's Golden Drop*, and the latter usually ripens perfectly, but, owing to its late season of ripening, it should not, except in warm situations, be grown as a bush.

Provided the soil and position are suitable, there need be no difficulty attending the management of bush trees, and they may be planted from 9 feet to 12 feet apart. While young a few of their branches are apt to take the lead in growth. This can be rectified, and the growth of more fruitful wood be promoted by careful root-pruning. Old trees are, however, impatient of severe root-pruning, and will not withstand it without injury. The chief point to bear in mind when pruning is to avoid crowding of branches, for naturally spurs are freely formed and readily spread and lengthen, and a tree may thus soon become massed with foliage. Not only does this, owing to the lack of sufficient sunlight and air, weaken the wood and fruit buds, but the fruit that is produced under these circumstances is at no time of high quality. Another matter of importance is the thinning of heavy crops of fruit, as these also both injuriously affect the quality of the fruit and enfeeble the future cropping power of the trees. For private use in particular high quality is of first importance, especially in the case of dessert fruit, and time should consequently be found for thinning. There are few things more humiliating to a gardener than to find the fruit grown by him is not freely partaken of because of its inferior quality; and, on the other hand, it is



THE LEAF-CURL FUNGUS (*EXOASCUS DEFORMANS*) ON PEACH LEAVES. ABOUT TWO-FIFTHS NATURAL SIZE.

encouraging to hear that its high quality is appreciated. The above remarks apply also to wall trees. With these there is some difficulty in keeping their spurs in close enough bounds to allow their blossoms and fruit to reap the full benefit of the sun, but much may be done to improve old trees in this respect by removing faulty branches and replacing them with young wood.

Of insect pests, the aphid and caterpillar are most troublesome, and the most efficient way of dealing with them is to act on the principle of prevention rather than cure, for if once the trees are badly attacked the pests are difficult to dislodge, and they quickly injure both the trees and their crops. A winter spraying of the well-known solution of caustic soda and crude potash and timely spring and summer sprayings of liquid quassia extract will keep trees perfectly free of all parasitic enemies. The efficacy of spraying with insecticides rests in its being done at the right time and thoroughly. We often hear of this or that remedy being useless, while the fault rests entirely with the operator.

Plums are free-rooting, gross feeders, and soon exhaust their soil and need assistance. This may be accomplished by liquid manure or top-dressings of farmyard or rich compound manures. The best time to apply the latter is in early spring, not later than soon after the fruit is set; and for moderately heavy soils, such as suit the Plum, bone-meal answers well, is easily applied, and quick in action. The following are good varieties, and afford a lengthened supply. Dessert kinds: Early Green Gage, Oullin's Golden Gage, Early Transparent Gage, McLaughlin's Gage, Bryanston Gage, Transparent Gage, Denniston's Superb, Kirke's, Jefferson's, Ickworth Imperatrice, and Coe's Golden Drop. Culinary varieties: Rivers' Early Prolific, The Czar, Prince Englebert, Victoria, Pond's Seedling, Grand Duke, and Monarch. THOS. COOMBER.

LATE WHITE GRAPES.

ON p. 34 "J. C. T." mentions Lady Hunt, and asks for information as to its keeping qualities. It is grown at an establishment with which I am acquainted from which about two tons' weight of Grapes are annually sold, and was there thought highly of as a late white Grape. Only a few Vines of this Grape have been grown in the vineries referred to up to the present time, but I understood at my last visit that it was intended to largely supplement this number in the near future. In the middle of November some good bunches were hanging from the rods, the fruit being of a very pleasant flavour. S. W. F.

HARDY VINES FOR THE SOUTH OF ENGLAND.

A FEW years ago, wishing to plant some hardy Vines on the south and west sides of some rough buildings, I purchased a few kinds. They were of the Chasselas class, but among them was one named Chasselas Gros Coulard, which ripens so remarkably early, that it is obviously a good kind for our climate. It is fully ripe in the beginning of September; indeed, the bunches are sweet and pleasant before the end of August; whereas the ordinary Chasselas (Royal Muscadine of English nurseries) and Chasselas Vibert are never ripe here before the end of October. Gros Coulard is slow to begin fruiting, and up to the present time—some eight years after planting—does not yet bear freely, but its precocity ensures ripening, a matter that is often doubtful in the case of other kinds. South-west Surrey. G. J.

GRAPE WHITE LADY DOWNES.

THE reason why I did not include the above in my notes on late white Grapes is that my experience of it after fruiting it for two years is the same as that recorded by "G. W. S.": indeed, I came to the conclusion that it was beneath contempt. If, as "G. W. S." suggests, there are two varieties of it, we must have got the worst of them, for no Grape I ever saw grown gave a worse return than this, though it was planted in a specially well-

prepared border in company with other Grapes which succeeded well. It set badly, and the berries that came to perfection were small, although they coloured well. This does not appear to have been the general experience, for in "Vines and Vine Culture" Mr. Barron describes it as "greenish yellow, often covered with dirty russet." A true white counterpart of the old Lady Downe's Seedling would be a boon to growers of late Grapes.

J. C. T.

THE ROSE GARDEN.

ROSE CAMOENS

FOR massing this variety is, in its way, quite unequalled. The delightful shade of China Rose colour is very taking, there being a distinct freshness about it rarely met with in any other kind of similar tint. On closer examination the flowers are seen to possess a yellow base. It is, however, the extraordinarily free-flowering quality of the variety that is, perhaps, most appreciated. Especially is this the case in autumn. This late-flowering propensity, although now very common with numbers of Roses, may be still more encouraged by rather hard pruning now and then. New growths are thus compelled to break out strongly from the base, which, from the very nature of the varieties, are crowned late in the year with huge corymbs of blossom. I have seen beds of this and similar Roses that presented anything but a bright appearance owing to the want of new wood. At pruning time it seems such a pity to cut away the growths, but my experience is that even with massing Roses it is well to harden one's heart now and then, and "be cruel only to be kind."

RAMBLING ROSES FOR PLANTING AGAINST TREES.

SUCCESS with Roses thus planted depends mainly upon two conditions, namely, (1) giving the plants a good start in some new soil, their roots being planted a considerable distance from the base of the tree; (2) trees selected where not too much shaded and whose nearest branches are some 8 feet or 10 feet from the ground. The latter condition is not so important as the first. I have seen the delightful Carmine Pillar rambling up a Pine tree, its branches very low down, but in this instance new soil to a considerable distance had been placed near, and, of course, the roots of the Rose soon seized hold of it. Where practicable take out two or three barrowfuls of the old soil, say about a yard from the base of the tree, and replace it with good loam and cow manure, the latter in about one-third the bulk of the former. Select plants on their own roots. It is not too late to plant out now, but I would advocate pruning back the Roses quite half their present length. They will not appear to be making much progress the first season, but next year strong growths will break out that will soon reach a considerable length. Beyond the first pruning nothing further will be required in this way for three or four years, and even then only if the branches are too crowded. These rambling Roses are much best left severely alone.

Considerable patience must also be exercised, for even after three years one only begins to obtain a small return in the way of blossom, but their ultimate splendour will amply repay for the period of waiting.

HALF-CLIMBING TEA ROSES FOR GREENHOUSES.

THE advisability of using the free-growing Tea Roses of the Mme. Lambert type for roof or walls of ordinary greenhouses was brought to mind by seeing a splendid example of the variety named upon the roof of a suburban conservatory. Such Roses are really more useful by reason of their floriferousness than the very vigorous climbers of the Solferino and Rêve d'Or stamp. Of course, one cannot obtain an effect so quickly from plants

with 2 feet to 3 feet of growth as from those of 10 feet to 12 feet, but there remains the compensating fact that three crops at least of flowers can be obtained from the former, whereas the latter barely gives us more than one. Where the roof is too lofty, a few large pots or tubs placed on the staging would get over the difficulty of starting such Roses. Providing they are not arranged too closely together, and thus shade other occupants of the house, gardeners will find this an excellent method to obtain quantities of useful Roses. It is a remarkable fact that of the Roses forced under glass by market growers, several of them have yielded climbing sports. Whether this is due to the environment of the plant I am unable to state, and must leave it to eminent scientists like the Rev. Prof. Henslow to explain. There appears to me to be some grounds for supposing this to be the case. But, be this as it may, I have proved that for small structures the growths of *Perle des Jardins*, *Bridesmaid*, *Niphetos*, &c., are quite strong enough if planted in tubs or pots as advocated without troubling about the climbing forms. I can imagine the grand effect a greenhouse roof would be covered with the lovely *Sunrise* Rose, *The Bride*, *Bridesmaid*, and many other charming kinds. Given a brief rest in June or July and again in late autumn, one could be sure of a good supply of lovely Roses for many weeks during the year. Naturally, the best results are obtained where the plants' requirements are best studied. Surface feeding will answer for a long time, but every two or three years the plants would need repotting or retubbing. A wise system of training the shoots so that light is freely admitted to the foliage would tend also to harden the wood, so necessary with Roses, and Tea Roses in particular.

A few grand kinds for this mode of culture, in addition to those named, would be: *President*, *Souvenir d'un Ami*, *Marie van Houtte*, *Anna Ollivier*, *Sunset*, *Francisca Kruger*, *Papa Gontier*, *Mme. Hoste*, *Souvenir de S. A. Prince*, *Medea*, *François Dubriell*, *Maman Cochet* and its lovely white sport, *Mme. Abel Chateau*, *Clara Watson*, *Mme. Falcot*, and *Mrs. W. J. Grant*.

PHELLOMEL.

RECENT PLANT PORTRAITS.

THE fourth monthly number of the fifteenth volume of "Lindenia" contains portraits of the following Orchids:—

Miltonia ovalida (the white-lipped Miltonia). A very handsome species with brown sepals edged and tipped with clear yellow, and a pure white central tube with a purple crescent at end of throat. It is a native of Brazil, and is by no means of recent introduction, as it was first bloomed in England by Messrs. Loddiges in 1838. It was first introduced by Lord Arran to the Irish Botanic Garden of Glasnevin, near Dublin.

Dendrobium primulinum (the Primrose Dendrobium).—A well-known and delicately beautiful species, with violet sepals and a large reflexed lip of primrose-yellow. It was introduced to European gardens either in 1857 or 1858, and its flowers exhale a perfume somewhat like that of the common Primrose.

Catleya Dayana (Mr. John Day's *Catleyana*), a most distinct species from North Borneo, bloomed for the first time in Europe in 1884 by Messrs. Veitch. The flowers have pure white sepals and throat, with distinct chocolate-brown markings on the lip.

Catleya Downiana var. *moortbeekensis* (the Moortbeek variety of Captain Dow's *Catleya*). This is a superb variety with flowers of the greatest size; the sepals are of a clear golden-yellow, with a gorgeous lip of clear rosy-purple most richly and beautifully veined with white and yellow.

W. E. GUMBLETON.

SEEDS.

WHILE there is doubtless a great deal of truth in what Mr. E. H. Potter has to say about growers becoming lost in the multitude of varieties in seed lists, I think that if each grower were to follow

your correspondent's lead and give a list of his own selection, the confusion would become worse confounded. In the list given there are some unaccountable omissions, as, for instance, no mention is made of that most popular of Cabbages, Ellam's Early, neither does Antocrat Pea find a place; indeed, the criticism that could be made would cover more space probably than could be afforded to the critic, therefore I confine myself mostly to generalities. From the economical point of view, Mr. Potter's list is not a good one, as there are in some cases too many varieties of one kind, some of these being poor and some too much alike to be worth growing under different names. Again, the list has evidently been compiled from one catalogue only, or from two at most, and many of the names given are mis-

IN THE GARDENS OF ALTON TOWERS, STAFFORDSHIRE.

The accompanying illustration represents the cascade and lake in the famous gardens of Alton Towers, one of the residences of the Earl of Shrewsbury and Talbot. Wherever one wanders some fresh and interesting feature is revealed. If tired of statues and masonry, there are the leafy Rhododendron groves brilliant with masses of flowers in the late spring and early summer. The visitor will find a flight of 172 steps, known as Jacob's ladder, which leads down the slope, and a fountain like a Chinese pagoda of quite imposing height is a curious object in the gardens. It is not so lofty as the designer

prospect, the Wrekin itself, familiar object to all who know the Severn valley.

Tree life is vigorous. Rhododendrons are everywhere, and we tread upon little seedlings which endeavour to usurp the pathway. Many of the finer kinds have been planted, and hence largely the extreme beauty of the early summer at Alton, when the valley sides are clouds of varied colour.

Miles of pony drives thread the beautiful scene, and do not offend by presenting harsh lines of gravel, but attract, by reason of their velvety turf. These grass drives are not the least beautiful features of these famous gardens.



LAKE AND CASCADE AT ALTON TOWERS.

leading, being simply synonyms of the correct names (as used in the wholesale lists) to suit the vendor's purpose. As said before, this is only a very cursory criticism of a paper that lends itself to far more drastic treatment, but I cannot close this without pointing out one other omission, that of perhaps the most popular and most distinct of Cauliflowers, viz., Veitch's Autumn Giant.

J. C. TALLACK.

The Constantinople Hazel (*Corylus Coloma*). This Hazel Nut attains to quite tree-like dimensions, reaching a height of 30 feet to 40 feet, or even more. The rough bark of the main trunk and the somewhat horizontally spreading branches are its chief characteristics. T.

proposed 100 feet—nor embellished with the hundred dragons from whose mouths water, and not fire, should inconsistently be discharged. For the sake of English gardening we are thankful that the design was never carried to its grotesque completion.

Alton Towers itself commands, as it should, splendid views of its gardens and surroundings. There are special points to be visited. Thus we may go to the Gothic temple upon its sandstone rock or climb the flag tower, which looks over mile after mile of romantic scenery. The structure is six storeys high, and is a point of vantage to survey the mansion, the church, and when the atmosphere is clear, beyond the vast

GARDENING OF THE WEEK.

KITCHEN GARDEN.

POT PEAS.

IMEDIATELY the land is sufficiently dry on the surface, plants raised under glass should be planted out in their fruiting quarters, and if the seedlings are at all weak, it will be well to shelter for a time by placing cut branches of Laurel or Yew so as to break the cold winds. Planting should be done with care, as frequently there will be a crowded root growth. It will be well to remove the drainage, and if the

ball be gently loosened at the base, the roots soon lay hold of the new soil. In heavy soil it will be advantageous to add some lighter materials to the soil as the planting proceeds.

PEAS ON OPEN BORDERS.

I gave advice a month ago on sowing in warm borders in the southern parts of the country, but heavy falls of snow delayed the work, and now there will be less risk of failure, and sowings made now will be serviceable in June. Much the same advice holds good as previously given, and in heavy or wet soil it will repay the cultivator to cover the seed with lighter or well-worked soil and to sow strong growers, such as Chelsea Gem, Bountiful, or Daisy. In sheltered gardens, for a successional crop I have never found any variety superior to Stratagem as regards flavour and crop, but being a Marrow it needs a warm, dry soil to assist germination. The less-known Danby Stratagem, a selection from the old variety, is a splendid acquisition.

FORCING DWARF OR FRENCH BEANS.

French Beans will force well, and though the forcing of this vegetable is well understood, a few words as to the best way to secure a crop at the least cost may be useful. The old method was to half fill the fruiting pots with soil, and to add to it in the way of top dressings when growth was active. I do not advise this, as when it is seen how short a time the plants when forced are in the pots, what feeding is needed can be given in the shape of fertilisers or liquid manure. By adding large quantities of soil I have seen plants checked badly. It is far better to use pots a size smaller, to fill at the sowing to within 3 inches of the rim, and rely on foods to finish the crop. To get a succession we sow every fortnight now, using 7-inch pots, four or five plants in each, and it is well, if possible, to give ample warmth, say 60° to 70° at night, with a rise by day. When bottom-heat can be obtained, planting out will give better crops. As regards varieties, Early Favourite is a splendid forcer, also Ne plus Ultra, Syon House, and Progress.

SALADS.

These occupy an important place in the garden in the early summer or late spring months, and frequently the demand is greater than the supply at the last-named period, and to prevent this much may be done by sowing in frames, growing a portion on under glass and planting out another on a south border. For early supplies of Lettuce there has been some valuable introductions of late years, Golden Queen and Golden Ball are specially good for frame culture, and if sown early in March, may be had fit for use in May, when good salads are scarce. The older Commodore Nutt is also an excellent forcing Lettuce, and, in addition to sowing in frames as advised, it will be advantageous to make an early sowing on a warm border to give a succession to those forced. In any case avoid thick sowing, as it greatly weakens the plants at the start. I prefer movable frames for salads, as when growth is sufficiently advanced the frames may be used to push forward other crops or seedlings planted out on a warm bed of manure. Radishes will now be in demand, and should be sown every three weeks. Sowings made after March should be on cool borders. Corn Salad sown now will be a valuable addition to the salad bowl in May and June, and a small quantity of Chervil will be useful. Those who need quantities of green salad may with advantage sow Cabbage Lettuces in boxes under glass, and this cut in a young state like Mustard or Cress will prove valuable. The Endives may be treated the same way.

G. WYTHES.

Syon House Gardens, Brentford.

FRUIT GARDEN.

PRUNING BUSH FRUITS.

WHEN pruning is deferred until now one can see to what extent the bullfinches have reduced the buds. In many districts they are so numerous, that every winter, more or less, they carry on their depredations. But for such precautions as dressing the bushes to make the buds distasteful, in a thickly

wooded district there would be very few Gooseberries, Currants, and some other kinds of fruit.

GOOSEBERRIES.

may be pruned to bear fruit on spurs. I usually adopt the young wood system, taking off shoots on the lower parts of the bush that are likely to be bent near to the ground by the weight of the fruit, and distorted branches made so by the weight of fruit last season. Thin out other shoots according to the buds on them at the time, leaving those that point outwards. Take away suckers and shoots off the main stem near the ground, so that one main stem only starts from the ground.

In the case of bushes that were infested with caterpillars last summer, prevent a recurrence as much as possible in the coming season by removing from under the bushes the surface soil. Take it away and burn it, as it contains the larvæ of this troublesome pest.

RED AND WHITE CURRANTS

are most satisfactory when pruned on the spur system, leaving young shoots starting from towards the main stem to take the place of dead and worn-out branches, also to fill open spaces when required. Keep the bushes free of suckers and to one clean stem of some inches between the surface of the ground and the spread of branches.

BLACK CURRANTS

should be treated on the thinning system, by pruning out the oldest and weakest branches their full length. In the case of

AMERICAN BLACKBERRIES.

now cultivated in many gardens, take out the wood that fruited last year, also the ends of the growth made last year. Tie them along the side of stakes driven into the ground a yard apart in a straight line, and standing out of it 4 feet.

Where the work of staking, tying, and nailing is not finished do so without further delay; the same applies to digging between trees. Give bush fruits, or trees of any kind recently planted, a liberal watering, for the purpose of settling the soil about the roots, and apply a mulching of decayed manure. Take off all the flowers from young fruit trees planted at any time since last autumn. If allowed to remain on the trees they tend to weaken them. One must only expect healthy growth the first season. Bloom promises to be plentiful generally, a good omen for the future. Make as judicious use as possible of coverings on Peach trees while in bloom by placing them over the trees in the early part of evenings when frost threatens, and remove them in the morning as soon as the temperature rises above 32°. They are better off on fine mild nights when there are no signs of frost.

G. NORMAN.

The Gardens, Hatfield House, Herts.

INDOOR GARDEN.

POTTING.

CONTINUE potting among the general run of stove plants, bringing this work to a close as soon as possible in the case of those things which are only potted once a year, so that they may get re-established before the very hot and trying weather is upon us. An old-fashioned stove plant is the *Eschynanthus*, but where room can be found for it it well repays cultivation, more especially as it is one of the few plants which succeed best in baskets, and these may be hung overhead where they will not crowd other things. Line the baskets with refuse Sphagnum Moss, fill up with one-half of fibrous peat, a quarter each of loam and decayed manure, and add plenty of silver sand. Grow the plants on strongly, giving plenty of water when the baskets become filled with roots. Young plants raised from cuttings this year should not be allowed to flower, as it takes a year to establish them strongly, and weak plants are useless.

Marantas or Calatheas require annual repotting, as they soon exhaust the soil. Equal proportions of peat, leaf-mould, and loam suit these plants, and the soil should not be too much broken up; neither is firm potting advisable. As they require much water in the growing season, ample drainage must be supplied to prevent the soil from getting

stagnant. Bulbs of the gorgeous *Gloriosa superba* can now be bought so cheaply, that a few should be grown in all stoves where room can be found for the plants to be trained near the roof. Soil similar to that advised for Marantas, but containing some decayed manure and a still larger quantity of silver sand, is suitable. The dormant bulbs should be potted with their crowns 2 inches below the surface; no water should be given until the plants are growing and roots forming freely, and a temperature approaching about 70° is desirable.

Aphelandras which have been resting should now be pruned. Weak shoots should be cut out entirely, and the strongest leads shortened back to within a few eyes of the old wood. When new shoots have formed and grown about an inch, the plants may be potted into pots a couple of sizes smaller than those they have been occupying, potting them on later when growth is active. Before the plants break it will be helpful to sprinkle them frequently.

PROPAGATING.

Gardenias may be propagated at almost any season of the year, but as young plants are now considered the best for flowering, it is necessary to work up a stock early in the year so that they may make good plants, well established in their flowering pots, in autumn. My own opinion is that much of the canker seen is partly, if not entirely, induced by potting too late in the year and by giving big shifts. Put the cuttings in singly in 2½-inch pots, using peat and sand as a rooting medium, and plunging the pots in a hotbed, where they may be covered with a handlight. Harden them off by exposure when struck, and put on in a compost consisting of two-thirds peat and one-third of good loam. *Eranthemums* may be treated in the same way, as they root freely from cuttings put in at this time of the year, and young plants make the finest spikes. Old plants, however, are useful, and these should be potted on into larger pots when they have broken well after pruning, which may be done now. The *Aphelandra* is still another plant which may be propagated now in the same way, but the cuttings of this should be taken off with a heel of old wood when they are a couple of inches long, and to produce these a few of the worst shaped older plants should be left unpotted. *Euphorbia jacquiniellora* should now be started to make cuttings unless this has been done.

GENERAL WORK.

Uncertain weather may be expected, and where the blinds are not permanently fixed, it will require care in watching the weather to prevent fine-foliaged plants from becoming scorched. On exceptionally changeable days it is better to leave the blinds down all the time than to get caught with a sudden burst of sunshine. The syringe may be used freely, a moist atmosphere being congenial to most things just now. Ventilate with the greatest care, as draughts are very trying to plant life.

J. C. TALLACK.

Shipley Hall Gardens, Derby.

CHRYSANTHEMUMS.

THE earliest struck Chrysanthemums which are required to produce specimen blooms of the finest quality during November should now be making good headway, and from henceforth will require constant care and attention, and the cultivator must keep in view the fact that neglect at this season means failure and disappointment when the flowering season comes round. The first thing he should now decide is the number of plants he can conveniently pay strict attention to during the growing season, and the accommodation that can be afforded when the time arrives for housing them. How often are one's chances spoiled by attempting too much! It is easy enough to strike and start well a very large number of plants, but it is quite another thing to be able to give the necessary time and accommodation as the season advances. It is far better to decide at once to grow only the number which can be thoroughly tended. A correct list of each section should be kept, and the number of each variety grown, which will be found most handy for reference.

By the end of the present month the majority of the plants should be quite ready for shifting on into larger pots, but in no case should this be performed unless the present pots are filled with roots, and overpotting must also be guarded against. Those in 3-inch pots should be placed in 6-inch, except any of the weaker kinds, and for these $4\frac{1}{2}$ -inch pots will be sufficiently large. The pots and crocks should be thoroughly clean and the pots well drained. A most important rule at all times is to keep the drainage perfect. This is best done by sifting every particle of soil away from some thinly cut turfy loam and placing a thin layer of the fibre over the crocks. Providing worms are rigorously excluded when mixing up the compost and not allowed to enter afterwards, little difficulty will be found in keeping the drainage clear. The most suitable mixture for this potting consists of four parts of good fibrous loam, pulled to pieces finely with the hands, and one part of finely-sifted old Mushroom bed manure, with sufficient coarse sand to keep the soil open. To every bushel of the compost add half-a-peck each of finely-broken charcoal, bone-meal, and wood ashes. The mixture should be prepared some days before it is wanted, and should be turned five or six times before using to ensure its being thoroughly mixed. Providing the compost is in a moderately dry condition, which it should be, it can hardly be made too firm, using the potting-stick freely on the new soil, but being careful not to ram the ball of the plant. To each plant place a neat stake and tie loosely.

The plants should be returned to the cold frames immediately the potting is accomplished. Sprinkle and keep close for a few days until they recover from the slight check which they will have undergone. Syringe freely for the first three days, after which they should be in a fit state to be watered in, which should be thoroughly done, filling up the pots with water at least three times. It is always advisable to have one or two lights for the less robust kinds or any weakly plants, so that they may be treated accordingly. Air moderately at first, avoiding cold, cutting winds, but as the roots begin to find their way into the new soil much more may be given, removing the lights entirely till last thing in the evening in favourable weather. Syringe the plants morning and afternoon, dust the points once a fortnight with tobacco powder, and search minutely for rust.

Stopping the plants in order to time the blooms for any given date requires to be judiciously practised, and it is most difficult to lay down any hard-and-fast rule. Seasons and localities differ so much, that, except in a few varieties, some plants only of each sort should be subjected to this treatment. Only a few kinds do I recommend should be stopped at the end of March, such as the Queen and Teak family, Miss Phyllis Fowler, Owen's Crimson, The Egyptian, W. Carpenter, and Wm. Tunnington. In the untried section, Mme. R. de Massey, Chatsworth, Duke of York, George Seward, Lady Byron, Mme. P. Rivoire, Miss Dorothy Shea, and Mrs. Hermann Kloss.

JAPANESE CHRYSANTHEMUMS.

I propose to deal more fully with this section in my next notes. Specimen trained plants should receive every encouragement, and the foundation of the plants should be formed as quickly as possible. Potting, stopping, and training should be attended to as required, and they may still be grown on in a genial temperature. E. BECKETT.

Abraham Park, Elstree, Herts.

NOTES OF THE WEEK.

Crocus susianus. This pretty Crocus, commonly known as Cloth of Gold, hardly seems worth planting in quantity where a continuous mass of colour is wanted, and yet one often sees it planted and causing disappointment. Individually the flowers are of a better shape than the common yellow variety, and they are well set off by properly expanded foliage at the time that they are in bloom, but they are wholly dependent on sun, for although the common variety on a dull

day is shut up, all that there is of it to see is yellow; whereas all one can see of *C. susianus* under similar conditions is the outer brown petals and a mere streak of the inner yellow ones. I have grown *C. susianus* by the side of the common form for some years, and the former has never been a whole week earlier than the latter, the common one having lasted a good fortnight longer than *C. susianus*.—B. D. WESTER, *Newton Abbot*.

Spring Colchicums.—Most good gardens are rich in various species of autumn Colchicums, but those which flower in spring, nay, almost in winter, though of comparatively small size, are beautifully delicate and of great interest, yet they are seldom seen. I know four species only—*Colchicum luteum*, bright yellow; *C. montanum*, white; *C. crociflorum*, white striped purple; and this spring for the first time I have *C. Decaisnianum*, again a white flower with leaves of equal height, with the flower about 6 inches long. If there be others, I should be glad to know what they are. In ordering *C. crociflorum* it is necessary to particularise *C. crociflorum* of *Regel* to guard against receiving an autumn species, which is figured in the *Botanical Magazine*, No. 2673, under that name, and very generally supplied instead of the other.—T. H. ARCHER-HIND, *Coombe's Grove, S. Devon*.

Pterocarya caucasica.—I was greatly interested in Mr. Burrell's note on the above in a recent issue of THE GARDEN, especially as it is a noble tree seldom mentioned, and although I fear few possess specimens approaching the dimensions of the particular one he describes, yet it should not deter anyone having a suitable situation from planting the species under the impression that it is devoid of beauty until it has attained to a great age and size. I can quite believe that such a perfect tree as Mr. Burrell has must possess unique charms not attainable in younger plants; still, even these are very beautiful for the greater part of the year. During winter the grey-streaky bark is attractive, almost equal in beauty in this respect to the Snake-barked Maple. In the spring the unfolding of the tender green leaves, and sometimes catkins, is interesting, and this stage is watched with some anxiety, as often the summer beauty is destroyed at this period by frost. When they escape uninjured, the fully and partly developed ample foliage and the free habit of the tree are admired by all, while as an autumnal tree it is most striking, for in clear air its leaves assume a glistening pale yellow colour, which, alas! is far too short-lived. Nevertheless, even among the host of native and foreign trees which make up our grand autumnal coloration it deserves a prominent place, and forms a telling object in the landscape at that season.—JOHN ROBERTS, *Tan-y-bwlch, R.S.O., N. Wales*.

A famous Scottish gardener.—A good, though far from exhaustive, article appeared lately in an Edinburgh weekly on the dwelling of Patrick Neil, A.M., F.L.S., with some remarks concerning that gentleman, who early in the century combined with his business as printer a keen practical liking for gardening. His house with its garden, which in his lifetime and long afterwards stood in the country in a village called Canon Mills, has been surrounded by the encroaching northern city, and is now disappearing altogether to give place to the printing establishment of which he was once the head. Mr. Neil left a few essays on horticultural literature, at present almost forgotten and some of them difficult of access. They are, however, of a nature that time will ripen, and will in due course become valuable. His best known work is a "Journal of a Horticultural Tour on the Continent," which, along with Mr. McIntosh, of Dalkeith, and a Mr. Hay, he undertook on the initiative of the Caledonian Horticultural Society, of which he was the first secretary. Still more important is the report embodied in Sir John Sinclair's general report of Scotland on "The Gardens and Orchards of Scotland." Mr. Neil's views on horticulture are buried in the pages of the Edinburgh Encyclopædia, besides which he wrote many short papers and one or two books of less interest on kindred subjects. His memory is kept alive by means of the Neil Prize, a sum of money presented at intervals to Scottish horticulturalists, and which accrues from a legacy he left for the purpose. Mr. Patrick Neil-Fraser, for long the treasurer of the Royal Caledonian Horticultural Society, now represents the family. The love for gardening, it is pleasant to know, has been transmitted to him. One would be thankful if Mr. Neil-Fraser could see his way to rescue these old writings from encyclopædias, reports, and memorials, and let us have them combined in one volume easily accessible to all.

Bomarea patacensis.—It is now about twenty-five years since attention was directed to the ornamental qualities of the Bomareas (a group of climbing Alstroemads) by the introduction of *B. Carderii*, the largest member of the genus, whose flowers, borne in a drooping umbel, are in shape very much like a *Lapageria*, but the colour is totally different, the outer segments being pink, and the inner ones of a pale bluish tint, spotted with chocolate. *B. patacensis* was, when first introduced early in the eighties, known as *B. conferta*, under which name it is still occasionally met with. It is a free growing climber, whose stems will attain a length of from 10 feet to 15 feet, or even more. These twining stems are clothed for the greater part of their length with lance-shaped leaves, thin in texture, while the flowers are borne in a closely packed terminal cluster, pendulous by reason of the weight of the blossoms. They are of a bright crimson colour, with bluish anthers. A fine cluster is just now at its best in the succulent house at Kew, where there is a good collection of these interesting and beautiful plants. A necessary item in the culture of these Bomareas is to bear in mind that the long twining stem is really a flower-spike, which dies away after flowering, so that particular care must be taken to protect the growing point from injury, as the whole display of bloom depends upon this.—H. P.

A trio of Linarias not well known, and which deserve more extended culture, are those named below. It may be remarked how suitable the family is for prominent corners upon rockeries where, owing to overhanging tree branches, there is a lack of moisture. I refer to sites facing east, south, or west, where the overhead branches do not shut out the sunshine entirely. They are neither gaudy nor showy plants, but such as must be admired, owing to the singular beauty of their individual flowers. The *Toadflax* carries its numerous flowers upon spikes, which are very numerous, and has not inaptly been likened to Lily of the Valley, possessing, moreover, the merit of giving a good succession of blooms. *Linaria alpina*, the Austrian form, is a most charming plant, as suitable for a wall as for the rockery. If once it can be induced to grow between the crevices of a wall it soon forms an extremely pretty hanging mass of foliage and flowers, as it is a profuse grower, and, notwithstanding its small leaves, forms ample bulk of foliage to display to advantage the somewhat small flowers. When, however, it is considered the colours of the latter consist of bright blue and orange, their effect amidst a mass of dark green shining leaves is highly pleasing. *Linaria pallida*, another creeping prostrate form, is also very suitable for rockeries and walls; the blooms are comparatively large and of a pale violet tint.

Early Irises in the rock garden.

Besides the article in your issue of March 3, which deals with the culture of early Irises in pots, it may be well to write a note as to their culture in the rock garden. This season I have had full opportunity of testing their hardiness. It is not often that severe weather visits the neighbourhood of Dublin, but this year we had a full fortnight of frost and snow. While it lasted I watched my Irises closely. For a week before the first snow, the earliest of them, *I. reticulata* Krelagii and *I. Bakeriana*, had developed one bud each, but, like sensible plants, they objected to unfolding their charms in such unpromising weather. They continued so till the middle of the arctic period. Then came a soft hour or so, which lured *I. Bakeriana* to throw away caution and break into bloom. It was fascinating to see a form so delicately shaped and coloured literally standing in some 2 inches of

snow. Wishing to see what would happen, I supplied no protection. For five days the little flower continued in perfection, heedless of its snowy bed and of the frost which twice reached more than 20°, and when on the fifth day the snow melted, a second plant was found to have pushed out its coloured bud under the snow. Meanwhile I. v. Krelagei had not been equally adventurous. It waited till all traces of frost and snow were gone before opening. Its position was a little less sunny. As a proof of the absolute hardness of these little bulbs, it is only necessary to add that, so far from suffering from the exposure, the display of flowers has been exceptionally vigorous and abundant. Plenty of sun, thoroughly good drainage, and shelter from wind seem to be the important points to secure for their comfort. Given these in the warm nooks of the rock garden, the reward will be a February and March heightened with a display of floral beauty, which, alike for brilliance and delicacy, will not be surpassed by any in the year. — H. K. M., *Dundrum, Dublin*.

Sternbergia colchica. — This is in flower here now (middle of March), so Mr. Archer-Hind's information as to its being an autumnal bloomer must be incorrect. It is a pretty little plant, the leaves and flowers coming together. T. SMITH, *Nearry*.

Pentapterygium serpens. Though I have known this plant since I first went to Darjeeling thirty years ago, and the original plant which I brought home nineteen years ago has stood in the corner of the Heath house at Kew ever since, I never knew what a pretty plant it was till I saw Mr. Bennett-Poe's beautifully grown specimen at the Royal Horticultural Society's meeting on March 13. The plant is easy enough to grow in a greenhouse, coming from an elevation of 7000 feet, where it trails over damp rocks, but is difficult to propagate, as it never sets seed with me, and being of a leggy habit wants training from an early stage to get it into such a pretty shape as Mr. Poe's plant showed. I feel sure that it taken up by a nurseryman such plants as this would be very popular. H. J. ELWES.

Gladioli on sandy peaty soil. In our peaty sandy soil most plants luxuriate and produce effects which cannot be equalled on the more loamy mediums. Bulbs of all kinds seem at home with us, but the most striking example of growth I have met with among them was in connection with a batch of Gladioli we have had occasion to transplant this spring. Last year they were planted late, but threw up exceptional spikes, and each bulb produced four or five abnormally large ones for this year's crop of bloom. I enclose half a dozen as a sample to show their size — some over 10 inches in circumference. How very different to this is their growth on heavy soils, when the bulbs gradually diminish in size and eventually disappear altogether. RIDDELL, *Rougham*.

[With this note Mr. Riddell sends some Gladioli corms of remarkable size, which we shall have pleasure in testing in such a soil as that he describes. Eds.]

Blue-eyed Joan *alias* **Blue-eyed Mary** (*Omphalodes verna*). This humble little plant does not, I think, meet with quite so much favour from gardeners as its extreme beauty deserves. I suspect that this neglect is chiefly due to the fact that its lovely little flowers are not produced in sufficient profusion to afford a mass of colour to the border, as its cousins of the Forget-me-not tribe do later in the season. It is not a plant for distant effect certainly; it requires looking at, even rather closely, but it possesses a beauty of its own which is almost unique. Nothing can exceed the brilliancy of the contrast which the pure blue flower "powdered," to use the heralbic term, amidst the fresh green leaves affords. It is exactly the right blue and right green in exactly the right proportions that produce the exhilarating effects felt on viewing a mass of this plant. It is, perhaps, rather weedy and wilful in its creeping growth, running into and around everything that it comes across. I have known it go through a Box edging and flourish in the gravel path; but it is a plant many people will be sure to love, coming as it does with both flower and leaf to cheer the

cold days of early March. I have never tried it, but I should say that this pretty plant would make the most exquisite carpeting for a bed of choice Daffodils that could possibly be desired. I like its old-fashioned name of Blue-eyed Joan. G. D. L., *Wallingford, March 16*.

Dahlia show at the Royal Aquarium. — An exhibition of Dahlias, on much the same lines as that held last summer, will take place at the Royal Aquarium on September 18 and two following days. A sum of nearly £30 is offered in prizes, a portion of which has been subscribed by the directors of the Royal Aquarium, and the remainder by private subscription. Two main objects are sought by the establishment of this show: one is to provide an exhibition of Dahlias in central London, the other to afford a convenient opportunity for a further exhibition of seedling Dahlias. The Aquarium show will be supplemental to, and not in any way antagonistic to, the exhibition of the National Dahlia Society at the Crystal Palace on September 7, as all the donors of the prize fund are members of the National Dahlia Society. Schedules of prizes can be obtained of the superintendent, Mr. Richard Dean, 42, Ranelagh Road, Ealing, W.

Caulescent Hellebores from Wisley. — We receive from Mr. Wilson's ever-blooming garden a charming bunch of seedling Lent Hellebore blooms, varying in tint from the deepest of the lurid red-purple colourings of the garden varieties of *H. solidus* to the whitest of the olympic section. In some of the white seedlings the colour is a delicate green-white, even in the flower's earliest stages. In some there is a delightful harmony of low-toned white and slightest staining of green and purple, with faintest suspicion of purple in the delicately coloured veins — colourings that would scarcely please the average gardener, but that are much valued by the colour student, whose eye is trained to enjoy the tender tints that are only, as it were, hinted at rather than conspicuously displayed. There is a strong undulation, suggesting strength, upon the outer edge of the petals (really sepals) of several of these charming seedlings that increases the beauty of the flower; while in the case of the darkest flowered, both the stem and the frill of the small leaves nearest the blossom have a tinge of purplish colour in harmony with that of the flower.

Crocus species. *Crocus Imperatii* varies, when wild, in a remarkable manner. All round Castellamare di Stabia (S. Italy), in the vast Chestnut woods and the orchards, every spot where a little rough grass grows is carpeted with the lovely flowers, and I never found two alike. In the garden also it varies from year to year, and a line of fifty, new last year, has not had a mark on the outer perianth, whereas this year (though two months later) they are strongly marked and deep coloured. *C. Sieberii* and *C. Olivierii* are real gems, and *C. chrysanthus fusco-tinctus* is not far behind in beauty as well as equally early, but perhaps (after *C. Imperatii*) some of the autumn Crocuses are the loveliest. *C. speciosus* with its exquisite colouring, and *C. longiflorus* with its delicate perfume. They spread like weeds and bloom just when tints of blue and mauve are at a premium, and it is a pity they are not more generally grown. *C. iridiflorus* does not succeed with me, but it is well worth trying in various soils and situations. JENIA, *Warwickshire*.

Horticultural Club. The usual monthly dinner and conversation took place on Tuesday, the 13th inst., and the chair was occupied by the Rev. W. Wilks. Amongst those present were Messrs. Gofton, H. Salmon, George Bunyard, Alfred Rivers, Pinches, Selte-Leonard, George Paul, &c. The discussion after dinner was on the "Hardiness of Tea Roses"; it was opened by Mr. George Paul, V.M.H., whose long experience in the growing of this beautiful section enabled him to speak with a good deal of authority. An interesting discussion (in which many of the members joined) followed the reading of the paper, and a cordial vote of thanks was given to Mr. Paul. The question has been a good deal before the public lately, and it is hoped that Mr. Paul's paper will appear in the "Rosarian's Year Book" for 1901.

Rhododendron præcox. Though not to be compared for brilliancy with many other hybrid Rhododendrons, this is a very beautiful kind, and one that may be turned to various uses. It is among the earliest of our hardy flowering shrubs, but, unfortunately, this fact is often a disadvantage, as just as the first blossoms are expanding and one is anticipating a grand display, a sharp frost or two will ruin the flowers, though the plant itself is perfectly hardy. For this reason it should, if possible, be planted in a sheltered spot, or it may be employed for the embellishment of the greenhouse at this season, where its charming blossoms are always appreciated. There are several forms, the deepest coloured being that known as *R. præcox rubrum*. This Rhododendron was raised by the late Mr. Isaac Davis, of Ormskirk, by the interesting cross of the European *R. dahuricum* and the Himalayan *R. ciliatum*, a species that has proved of great value to the hybridist. As long ago as March, 1861, *R. præcox* was shown at a meeting of the Royal Horticultural Society, but it only received a commendation instead of a first-class certificate, which from present day experience it well merited. H. P.

Narcissus Cynosure. This pretty and useful incomparabilis *Narcissus* behaves curiously with me. Gently forced in pots, the flowers have all shown a distinct orange-scarlet shade in the brim of the cup, much enhancing their beauty; but later in a cool frame they all come with a plain yellow cup, and are consequently not nearly so attractive. The bulbs came from the same source in one lot. This seems to rather upset the assertion that forced Daffodils lack colour, for the reverse is the case in this instance at any rate. F. H. C., *Rye*.

Dwarf Irises. Twenty years ago, walking in a neighbour's garden, I saw and admired *Iris reti alata*. Two bulbs were pulled up and given to me, and were carefully planted in the very poor, sandy soil of a garden then being made. Only one survived and flowered the following season, the bulbs increasing rapidly in number in the next few years. In 1894 a nurseryman saw them, and offered to purchase as many as could be spared. He has taken over 9000, and a very large number have been given away. They grow in a very loose, sandy, gravel soil, on a slope facing north-west, much enriched by well-decayed manure, and top-dressed in winter with leaf-mould. They are planted in a bed, for sale, and also grown in all parts of the garden in clumps. In the latter case they are only taken up every second year, but are heavily top-dressed. Two thousand six hundred blooms have already been gathered this year. Those for sale are taken up early in July, and those to be replanted are not kept more than a month out of the ground — often much less. They should never be taken up until they have completely died down. *I. Bakeriana* and *I. alata* only flowered once and disappeared. *I. histrio* and *I. histrioides* have been much eaten by wireworm. I. Krelagei does tolerably well. Bulbs supplied to me as *I. reticulata major* were just the same as those I grow as *I. reticulata*. SOUTH HAVES.

Primula kewensis. When this plant was shown at the Drill Hall recently for certificate I was among those who regarded it as simply a much-improved form of one of its parents, viz., *P. floribunda*. This being so, I have all the greater pleasure in stating that, owing to the courtesy of Mr. Watson, of Kew, a sufficiency of material has been placed in my hands, establishing beyond all possible doubt that the above plant is a hybrid between *P. floribunda* and *P. verticillata*. Although the evidence establishes beyond doubt the influence of the latter species, it is not greatly marked to the casual observer, and the meanness of leaf and stem that I looked for in vain is really absent in these parts of the plant. Another distinct point is that *P. kewensis* is glabrous, as is also *P. verticillata*, while *P. floribunda* is covered with short hairs. There is a leaning to the former in the longer tube of the corolla and the paler tone in the blossoms, though these alone would be altogether inadequate to establish the hybrid theory. The meanness, which is evident when examining the solitary flowers, was naturally hidden in the plant exhibited

by the fine mass of expanded flowers; and one is not entitled to pluck feathers from another's bird. Of course, in the outward and chiefly visible sign there is a great leaning to *P. floribunda*. Kew is much to be congratulated that this remarkable and truly interesting hybrid Primrose made its appearance in these world-famed gardens.—E. H. JENKINS, *Hampton Hill*.

***Spiræa astilboides floribunda*.**—The Japanese *Spiræa astilboides*, a larger and bolder plant in all its parts than the well-known *Spiræa* or *Astilbe japonica*, quickly became popular after it was first distributed in 1884, and is now largely employed for forcing, being sent to this country from Holland in immense numbers every season. The form known as *S. astilboides floribunda* is, however, for general purposes superior to the type, the inflorescence being whiter and more in the way of *S. japonica*, but in vigour equal to *S. astilboides*. The variety *floribunda* originated in Belgium, and was distributed in 1891, when it was announced as a seedling from a plant of *S. astilboides*, the flowers of which had presumably been fertilised with the pollen of *S. japonica*, which was growing in close proximity thereto. Such a statement is apparently correct, as the variety *floribunda* is in general appearance about midway between the two. At all events, where *Spiræas* are forced into bloom and employed for various decorative purposes, the newer variety *S. floribunda* should be represented among them, as it can now be obtained in the shape of dormant clumps in the autumn at much the same rate as the others. T.

TREES AND SHRUBS.

THE RHODODENDRONS OF THE ALPS.

THE genus *Rhododendron* is represented in the Alps by three very distinct species, namely, *R. ferrugineum*, *L.*, *R. hirsutum*, *L.*, and *R. Chamaecistus*. They occur between the regions of the forest and the lower snowy zones, and form a sub-shrubby vegetation which gives a special character to the alpine chain. The genus *Rhododendron* is widely spread through the mountain ranges of Central Asia and of North America, while in Northern Russia and on the plains of Siberia there are species nearly allied to our own. In some parts of the Alps the *Rhododendrons* come rather low down and form a distinct sub-forest growth in the great wooded regions of Melezes and of Aroles. In Italian Switzerland on the shores of Lago Maggiore, at an altitude of 325 feet, *Rhododendron ferrugineum* is found braving the southern sunshine in company with species characteristic of the Mediterranean region, such as *Cistus albidus*, *C. salvifolius*, *Diospyros Lotus*, &c. In the smiling Val d'Anniviers the *Rhododendron* comes very low down, and in the woods between Vissoye and the hotel of the Weiss-horn it forms a beautiful sub-forest growth.

The two Swiss species, *ferrugineum* and *hirsutum*, are distributed in our Alps according to the nature of the geological formation, whether calcareous or granitic, the former belonging to the granitic flora and the latter to the calcareous zone. It is, however, impossible to assign definite limits to the two species, for so frequent are the exceptions to this rule and so vast is the area over which they occur in our Alps, that one cannot determine their exact boundaries.

Rhododendron Chamaecistus belongs to the Tyrolense Alps. The flower is quite unlike that of any other species, and approaches in shape that of the *Cistuses* of the Mediterranean; hence it derives its name. In the Eastern Carpathians there is a species somewhat re-

sembling those of our Alps, but smaller, namely, *R. myrtifolium*, *Schott*.

The distinct characters of our two alpine species consist in the glabrous deep green foliage, shiny above and rusty brown beneath in the case of *R. ferrugineum*, but light green on both sides and hairy in the case of *hirsutum*. In *ferrugineum* also the plant has a different habit and the flower a stronger colour, and the truss is more close and compact than in the more widespread flower of *hirsutum*. Both produce white-flowered varieties that are sometimes met with in the Alps, where there has also been found, though rarely, a hybrid form, intermediate between the two, called *Rhododendron intermedium*, *Tausch*.

The culture of our Swiss *Rhododendrons* is easy in England, though *R. Chamaecistus* proves somewhat difficult to establish. This probably arises from its growers not knowing that it requires a chalky soil. In the botanic garden of the Linnaea at Bourg St. Pierre, where I planted it ten years ago, it forms magnificent tufts entirely covered with flowers. But as the soil up there is deficient in lime, we surrounded it with calcareous rocks.

Here in Geneva, where we cultivate it for sale, it is grown in Sphagnum and watered with water containing 8 per cent. of lime. It shows a tendency to remain dwarf, not growing nearly so tall as at Bourg St. Pierre; no doubt in consequence of the little nourishment contained in the Sphagnum. We cultivate it in this manner because it dreads the dry air at Geneva, and we find that it soon dies if grown in any other way. The Sphagnum, on the contrary, surrounds the plant with vapour from the condensation of the moisture that it gives off, thus affording it the conditions necessary for its well-being.

Geneva.

H. CORREYON.

SPIRÆA PRUNIFOLIA FL.-PL.

MR. BEAN in his interesting note about this charming shrub has not mentioned what is to me one of its chief attractions, viz., the brilliancy of its autumn tints, and the fact that sprays cut in dry weather will hold their scarlet leaves for weeks in water, whereas the average autumn-tinted leaves drop in a very few days. Naturally one does not care about cutting branches in late autumn when set with flower-buds unless one has plenty to cut at, but if one can afford to do so one will never regret it. In South Devon the flowers open very early, and I have had it in bloom with snow on the ground. At the present time it is in full bud, and some few of the bunches have burst and are showing a few white petals. Doubtless in ten days there will be plenty of flowers fully out.

Newton Abbot.

B. D. WEBSTER.

OBITUARY.

MRS. ALICE LOUISA LAWRENSON.

IT will be a source of regret to many readers of THE GARDEN to hear of the sudden death of this lady amateur at her residence, "Salerno," Killiney, County Dublin, on Wednesday, 14th inst., of acute pneumonia. Under the *nom de plume* of "St. Brigid" and her own initials, Mrs. Lawrenson contributed many interesting notes to THE GARDEN; but she will also be known to many of our readers by her double and semi-double strains of "St. Brigid" Anemones, and by her green-stemmed variety of *Helleborus niger*, or Christmas Rose. She also originated two or three very early Star Narcissi, such as St. Patrick or Lucifer and others, all characterised by white perianths and intense red or fiery chalice. Nothing pleased her better than to make pilgrimages to good gardens, except it was to receive sympathetic visitors in her

own, and wherever she resided flowers seemed to spring up spontaneously around her. To poor and rich alike she was generous, and one corner of her garden always contained well-grown patches of golden and crimson Wallflowers, giant white and yellow Polyanthus, and sweet herbs and long-enduring leafage for giving away to pent-up townspeople or the poor in city institutions. Now and then she gave very pleasant lectures or conversations on flowers and gardening, and of these, the last one took place only a few days before her sudden illness. She was buried on St. Patrick's Day (beside her husband, whom she had survived) in the old graveyard at St. Fintan's Church, with its sacred well, on the sunlit and breezy headland of Howth, not far from the place where she had formerly lived, and where her Anemones and Christmas Roses had thriven so well. F. W. B.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

SCIENTIFIC COMMITTEE, FEB. 27.

PRESENT: DR. M. T. MASTERS (in the chair), Mr. Michael, Mr. E. Im Thurn, Rev. W. Wilks, and Rev. G. Henslow, hon. sec.

THE LUCOMBE OAK.

Specimens of foliage and acorns were received from Rev. J. H. Ward, of Silverton Rectory, Exeter, from a tree growing in the churchyard, requesting for information as to their identity. Dr. Masters has supplied the following details: "I believe the leaf and acorn exhibited to be those of the Lucombe Oak, or from one of its descendants. The Lucombe Oak was a hybrid between the Turkey Oak (*Q. Cerris*) and the Cork Oak (*Q. Suber*). The leaves are all but evergreen; indeed, in some of the varieties quite so. As is the case generally with hybrids, the descendants from the first cross vary extremely, consequently there are many forms and varieties of the Lucombe Oak in existence. As the specimens came from Exeter, there is additional ground for presuming it to be descended from the Lucombe, as the original tree was raised in the nursery of Lucombe, Pince & Co., of Exeter. The Fulham Oak, raised in the Fulham nurseries, had a similar origin, and now I believe it to be impossible to distinguish its descendants from those of the Lucombe Oak. A full account of these Oaks will be found in London's 'Arboretum,' vol. iii."

LARGE YEW TREE.

Mr. Ward also mentions the fact of a Yew tree in the same churchyard being 25 feet in circumference at a height of 4 feet from the ground, and asks if it is a reasonable conjecture that the tree was planted before the Norman Conquest. Data as to the rate of growth of Yew trees have been supplied from trees planted in Basilston Churchyard in 1724. They have been measured in 1780, 1796, 1834, and 1889. They were found, after a commencing period of more rapid growth, to be pretty regularly increased by one line (one-twelfth of an inch) per annum. (See *Nature*, October 17, 1889.)

BULBIFEROUS SCILLA.

A plant of *Scilla nutans* was received from Mr. Alex. Mortimer, 1, Paper Buildings, Temple, in which the outer bulb scale had become greatly elongated upwards, forming a closed tube. It bore two small bulbs on the inner surface, and was greatly thickened at the summit, as if attempting to form a larger bulb; but no other than the above two were developed. They both possessed small rolled-up green leaves.

ORANGE MALFORMED.

Dr. Masters showed an Orange having a band of paler and smoother rind than the rest of the skin. It was referred to Dr. Bonavia for examination, who writes as follows: "It somewhat resembles the Bigaradier tricolor Orange, which has a yellow skin, with orange stripes when ripe. Again, the Bigaradier bazarerie has smooth parts of an orange colour and warty parts yellow. These parti-coloured Oranges are normal." Dr. Bonavia would theoretically explain this peculiarity by referring to the "fingered" Orange, which he regards as a whorl of modified leaves, coalescing to form a covering to the inner portion of the fruit. To apply this theory to the case in question, he would compare the paler portion to, say, a *Eucalyptus*, which may have green leaves with an occasional yellow one, or again he would compare it with striped petals, as of the York and Lancaster Rose. The objection to Dr. Bonavia's ingenious theory lies in the fact that the paler coloured stripe did not correspond with a single carpel, but covered the half of one and the half of the adjacent carpel, so it would represent two halves of different capillary leaves. Secondly, striped flowers are probably the result of crossing two whole-coloured flowers. This is obviously the case with *Petunias*, a purple and white-flowered species having been the parents of all our garden forms. So that it would seem more probable that the Orange had received the pollen of a smooth-skinned variety, and the tubes penetrating one placenta, common to two adjacent carpels, had influenced the surface on both sides of the division. Similar stripes have been known to occur on the fruit of one variety of *Theobroma (Cacao)* when pollinated by a second variety. Dr. Bonavia's report will appear in full in the Journal of the Royal Horticultural Society.

The next fruit and flower show will be held on Tuesday, March 27, in the Drill Hall, James Street, Westminster, 1-5 p.m. A lecture on "Some of the Plants Exhibited" will be given by the Rev. Professor G. Henslow, M.A., at 3 o'clock.

CROYDON CHRYSANTHEMUM SOCIETY.

THE thirteenth autumn show will be held on October 30 and 31 at the Public Hall, George Street, Croydon.

READING GARDENERS ASSOCIATION.

THE large attendance of members at the recent fortnightly meeting of the Reading and District Gardeners' Mutual Improvement Association on Monday last testified to the increased interest which is now being taken in hardy flowers. The subject for the evening was "The formation and arrangement of a hardy border with a list of plants suitable for same," by Mr. D. Harris, gardener to Colonel Jekyll, Minstead House, Godalming, and it is needless to say that the paper was of a very practical character. Mr. Harris, in introducing his subject, said that the field open to the outdoor flower gardener was a very wide one, as the position in which gardens were placed varied so much in character, that it was nearly impossible to copy. Thus gardeners had each to work entirely according to circumstances. He acknowledged the great advantage he had derived from working under Miss Jekyll, from whom he obtained much knowledge respecting hardy border plants. The lecturer then passed on to describe the best sites, formation of same, soil, suitable plants and their arrangement, time of planting, &c. A large number of questions were asked, and an interesting discussion followed, in which Messrs. Stanton, Neve, Townsend, Lever, Burritt, Hinton, E. J. Dore, Fry, Exter and Chamberlain took part. A feature of the evening was two splendid floral exhibits by Mr. F. Lever, The Gardens, Hill-side, Reading, and Mr. W. Townsend, The Gardens, Sandhurst Lodge, the former staging *Azalea indica alba*, *A. Deutsche Perle* (grown from cuttings), *Doronicum caucasicum* grown in pots, and a splendidly flowered *Denyrobium mobile*; whilst the latter staged a beautiful group of *Begonia Gloire de Secaux*. The president (Mr. C. B. Stevens), in proposing a vote of thanks to Mr. Harris for his paper, said that the greatest charm was not so much the lecture as the kind and ready way in which the numerous questions were answered. The exhibitors were included in the vote.

NEW AND RARE PLANTS.

PRIMULA KEWENSIS.

AN accidental hybrid between two of the most floriferous of Primulas, viz., *P. verticillata* and *P. floribunda*, has been discovered at Kew among a batch of seedlings of the latter species. It was shown at a recent meeting of the Royal Horticultural Society, and obtained a first-class certificate on account of its elegant habit and free-flowering character. It forms a tuft of slender stems a foot long, springing from a nest of bright green leaves 6 inches long, and bearing whorls of large leafy bracts subtending the whorls of flowers. These are an inch long, $\frac{3}{4}$ inch wide, the pedicels slender and an inch long, and the colour bright buttercup-yellow. Evidences of the hybrid origin of the plant are seen in its resemblance to *P. floribunda* in leaf structure and arrangement of flowers, whilst in the absence of hairiness it is characteristic of *P. floribunda*, and in the presence of meanness on the flowers, as well as in their size, it resembles *P. verticillata*. Although the prepotency of the female parent (*P. floribunda*) is evident, the influence of the male parent is also to be seen. The plant is likely to become popular for pot culture.

SENECIO AURICULATISSIMUS.

PLANTS of this new introduction from British Central Africa are now to be seen in flower in the conservatory at Kew. It is almost a climber, the thin wiry stems, a yard or so long, being trained round sticks. The leaves are kidney-shaped, stalked, with a pair of large ear-like appendages at the base of each petiole, hence the specific name. The flowers are in loose corymbs, which on the most robust stems are a foot in diameter, and each flower is an inch across, bright golden yellow, and lasts a week or more. It is supposed that this species will probably cross with *Cineraria*, to which it is evidently closely allied.

TWO NEW CODONOPSIS.

THIS genus of Campanniaceae is known in gardens by *Codonopsis ovata*, sometimes grown by collectors of uncommon and interesting hardy plants. There are, however, other species which are as good or better than *C. ovata*, two of which have lately been forwarded to Kew by Mr. Hildebrand, of the Shan

States, Upper Burmah. He describes one as "a Passion-flower-like plant, the flowers hanging on the stems like bells, 1 inch to 2 inches long and an inch wide, their colour greenish white with purple veins." This is probably *C. lanceolata*, hitherto known only from China and Japan. The second is *C. convolvulacea*, of which very little was known beyond that it had been collected in Yunnan about thirty years ago. It was found wild in the Shan States by Sir Henry Collett, who describes it as a pretty little plant with thin wiry stems which twine round the culms of stout grasses, and bear numerous bright blue bells an inch across. The stems are annual, springing from a perennial tuber. There are twelve species known, all natives of the East. W. W.

LELIO-CATTLEYA CALLISTOGLOSSA SPLENDENS.

THE original *Laelia callistoglossa* appeared in 1882 before the compound name, derived from the generic species *Laelia* and *Cattleya*, was introduced. It was

(*L. purpurata* - *C. Warscewiczii* Sanderiana), the undesirable features of the first cross have disappeared. The plants are of most robust growth, and are generally most satisfactory to deal with. The subject of the accompanying illustration, *L. C. callistoglossa splendens*, is one of the most beautiful and highly coloured forms that has yet appeared. The sepals and petals are of great substance, show the intermediate characteristics of the parent species, and are intense rosy lilac in colour. The large lip is deep crimson-purple with darker veins; the side lobes are also of a similar shade, with the characteristic yellow discs on each side of the throat; the base of the throat is suffused with dark purple. The plant carried a three-flowered raceme, and was exhibited in Messrs. Veitch's group at the Drill Hall on February 27 last. H. J. CHAPMAN.

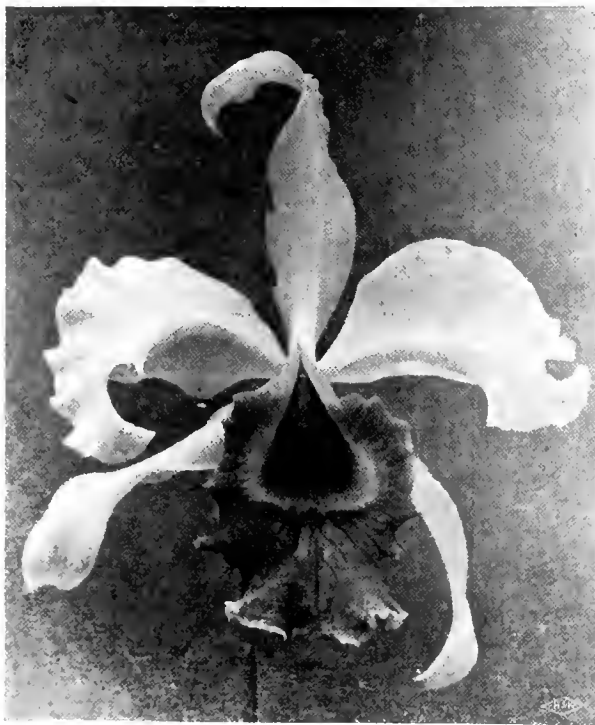
THE "PILOT."

THE ranks of weekly journalism have received an important accession in the production of the *Pilot*, a paper that "addresses itself especially to that section of educated laymen which desires to see theological and ecclesiastical questions discussed with adequate knowledge and breadth of view . . . while in other respects it covers a large field."

Even the most cursory glance reveals a paper of the highest type, a thing of dignity that bears itself with an air of distinction, while a careful reading of its admirable articles already in the early numbers gives an indication of the scope of its subjects and the tendency of the leading of the guiding hand.

Mr. Lathbury, so long connected with the *Guardian*, does not desire to conduct this new paper in any spirit of rivalry with existing journals, but rather to give it such a place of its own as is as yet unfulfilled. With this desire he will make a special feature of foreign correspondence on matters ecclesiastical, so that we may look to have fuller and more accurate information concerning the growth of religious thought and movement throughout the world.

When we say that in his moments of rare leisure Mr. Lathbury is an ardent gardener, we have all the more reason to wish success to the graver work of his life; we know that for the present at any rate this is arduous in the extreme, and that in devoting what small spare time he may have to his flowers, he is seeking the best



LELIO-CATTLEYA CALLISTOGLOSSA SPLENDENS. (Shown at meeting of R. Horticultural Society by Messrs. J. Veitch and Sons.)

of physical recreation and the wholesomest balm of mind. raised in the nurseries of Messrs. J. Veitch & Sons, and is the result of crossing *Laelia purpurata* and *Cattleya Warscewiczii* (*gigas*). Plants of the old type of *C. Warscewiczii* that are still in cultivation retain to the present day their shy-flowering characteristics. This influence is unfortunately characteristic of the original batch of seedlings, and this has greatly disappointed purchasers of the original stock. About the time the original *L. C. callistoglossa* flowered, what was supposed to be a new species of *Cattleya* was introduced and distributed as *C. Sanderiana*. When these plants flowered they proved to be a geographical variety of *C. Warscewiczii*, and the tree-flowering characteristics displayed justified the distinctive name of *C. Warscewiczii* Sanderiana, a name by which it is recognised in gardens at the present day. Mr. Seden, no doubt, recognising the free-flowering characteristics of this type of *C. Warscewiczii*, was influenced by the fine qualities possessed by the original hybrid, *L. C. callistoglossa*, and decided to repeat the cross, hoping, no doubt, to overcome the shy flowering trait above referred to. The result is, that in the second batch of seedlings, which appeared in 1895 as *L. C. c. ignescens*

of physical recreation and the wholesomest balm of mind.

PERISTROPHE SPECIOSA.

IT is but seldom that one has the pleasure of seeing this most useful and attractive winter-flowering plant in a greenhouse, yet its merits should claim for it a place wherever cool-house plants are cultivated. Introduced from India in 1826, it is remarkable that after such a long period its culture is still so restricted, as is apparently the case. The flowers are of a peculiarly twisted form, the tube pale purple, and the two lips of a deeper hue. At any time this particular shade of colour is uncommon in flowers, and especially valuable at such a dull season.

In the course of a year very fine specimens can be obtained if a proper course of treatment is followed. We take cuttings from the old plants in February, and insert them singly in 3-inch pots, placing the latter in a warm house. A light soil, containing a fair amount of silver sand, is the most suitable medium for rooting the cuttings. When roots are visible around the inside of the small pot

it becomes necessary to move the plants into 4½-inch ones, using a compost of loam and leaf-mould in equal quantities, mixing with these a little manure and silver sand. As soon as they are well established in the new material, a cool frame is the most desirable position in which to cultivate them throughout the summer. This should be kept close for a few days so that the change from the warmer house may not check their progress in any way, but afterwards quite cool treatment is essential to their well-being. A light shading will probably be necessary in the hottest weather for a portion of the day, and daily syringings are of great benefit, both by keeping the plants clean and healthy and as a means of encouraging growth.

At the final potting, performed as soon as the Peristrophes are sufficiently well rooted, they are removed, the strongest plants into 10-inch and the smaller ones to 8-inch pots. The soil advised for use at the previous potting will again be suitable. In order to ensure a bushy habit of growth attention to the timely pinching of the shoots is necessary, for it is early in the season that the future form of the plant can best be regulated. As soon as cold weather approaches, a warm house, *i.e.*, one where the night temperature is about 60°, should be prepared to receive them. With careful watering and the judicious use of stimulants, the buds will develop and the flowers will commence to open about Christmas-time. H. THOMAS.

Fragrance, Windsor.

ANSWERS TO CORRESPONDENTS.

FLOWER GARDEN.

A border of Poppies (M. L. S.). To obtain the finest and the earliest bloom, annual Poppies should be sown in place in August, when they will flower in May and early June. For spring sowing the best are the Opium varieties (*P. somniferum*) and the Shirley Poppies, though if spring-sown they will have nothing like the size and vigor of the autumn-sown plants. In addition to these, for autumn sowing, the kinds most to be recommended are *P. umbrosum* and *P. glaucum*. They should be sown broadcast and as thinly as possible in large straggling patches, and well thinned in spring. The Opium kinds, which are the tallest and stoutest, should go mainly towards the back of the border. *P. umbrosum* is the next largest. There should also be some permanent patches of the splendid perennial Oriental Poppy and of its tall upright dark-red variety *P. orientale bracteatum*. The only way to have anything of a succession would be to leave some patches unsown in autumn and to sow these in spring; but we think it would be much better gardening to be contented with the display through May and June given by the autumn-sown seed and the clumps of Oriental Poppy, and then to trim down the Michaelmas Daisies over the bed, bending the foremost of them forward and tying them out in a free way to pieces of branching spray instead of leaving them to be too stiffly upright in a straight line. With the Asters it would be well to have some clumps of the large white Daisy (*Pyrethrum alpinosium*).

When to plant Lilies (G. V. M.). Generally speaking, the best time of the year to plant Lily bulbs is towards the end of autumn, say in November, that is if they are simply shifted from one part of a garden to another, but when the bulbs are purchased from dealers other circumstances have to be taken into consideration. For instance, the immense importations from Japan, consisting for the most part of the bulbs of the different forms of *L. amatum*, *L. speciosum*, and *L. longilobum*, do not at least in the case of the two first-named, reach here at their best much before Christmas, at which time the ground is often unfit for planting, while if *L. longilobum* is planted as soon as received that is about the beginning of November it will by then have begun to grow, but not sufficiently so to penetrate the ground. Again, very large numbers are sent here from Holland, and they arrive during November or sometimes earlier. Prominent among these largely sent here by the Dutch are *L. elegans* or Thunbergium, *L. umbellatum*, *L. clarkii*, *L. Brownii*, *L. Martagon*, *L. speciosum*, *L. crocum*, and *L. tigrinum*, some of them being represented by numerous varieties. Should the ground be in good condition, all of these may be planted as soon as possible after they arrive. It will thus be seen that when several kinds are represented in one bed it may be impossible to carry out the planting till the first or second month of the new year. One reason that late planted Lilies so often fail is that they are not purchased from the dealers till required, and have then probably spent a month or more on the shelves of a warehouse, the result being that they lose a good deal of their vitality and are never satisfactory. Lilies may be kept in good condition from November to February before they are permanently planted if laid singly on the surface of the soil in a fairly sheltered spot out of doors, and covered with sifted leaf-mould or coagum refuse. It should be of sufficient thickness to cover the bulb to a depth of 2 inches, in which case, unless the frost is very severe, no harm will be done to them. To prevent this they may be covered with a mat or two should unusually sharp frost set

in. This method is much superior to keeping them dry in sheds or similar places, as when taken up for permanent planting it will be found that the roots are all commencing to push forth. The Madonna Lily (*L. candidum*) is quite an exception, as that should be planted as soon as possible after the flowers-stems decay, and at the latest not after August.

Violets failing (H. M.).—The cause of failure is owing to want of strength in the crowns. The past season was very bad for Violets, and the little red specks on the leaves would point to an attack of red spider. You say that the plants were grown in a partially shaded position; does that mean that they were in some degree shaded by overhanging trees? If so, give them a more open position. It may be that the plants had too much heat in the frames. Violets do not like too much artificial warmth, which causes them to draw up and weaken the crowns, and the mid-winter blooms come small and very pale.—J. CORNHILL.

Delphiniums (AMATEUR). These hardy perennials can be easily raised from seed, and as all varieties seed freely and generally reproduce themselves well, you can purchase a good strain and sow the seed outdoors on good ground during May, taking care to shade partially during hot sunshine. From such a sowing you will get plenty of plants to bloom next year and for several succeeding years.

FRUIT GARDEN.

Pot and planting Vines (CHESTER). A Vine in a large pot that was fruited in the pot last year is not likely, if similarly treated, to break strong enough to produce other than very tiny bunches, but the greater portion of the laterals will probably be blind. Had it been possible last year after cutting the Grapes early to have forced extra strong growth, the results this year might have been better. If you elect to keep the Vine in the pot, remove 4 inches of the top soil and replace with a compost of turfy loam, old hotbed manure, wood ashes, and bone-dust, the loam being in the proportion of two-thirds. But it would have been better to have turned the Vine out of the pot, loosened the roots from the old soil, planted it in a border of good fresh loam, and, having cut it hard back, have in that way forced it to form a new rod that would in time produce plenty of fruiting wood in your greenhouse.

Pruning bush Apples (D. G.). It would have been much better had you pruned your Apple trees earlier. Still, better late than not at all. As the trees are now well established, do not prune hard. Leave a certain number of main branches to form the tree, and let these be from 18 inches to 20 inches apart at least. Then shorten back the leading shoots one-third, taking care to cut to a bud which breaks outwards or towards the pruner. Cut just over that bud. Also cut nearly close back all side shoots, as the object should be to induce the back buds of these shoots as well as the chief buds on the main or leading shoots to form fruit-buds. But that is best done by proper summer pruning, which is done by cutting back all side shoots to about four eyes or buds in July, then cutting all these spurs back to two or three buds in the winter. Take care to keep the insides of the trees fairly open to admit ample light and air.

Apple store (WATERFIELD). The assumption that an elaborate store is needful to keep Apples in well is quite an absurdity. We have kept fruits well for several months in a moderately cool cellar in boxes, and equally well in an upper room looking east; indeed, we have now fruits that have been there six months, and are remarkably fresh. All the advice as to putting fruit into barrels with or without all sorts of material, such as dry peat, sand, ashes, &c., is not worthy of a moment's attention. Such materials absorb flavour far more rapidly than it is parted with in the air. Give a cool position where the temperature keeps fairly even, and ranges from 35° to 40°, but rather low than high, where air can be given occasionally and frosts can be readily excluded without exciting the temperature, and fruit will keep well. For a special shed nothing is better than concrete low walls, a thickly thatched roof, and a soil floor with neat lattice shelves, and a door for entrance at one end and a glass door or window at the other.

KITCHEN GARDEN.

Runner Beans (Mell). You need not restrict yourself to one description of Runner Bean only. There is the old rough or so-called scarlet strain, which is, except in colour of flower and seed, the same as the white Dutch Runner. This is, of course, the chief favourite, because it is at once the best cropper and the most enduring. Then there is the smooth runner as seen in the climbing Canadian Wonder or Tender and True section. This is a capital strain when sown thinly and well grown, because it renders some two or three sowings of Dwarf Kidney Beans needless. Differing still from these is the old Cashekin section, a long-podded bean that has a distinctive taste; and then there is the Butter Bean, of which yet few seem to know the excellent properties. You will do well to have rows of all these in your garden, as then you will be able to enjoy the luxury of having different ones daily on your table. For all of them have the ground deeply worked and well manured, and sow seed quite thinly in the rows. Do not sow until the end of April for the earliest, and same of May for the latest.

Tomatoes for outdoors (C. H. D.). There are so many named varieties of Tomatoes, and all relatively good, that it is difficult to specify one as better than another, but it is generally found that for outdoor purposes the heaviest croppers are the corrugated ones, such as Open Air, Earliest of All, and Magnum Bonum. You may, however, prefer the smooth round ones, which, if less heavy croppers, are generally the best liked. Of these, capital ones are Confidence, Comet, and Chemin. The best place for outdoor plants is against a warm wall or wooden fence, the plants being 12 inches apart and kept hard pinched to a single stem. Next to these positions, a warm border looking south, with plants put out into rows 2½ feet apart and

15 inches asunder in the rows, tied up to stout stakes, or, if preferred, to trellises, not direct across the border, but running slantingly. The second week in May is soon enough to put out the plants.

MISCELLANEOUS.

H. B. Ambleside. Will our correspondent kindly send his address; it has been, unfortunately, mislaid.—EDS.

Planting a window box (R. C. MOFFAT, N.B.).—No plants are better for window boxes or keep up a longer display than Pelargoniums, and if one of the soft scarlet or salmon-pink colourings is chosen the effect will be better than if one of the hard scarlets were used. The front of the box could be draped with pink Ivy Pelargonium Madame Croisse. The yellow Paris Daisy (*Chrysanthemum frutescens*) is also a good box plant, and can be suitably accompanied by a hanging front edge of Creeping Jenny (*Lysimachia Nummularia*), but the latter should be planted in the autumn. Varieties of Nasturtium (*Tropaeolum*) are also excellent box plants, both the dwarf bushy kinds and the older trailing sorts being used together.

Plants and watering (ST. ANDREWS).—The theory that when plants, especially in pots, are in flower they need less water, because watering tends to shorten the flowering period, is quite wrong. In every direction we see plants, whether in pots or growing outdoors, failing to bloom all the more when the roots are dry. Practically, plants growing in the open ground during the flowering period will bear any amount of watering such as does not exceed what Nature in a rainy time affords, but beating of the flowers by water of course does harm. But that does not apply to plants in pots under cover. Then it is well to remember that whilst the roots of pot plants are greatly restricted and can find less moisture as a rule than the roots of outdoor plants, watering must not be unduly lavish lest the roots damp off. But, on the whole, plants in flower need rather more water than plants not in bloom.

TRADE NOTE.

CAPE PEARS.

The *s.s. Briton* recently brought from Natal a very fine lot of fruits from Capetown. Among other things there were 1371 boxes of Grapes, 3 of Peaches, 400 of Plums, 139 of Pears, and 42 of Nectarines, and they had a ready sale at good prices. The Cape Pears brought by the *Briton* are considered equal to the Californians. As regards the development of this particular trade, everything, of course, depends on the shipment. If the Cape Pear can be got into the London markets in good saleable condition, then, it is said, tons can be sent to this country with every prospect of a ready sale, especially during the months of March and April.

BOOK RECEIVED.

"My Gardener." By H. W. Ward. London: Eyre and Spottiswoode.

CATALOGUES RECEIVED.

General Catalogue. *Guthford Hardy Plant Nursery*. Potash Manures. *F. W. Berk & Co., Ltd., Finchurch Avenue, London*.

Seeds. *Cooper, Fisher & Co., Ltd., 30 & 32, Southwark Street, London, S.E.* *Richard Dean, Rivington Road, Ealing, W.* *Thompson and Morgan, Ipswich.* *T. S. Ware, Ltd., Tottenham.*

Seeds and Plants. *Riviere and Son, 16, Rue d'Algerie, Lyons.* *Cocker and Sons, Aberdeen.*

Perennial Plants. *McC. John Peck & Son, West Norwood, S.E.* *Barr and Sons, King Street, Covent Garden, W.C.* *Plants, Otto Fobell, Zurich.* *V. N. Gaudelot & Co., Bedford.*

Chrysanthemums, Aemath Davis, Framfield, Sussex. *Bulbs and Plants, Mrs. Leighton, Boden-Boden.* *Pansies, Violas and Roses, W. Sudeham, Tunworth.* *Shrubs and Fruit Trees, S. S. Musshall, Barcham, Sussex.* *White's Patent Garden Syringes, Benton and Stone, Birmingham.*

PROPOSED NEW GARDEN OF THE ROYAL HORTICULTURAL SOCIETY

[TO THE EDITOR OF "THE GARDEN,"]

SIR, On behalf of the council of the Royal Horticultural Society, and in order to allay any anxiety that may be felt by the Fellows, I shall be obliged if you will publish the following statement: The general meeting of the society held on February 13 having unanimously adopted the proposal of the council to celebrate the centenary of the society by the removal of the society's gardens from Chiswick to some spot where the atmosphere is less charged with smoke, the council have inspected several proposed sites, and have at least one still left to investigate. The business is not one which can be hurriedly done. As soon as all the suggested sites have been properly considered by the council a definite proposal will be duly submitted to the Fellows.

[We received this note at the time of going to press, after the article on page 233 was written. EDS.]

Corrections. We regret some printer's errors that escaped revision in the Rev. G. H. Engleheart's article on "Dahlia's under glass" (p. 181). "For the pots I am inclined to apologise" should have been "For the pots I am not inclined to apologise," and the word "delightful," referring to the establishing of the Pyrenean mesochorus, should have been "difficult." EDS.

Flowers for illustration. We shall be pleased if readers will send any rare or good garden flowers worthy of illustration to Mr. H. G. Moon, Herbert Lodge, St. Albans. This will assist us greatly in maintaining an interesting series of flower sketches.



THE GARDEN.

No. 1480. Vol. LVII.]

[MARCH 31, 1900.

THOROUGHNESS IN GARDENING.

IN Mackail's "Life of William Morris" (vol. ii., p. 22) the biographer, speaking of some portions of an address given by Morris to the students of the School of Science and Art connected with the Wedgwood Institute at Burslem, writes thus in reference to the second of two passages:—

"The other passage is a piece of straightforward practical advice to designers. In the artist, and therefore in his art, a certain moral quality was before all things essential. The qualities fatal to art were not technical; they were 'vagueness, hypocrisy, and cowardice.' And of these three, vagueness was to Morris as immoral, and therefore as artistic, as either of the other vices.

"Be careful to eschew all vagueness. It is better to be caught out in going wrong when you have had a definite purpose than to shuffle and shrug so that people can't blame you because they don't know what you are at. Hold fast to distinct form in art. Don't think too much of style, but set yourself to get out of you what you think beautiful, and express it as cautiously as you please, but, I repeat, quite distinctly and without vagueness. Always think your design out in your head before you begin to get it on paper. Don't begin by slobbering and messing about in the hope that something may come out of it. You must see it before you can draw it, whether the design be of your own invention or Nature's."

Would that people would take this advice to heart in matters pertaining to the laying out of gardens. We should not then see those whole acres of planted ground where the evident procedure of the original planter could not be better described than in Morris's words as "messaging about." How often do we see excellent shrubs, perhaps planted without any definite intention, any aspiration towards pictorial effect, incongruous units huddled together; a waggon-load of trees from the nursery, ordered without plan, perhaps left to the nurseryman's own choice and planted as your good gardener thinks best—tall ones at the back, short ones in the front, and middle-sized between. Shrubs grandly grown by the nurseryman, perfectly planted by the gardener; technicality all right, but because of that sin of vagueness, of not taking the trouble to intend the doing of anything in particular, the thing done is senseless and soulless and wholly unprofitable.

This is why we may see hundreds of gardens one just like another in their wearisome monotony of utter dullness, where the only impressions that the more understanding observer receives are those of weariness at the tiresomeness of it, of regret that good material and good labour should be spent upon so dull a thing, of a desire to get out of it, to escape from its irritating restraint, to get away into field or wood or wayside, each of them a better garden in the sense of a place of repose to mind and eye than the one where there is no definite or clear intention—nothing but "messaging about."

It does not matter whether or no the garden shows the kind of treatment that most pleases or interests just you or me: it may not do either. Your taste or mine may be gratified by beautiful effects of grouping or colouring. Other people who also love their gardens may like it to grow things for their individual interest, or for many another reason, and with a wide diversity of object; and wherever this is the case, wherever a strong or even distinct wish of any one individual dominates the working of the garden, the garden will show that it is a living thing and not a thing inert. It will in some sort reflect the mind of its owner: it will look like something that is alive, and that has, moreover, the higher life of a living soul as well as the baser life of a merely existing body.

HISTORY OF THE KNOWLEDGE OF THE FERTILISATION OF FLOWERS.

It must not be supposed that flowers specially adapted for intercrossing cannot ever fertilise themselves; for the fact is that probably the great majority are capable of so doing, though irregular flowers are more or less obviously adapted to receive the visits of insects. If the flower be regular, as of nearly all members of the Ranunculaceæ, there are no great adaptations for special kinds of insects. Thus every petal of a Buttercup carries its own little gland at the base, and in the Christmas Rose every petal is entirely metamorphosed into a little honey-pot. In the two genera Larkspur (*Delphinium*) and Aconite (*Aconitum*) the whole flower is much modified. Thus the calyx has not only become the attractive organ, but is highly irregular, and the corolla is reduced to two petals, which are converted into nectaries. The carpels, instead of being numerous, are now from three to one only. The stamens are many in number and hang down at first, so supplying a foothold for bees. They rise up in succession, placing the anthers in a forward position, so that the bee is sure to get dusted

just where the stigmas of the next flower visited will strike it.

Now what is the supposed advantage of all this? H. Muller tells us that the expanded flowers of *Ranunculus acris* were visited by sixty-two different kinds of insects, whereas *Delphinium elatum* and *Aconitum Lycoctonum* had only *Bombus hortorum* for their sole fertiliser. A common occurrence with flowers adapted for insects is for the stamens to mature their anthers before the stigmas, so that, unless the interval be very short, such flowers may fail to set seed if they be not visited at all.

We thus see at least two disadvantages under which these flowers labour. One is the very possible absence of the one, or few insects only capable of pollinating it; the other is the inefficiency or inability of fertilising itself.

Buttercups have numerous visitors, and if none come, the anthers shed an abundance of pollen over the stigmas, so that the self-fertilisation is readily and fully effected. Fumitory has minute and extremely irregular flowers, but is very sparingly visited by insects. The stigmas consist of two lateral horns, each of which is surrounded by three anthers, so that the pollen pours the tubes into them without any extra aid. If its ancestry was more frequently visited, it has at least acquired a complete method of self-fertilisation, though a pistil only produces one seed after all. In the Crucifere the stigmas of the more conspicuous flowers are two-lobed, as in Wallflower and Stock. The flowers are highly attractive by colour and scent. They secrete honey by means of two glands or the receptacle.

When such flowers have become self-fertile, as in Shepherd's Purse, little or no honey is formed, and the two stigmas become reduced to a single knob, around which the anthers are closely adpressed. Mignonette is attractive by its cluster of red anthers and its powerful odour. This illustrates a case of variation in the capabilities of fertilisation. In many instances it is fully self-fertile without the aid of insects; in others it proved to be self-sterile, but could re-acquire self-fertility.

An important fact is learnt from this and similar instances, viz., that the sterility or fertility of individuals of any species must never be regarded as absolute. They depend on many other things besides insects, such as climate specially; thus *Eschscholtzia californica* was quite infertile in Brazil with its own pollen, but seed sent to Darwin proved capable of re-acquiring self-fertility in three years to the extent of 80 per cent.

Violets in this country set no seed by the usual scented flowers, but after they have done flowering, great quantities of buds may be discovered underneath the leaves which never open, but form capsules with an abundance of seed. They are called cleistogamous, a word meaning "concealed unions." They prove to be arrested stages of the usual flower, having only rudimentary petals or none, while the

stamens are of quite different construction. The five anthers lie adpressed on the top of the pistil, which has a short style with truncated stigma curled up underneath them, so that the pollen tubes enter at once into the stigma.

In warmer climates the ordinary flowers set seed, as in Liguria; while in Malta, the buds, which are cleistogamous here, develop into ordinary flowers. For further details the reader is referred to "The Origin of Floral Structures," p. 262, &c. The greater Stitchwort (*Stellaria Holostea*) and *Geranium pyrenaicum* are alike in having two whorls of stamens, five in each. The outer five mature first and carry their bursting anthers erect; then the other five follow, and, lastly, the styles and stigmas mature. But as these last grow up just before the pollen is all shed, though peculiarly adapted for insects, they can be self-fertilised. On the other hand, *G. pusillum* with its tiny flowers illustrates an opposite condition of things, for it has lost five stamens, and the pistil succeeds in maturing its stigmas before the anthers burst. Such a condition is called protogynous, *i.e.*, female structures first. But as the anthers soon mature, while the flower can supply some food to insects as it secretes some honey, it is abundantly self-fertile.

The Leguminosae afford a great variety of details, but they are all based on one plan. The carina or keel-petals, with or without alae or wings, form the landing-place, the stamens and pistil being enclosed within the boat-like carina. The weight of the insect depresses this and so exposes the anthers, which dust the bee or other insect on the abdomen.

In *Genista* the petals have spring-like claws and drop down; in *Melicago* the stamens spring up; in the Scarlet Runner they are twisted like a screw; and on a petal (a wing) being depressed, it makes the anthers come out just like the head of a snail from its shell. In *Lupinus* the pollen is thrust out, as it were, by a piston, &c. Willow herbs, like *Geranium*, supply several species, some of which have conspicuous insects visiting flowers, while other and small-flowered kinds are perfectly self-fertile. This result is evidently due to degradation, for the flowers have lost all attractive features. Thus in *Epilobium angustifolium* the stamens mature first, hang downwards, and the bees cling to them. The honey is secreted on the top of the inferior ovary. The stigmas are then quite immature. Long afterwards the stamens spread out and are held forward by the now greatly elongated style; cross fertilisation is secured, and self fertilisation is impossible. On the other hand, in small-flowered species, as *E. parviflorum*, &c., the flowers scarcely expand, and the anthers shed their pollen upon the mature stigma, around which they are closely adpressed.

This will illustrate what happens when a flower degenerates. First, the petals are reduced in size and become less attractive, if at all; the flowers tend to remain as buds, only half-open or not at all; the anthers and stigmas simultaneously mature and are placed in close contiguity; so that there results as much adaptation for self-fertilisation as there was previously or ancestrally for intercrossing. Lastly, in habitually self-fertilising flowers the amount of seed set is prodigious. Such plants are often annuals, and constitute many of our commonest, most abundant, and troublesome weeds.

Composite, with the widely exposed florets of the "head" are much visited, and when heads are conspicuous there is a common method of securing transmission of the pollen. The style, which is surrounded by the five anthers coherent into a tube, continues to

elongate until it has swept out the pollen and elevated it into the air. But in such a flower as the Groundsel, for example, the stigmatic lobes receive the pollen within the anther-tube, so that it is not pushed out at the top at all.

Primroses are generally dimorphic, having pin-eyed and thumb-eyed flowers; and this was thought to be a potent example of adaptation for securing intercrossing and avoiding self-fertilisation. Darwin's experiments showed a greater portion of seed when the flowers were "legitimately" crossed. When, however, we examine the results when the flowers are left to the casual visits of insects in Nature, we find that the worst kind of "illegitimate" union produces the best results.

Thus experiments show that the long-styled forms are more fertile than the short-styled when illegitimately crossed; but the Cowslip has to be contented with the latter, because the pollen can fall upon the stigma, which thus secures self-fertilisation, for in Nature's legitimate crossing it fails to be fully effective. (For details, see "Origin of Floral Structures," p. 205.)

Of all plants which exhibit the disadvantages of high specialisation in the structure of flowers the Orchids are most conspicuous. The great majority are so constructed that a structure called the "rostellum" intervenes between the anthers and the stigmas, preventing self-fertilisation altogether; yet in several genera this structure has become degenerate, so that the pollen masses actually slide or fall into the stigmatic cavity, the flower even becoming cleistogamous in several instances. (See paper by H. O. Forbes, *Trans. Lin. Soc.*, vol. xxi, bot., p. 548.)

The general conclusion, therefore, is, that flowers have been modified in response to the irritating action of insects, and have become specialised in various ways and degrees, giving rise to irregular flowers. This, however, is done at a loss in very many cases, for the more highly specialised they may be, the less is the number of insect visitors and the greater the chance of their setting no seed. For not only does the process of adaptation tend to stimulate the stamens into maturity too soon, but to develop structures which, as in Orchids, may not only easily interfere with self-fertilisation, but prevent it altogether.

Many such flowers, however, have reverted to a self-fertilising condition, and where this is re-acquired the plant then becomes vastly more fertile than it ever has before. The rule, therefore, for horticulturists is, indeed, what they practically follow, *viz.*, to cross flowers whenever they can, and adapt self-fertilisation for fixing new forms. GEORGE HENSLOW.

TWO EMINENT METEOROLOGISTS.

DURING the past few days the science of meteorology has suffered the loss of two of its most well-known and hardest-working members, in the deaths within a few hours of each other of Mr. George James Symons, F.R.S., and Mr. Edward Joseph Lowe. They both passed away on Saturday, March 10. Of the two, Mr. Symons was by far the more widely known. He was born in London on August 6, 1838, and became a member of the Meteorological Society at the early age of eighteen. During the greater part of his connection with the society he filled the office of honorary secretary, and at the time of his death he was president. His election as president for 1900 was a particular honour, as it was the year of the society's jubilee. Arrangements had already been made previous to his death to suitably celebrate this event in April next, but doubtless under the present sad circumstances the celebration will be abandoned. He

was a Chevalier de la Légion d'Honneur and an Albert medallist, besides being connected with several societies other than those with which his name is most closely associated. Throughout his life he made the subject of rainfall distribution his especial study. Forty years ago he commenced organising a system of rainfall observations over our islands, which at the present day has reached a perfection that can hardly be improved upon. In 1861, when he issued his first annual report, entitled "English Rainfall, 1860," it consisted of a small leaflet of four pages, giving the year's fall at 168 stations distributed over England and Wales. By earnest work and untiring devotion he increased this number to 1500 by 1870, and to 2114 by 1880; while in the last volume of "British Rainfall" that has been issued, the number of complete yearly records is 3404, the number of pages having increased from the modest number of 4 in 1860 to 243 in 1898. Mr. Symons' work has indeed become one of national importance, and it is imperative that it should be maintained in the state of efficiency in which its creator has left it. Happily during the last few years he has found in Mr. Sowerby Wallis, F.R.M.S., an able co-editor in producing "British Rainfall," so that the departed scientist leaves a successor who has gained experience under the very best training. In addition to "British Rainfall," the late Mr. Symons has, since 1865, issued monthly a magazine entirely devoted to meteorology, this being the only one of its kind published in the United Kingdom. Besides these publications he did much miscellaneous work for the advancement of the science to which he consecrated his life. His interment took place at Kensal Green Cemetery on Friday, March 16, at 1.15 p.m., a memorial service having previously been held at Holy Trinity Church, Marylebone Road.

Mr. Edward Joseph Lowe was born at Highfield, Notts, on November 11, 1825. At a very early age he was attracted to the study of meteorology, and from 1840 to 1882 he made a very valuable series of daily observations. He was one of the founders of the Royal Meteorological Society. In addition to this science he was much interested in the biology of animals and plants, ferns attracting his especial attention. On this subject he issued many publications, among them being "Natural History of British and Exotic Ferns," "Beautiful-leaved Plants," "New and Rare Ferns," "Fern Growing," &c. In the west of England, where he resided during the last twenty years of his life, he became widely known, and he published yearly exhaustive reports of the rainfall and meteorology of the district. In this connection I received a letter from him only two days before his death, which, after alluding to an intention he had of publishing a book in the near future, ended with—in the light of recent events—the pathetic words, "At present I am ill."

H. H. HARDING, F.R.M.S.

VERONICA SPICATA.

V. SPICATA (*Linnaeus*) is undoubtedly an indigenous British plant, and is found wild in these islands in two very distinct forms, both of which are figured and described in vol. vi. of Sowerby's "English Botany." One, which is generally accepted as the type, is only found (as a British plant) on the dry chalk downs of the Newmarket district. It is of very weak growth, the slender flowering spike not rising more than 3 inches or 4 inches from the ground, the flower, as far as I have seen, being always blue. I cultivated this for several years on my rockery, having first received it from the late Mr. Niven, curator of Hull Botanic Gardens, formerly well known as a collector of alpine plants. I have occasionally, but rarely, seen this form for sale in nurseries; it occurs in many parts of the Continent. The other form was called by *Linnaeus*, for no obvious reason, *V. hybrida*, but is now universally referred by botanists to *V. spicata*. It is found in several spots in the west of England and in Wales, generally on limestone downs. I have often studied it as a wild plant in the neighbourhood of Llandudno. It grows sparingly on

the Great Orme's Head, but on several of the bare rocky hills to the south of that town it is found in profusion, especially round Gloddaeth. These hills have a very thin covering of hard, dry turf not more than 1 inch or 2 inches over the surface of the broken carboniferous limestone. It flowers in August, at which time it is the most conspicuous flower visible, though seldom rising 4 inches high. *Helianthemum canum*, *Epipactis ovalis*, *Spiranthes autumnalis*, and stunted forms of *Thalictrum minus* are amongst its companions. The usual colour of the flower-spikes is some rich shade of glossy purple, but I have now and then found a spike of pure white, and different shades of pink are not rare. The leaf is broader and of greater substance, and the stem stouter than in the Newmarket plant, and the flower-spike much larger. I have frequently

As for *Veronica longifolia*, some botanists do not separate it as a species from *V. spicata*. Godron in his "Flora of France," discusses the question of their identity, remarking that *V. longifolia* when dried always turns black in the leaf, whilst *V. spicata* retains the green. Koch, in his well-known "Synopsis of the Botany of Central Europe," describes under Latin names four wild varieties of *V. longifolia* and six of *V. spicata*, some lowland forms being as much as 2 feet high. In my garden the spontaneously sown varieties are many, but nearly all belong to *V. spicata*. A few years ago I took to Kew Herbarium for comparison several of these; one, and one only, the curator of the herbarium recognised as typical *V. longifolia*. This plant came to my garden about twenty years ago from some nursery and refuses to be expelled,

though a weedy plant, and as it comes true from seed, I can always find one if any reader of THE GARDEN interested in the species would like to have it. It grows about 4 feet high, with long, narrow leaves on rather long stalks. I may remark in addition that the plant generally called *V. longifolia* var. *subsessilis* seems to me to belong rather to *V. spicata*, being in habit exactly like an exaggerated form of var. *hybrida*. It is said to come from Japan, but I never could get a fertile seed from it.

There is a pretty species nearly allied to *V. spicata* named *V. incana*. This forms spontaneous hybrids with the Llandudno *V. spicata*, which are very pretty, the leaves being as grey as lavender and the flowers pale blue on a long spike. Though I have many hardy herbaceous Veronicas in my garden of which I never could determine the species, those of the *spicata* class do not seem to form hybrids with those which bear axillary flowers, such as *V. Teucrium*, which for the most part have greater merit as garden ornaments.

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THUNBERGIA ALATA.

The pretty greenhouse twiner shown in the annexed illustration, though in cultivation for three-quarters of a century, is not so often seen as its merits deserve. It belongs to the order Acanthaceae, and is a very slender twining plant, practically an annual, though under favourable circumstances perennial. It occurs commonly in six varieties, white, light buff, and light orange, each with a self-coloured throat, and the same series with a purple-black throat, from which it sometimes gets the name of Black-eyed Susan. It is extremely easily grown, and will do in the stove, greenhouse, or, after a fashion, outside, but an airy greenhouse seems to suit it best. Sown in January it will flower all the summer with the most

ordinary care, but look out for red spider. If the cultivator possess a microscope, the hairs on the stamens will repay examination. The plant is a native of the East. GREENWOOD PIM

NOTES ON NEW OR RARE AMERICAN PLANTS AND SEEDS.

PLANTS.

ANEMONE DICHOTOMA (SYL., *pennsylvanica*). 1 foot, pure white, neat habit; remains a long time in bloom.

Anemone multifida (syn., *Hudsoniana*). Bright crimson flowers.

Anemone patens. 1 foot, flowers very large, pale lavender, early. A white flower under this name is figured on plate 1994 of *Bot. Mag.*

Aster Porteri. 1 foot, one of the best pure white species; flowers large, foliage and stem very neat and slender; good for cutting.

Frasera speciosa. A member of the Gentian family, 3 feet high, rigid erect habit, curious white flowers arranged loosely but symmetrically up the whole length of the stem, foliage whitish; called the Monument Plant from its very suggestive appearance. Only one of the seven known species—*F. carolinensis*, or *Walteri* seems to be in cultivation.

Helianthella quinquenervis, 3 feet, allied to *Helianthus*, *Cocopepis*, &c., grows from a thick tuberous root with slender stems and very large flowers sometimes 5 inches broad, of a pale yellow colour. An involucre of large leafy bracts gives a very distinct appearance to the heads of flower. This is the earliest to flower of any plant of its class, and quite one of the most striking. It is of the easiest culture either from seeds or divisions.

Lepachis (syn., *Rudbeckia*) *pinnata*. *Bot. Mag.*, xlix., t. 2310.

SEEDS.

Argemone platyceras (the Broad-horned). 3 feet, very large white flowers, blooming all through the summer; very ornamental foliage. Not mentioned in any of the ordinary books of reference or in the "Index Kewensis."

Argemone hispida (the Colorado Silver Poppy). Almost identical in appearance with *Romneya Coulteri*, only rather smaller in size of bloom.

Aster foliaceus. 1 foot, very large lavender flowers often 2 inches in diameter.

Aster Fremonti. 1 foot, with large violet-rayed flowers sometimes 2½ inches in diameter; suitable for moist, shady places.

Habonra trachypleura, 1 foot, has beautiful golden yellow flowers in large compound umbels and slender stems; foliage divided into beautiful feathery sprays; a most graceful plant. This plant is not mentioned in "Index Kewensis" or any of the ordinary books of reference.

Krynitzkia Jamesi. 6 inches high; flower resemble those of *Heliotrope* in form, but are white with yellow eye.

Lepachis (or *Rudbeckia*) *columnaris* (*Bot. Mag.*, xxxix., t. 1601) is a beautiful composite with long drooping yellow rays; blooms the first season from seed.

Lepachis columnaris pulcherrima. A grand variety with base of each ray conspicuously blotched with orange-earlet.

Lepachis columnaris totus purpureus. A variety with dark orange-brown rays, almost black; quite unique in this family.

Oxytropis splendens. 1 foot, new plant with silky silvery white foliage very conspicuous, with many flowered spikes, several from the same root; flowers large, Sweet Pea-shaped, deep rose in colour.

Iponoea leptophylla (Bush Moon Flower). 2½ feet high, a unique novelty. The plant is bush-like, much-branched, and neither trailing nor climbing. The flowers are of the usual Morning Glory shape, about 3 inches broad, rose colour, deepening to purple at the throat, remaining open till noon or a little later. The plant continues to bloom for about three months. The tuberous root attains a large size and penetrates deep into the soil, which should be well drained and of a loose sandy or gravelly texture. Plant the seeds where they are to remain; if a notch be filed at one end



THUNBERGIA ALATA.

brought plants home to my garden, selecting various colours. The rich tints of purple become dull with me; the best is the pure white, which does not alter, and for the most part comes true from seed, which ripens in abundance. On dry, shallow ledges of the rockeries, planted amongst stones with very little soil, the variety maintains its dwarf character in my garden, but if planted in the damp, retentive soil of the borders it soon becomes coarse and large, and seedlings whether crossed or not with larger forms which grow about the garden I cannot be sure—are often as much as 1½ feet or 2 feet high; in fact, they assimilate to the large forms commonly known as *V. spicata* of gardens, of which there are dull blue and white and pink varieties, and one with variegated leaves.

of each before planting they will germinate quickly. This fine novelty has already been introduced into British gardens, as I obtained a tiny tuber of it last year from an English nurseryman which has not yet begun to grow, and which I fear is too small to bloom this year. W. E. GEMBLETON.

[Many of the plants and seeds named in these notes seem to promise well for our gardens, and amateurs would do well to give them a careful trial: they are recorded in the list of Mr. D. S. Andrews, Boulder, Colorado, U.S.A.—Eds.]

A TRIP TO TAI-MO-SHAN.

TAI-MO-SHAN is a large hill on the mainland in the newly-acquired territory opposite Hong Kong, and is about 2000 feet high. Availing ourselves of one of the Christmas holidays, a friend and myself had a day's botanising there and found several plants of interest. We hired a launch and left Hong Kong at 5.30 a.m., and arrived at Tsin-wan, a village at the foot of the hill, in about an hour. It was just getting light when we got on shore, and as we proceeded on our way through the village we were saluted, in the usual way, by the yelping of a whole army of Chinese dogs and by the squealing of scores of the ubiquitous pig. We had not gone very far beyond the village when we were brought to a standstill by a Chinese water buffalo, which immediately on sight of us prepared for action. However, we managed to escape from it by getting through the nearest hedge. I do not know how it is, but these beasts invariably have a dislike to foreigners. Perhaps this accounts for the anti-foreign feeling of the Chinese; they take it with their milk! Passing along the edges of the Paddy fields, we came across that little sapindaceous creeper, *Cardiospermum Halicacabum*, in flower and in fruit. In case any should not know, I may as well mention that Paddy is the name given to Rice in a growing state, and it is also known by that name previous to being taken out of the husk. *Euphorbia pentagona*—at least I take it to be that species—is a common plant near Chinese dwellings, and is largely used for making hedges, which was the case here. This plant, as well as *Agave americana* and *Opuntia Dillenii*, is found right away in the interior of China, and unless one knows one would be apt to consider all three indigenous to the country. *Rosa moschata*, a sweetly scented little thing with white flowers, was in bloom—rather out of season, I think, as I have previously met with it in flower in March. As we went along we came across plants of *Buriera cristata* in the hedges in flower, and fine plants of *Ardisia crenata* in fruit. The latter when seen, as it so often is, smothered with its crimson berries, is a glorious sight. Other things we noticed growing in the hedges were *Plumbago zeylanica*, *Mentha arvensis*, and *Nephrolepis biserrata*.

After leaving the Paddy fields, and as we began the ascent of the mountain, we noticed three or four small trees, about 15 feet high, literally covered with one mass of berries, and on examination they turned out to be *Hex rotundifolia*. Proceeding upwards, on the south side *Saccharum procerum* was seen in abundant, its white wavy plumes being very striking. Small specimens of *Lipidium barbinifolium* were also met with here, and at some distance further up a tree about 40 feet high, which one of our Chinese said was a *fungus* tree. *Pinus Massoniana* and *Cunninghamia sinensis* had been largely planted by the Chinese, the former to be cut down as soon as big enough for fire-wood. The vegetation in the ravines was not very rich until we reached an altitude of about 2000 feet. *Gelsemium elegans* was then met with, its large dense cymes of pale yellow flowers making a grand show. This is a very

poisonous plant, and its properties are apparently known to the Chinese, as it has been detected as the poison used in a criminal case in Hong Kong. A friend of mine, perfectly cognisant of the properties of the plant, was handling a fresh specimen a short time ago, when soon after, two or three hours only, an irritation set up in one of his hands, which rapidly became very much inflamed and swollen, so much so that he had to consult a medical man about it. The doctor on seeing the hand immediately exclaimed that it was a very bad case of poisoning, and said that it was lucky for my friend that he had consulted him when he did, or the consequences would probably have been serious. I think there can be no doubt but that the poisoning was accidentally caused by the *Gelsemium*. This is by the way, however.

Trailing over huge boulders from 2000 feet to 3000 feet altitude, *Clematis crassifolia*, a fine-lobed plant with thick leathery leaves, was abundant, its large, loose panicles of white flowers, produced in the greatest profusion, making an exceedingly beautiful spectacle. In the same neighbourhood *Momordica Charantia* in fruit was common. Its fruits are ovoid in shape, of a bright orange colour, and are about 5 inches long. The most interesting plant found here was *Podocarpus argotaenia* (*Hance*) described in the "Journal of Botany" for 1883. It was first found by the late Dr. Faber on the Lo Fan Mountains, about fifty miles east of Canton. Subsequently Westland found it on Tai-mo-shan, and specimens were sent to Kew, where it was named by Hemsley *Podocarpus insignis* and re-described in the "Journal of Botany" for 1885 under that name. Mr. Hemsley had only male flowers for examination, and in a note he adds: "This is a very distinct and remarkable plant, if correctly referred to *Podocarpus*, but it may be a different genus." The leaves are arranged distichously, and are from 2 inches to 4 inches long, the upper surface green and the under divided into five longitudinal bands, two white and three green, the vittate markings being exceptionally well defined. The plant has more the appearance of a *Cephalotaxus* than of any *Podocarpus* I know. It is about 8 feet high and branched from the ground. Unfortunately, it was not in flower, but cuttings which were procured have been put in, and I trust will root. In this locality we only came across one plant, but on our descent of the east slope of the mountains we found four small specimens. *Magnolia Champinii* or *Magnolia pumila*, as it is now merged in, although there are considerable differences in the foliage and flowers of the two, was growing in very exposed situations, but the plants were very small, not being more than 3 feet high, and Ferns were quite at home underneath the large boulders, among which we collected the following: *Trichomanes javanicum*, *Asplenium rutae-folium*, *Asplenium emeatum*, *Gymnogramma decurrens*, *Vittaria elongata*, *Davallia elegans*, *Davallia pedata*, and *Davallia tenuifolia*. *Polypodium coronans* was very common and looked very fine; large masses of it almost completely covered many of the large rocks. On top of the rocks and stones were a few Orchids, such as *Eria ambrosia*, *Pholidota chinensis*, *Celogyne finibrata*, and *Bulbophyllum radiatum*. Two Ferns in company with these were *Polypodium adnascens* and *Polypodium Lingua*. Trailing over the boulders were several plants of *Eschyanthus acuminatus*, a species with green and purple flowers, but by no means showy; *Hoya carnosa*, not in flower, a simple elliptical-leaved *Rubus* with a terminal inflorescence, unknown to us; *Psychotria serpens*, which was a fine

sight with its white berries; *Rubus reflexus*, the foliage of which is very prettily marked when young and grown in the shade; *Pothos scandens*, *Bankia Championii*, a species with small, insignificant green flowers; *Euonymus hederaceus*, a good thing for covering rocks or walls, as it adheres quite readily to them; *Kadsura chinensis* in fruit; *Mucuna macrobotrys*, also in fruit, with pods upwards of 1 foot in length, and containing five or six large flat seeds; and *Stamtonia chinensis* were also met with here. After we had passed the boulders there was very little to be found, and things became scarcer the higher we went. On the summit we noticed *Melastoma repens* and *Pteris aquilina*. Soon after beginning our descent on the east slope, down a watercourse we came in sight of *Aspidistra lurida* in abundance. It was the typical form and in flower. The curious small tree-like *Lycopodium involvens* was grand, growing on stones and shaded by others above it. It was common for some distance down, but a patch about 3 feet square was particularly striking. In close proximity to each other are found *Dissochaeta Barthei*, a very fine *Melastomad* with bluish-coloured flowers over 2 inches across, and which were open at that time, and *Daphne odora* in flower, a grand species with sweetly-scented white flowers and leaves from 2 inches to 5 inches long. *Phrynium capitatum*, *Symplocos decora*, a richly scented species; *Eurya japonica*, *Camellia salicifolia*, a white-flowered hairy-leaved species, and *Elaeagnus Loureirii* in flower were also collected near.

Underneath the rocks in the watercourse, with the water dripping on them, fine specimens of *Chirita sinensis* were thriving, several of the plants being in flower, although the summer is their proper season for blooming. The colour and size of the flowers vary greatly, and no doubt, if some specialist were to take the plant in hand, results would be obtained similar to those in *Gloxinia* and *Streptocarpus*. *Selaginella atroviridis* and *Selaginella flabellifera* with *Pellionia seabra* were found in moist situations. *Acorns Calamus* and *Pentstemon Championii*, a pretty little *Asclepiad*, were growing in similar positions to that of the *Chirita*. The Ferns we noticed around here were *Menisium simplex*, *Asplenium fraxinifolium*, *Nephrodium opacum*, *Asplenium Griffithianum*, *Nephrolepis cordifolia* and *Aerostichum repandum*. Going further down, we secured a very fine *ternstroemiaceus* plant, probably a *Gordonia*, with flowers quite as large as those of *Gordonia anomala*, but with very different foliage. There were several plants about 4 feet or 5 feet high and one mass of bloom. *Musa sapientum* (?), the same species as is found in some of the ravines in Hong Kong, was plentiful, several of the specimens being in flower and fruit. Other common plants were *Adina globiflora*, *Chloranthus brachystachys*, a very showy plant when in fruit with its bright red drupes, which, however, are sometimes orange colour; *Fartingium Kienpferii*, *Phaius grandifolius*, a plant too well known to need any comment; *Psychotria elliptica*, a shrub with crimson berries; *Pittosporum glabratum* with light yellow flowers; *Bolmeria nivea*, the China Grass plant; *Actinodaphne chinensis*, *Begonia laciniata*, *Cuculigo recurvata*, *Dianella ensifolia*, with dark purple berries; *Dichroa febrifuga* in fruit, its bright blue berries produced in dense terminal panicles being very noticeable; *Enkianthus quinqueflorus*, *Ficus pyriformis*, *Atalantia Hindsii* with small yellow fruits about half an inch in diameter, and *Pandanus nrophyllus*.

Getting to within 300 feet or 400 feet above sea-level, we left the watercourse and began to

make our way back to Tsin-wan, skirting the hillsides as we went. Although we had about five miles to go, we did not come across so many interesting plants as we had seen in the ravines. The most striking plant we saw was *Gleichenia longissima*, or *G. exelsa* as it is called in Bentham's "Flora Hongkongensis." It is decidedly a most beautiful Fern, and when one comes across huge patches of it one seems to be rooted to the ground in admiration of it. *Gleichenia dichotoma* was, of course, common everywhere. We also saw some splendid specimens of *Cibotium Barometz*; there were some dozens of plants growing in a small ravine which we passed. *Lygodium scandens* and *Lygodium japonicum* were also quite happy trailing over small shrubs and rocks. *Asplenium esculentum* was luxuriating in swamps, and *Bryophyllum calycinum* in dry, stony places.

collector whom we took with us managed to get separated from us on the summit of the mountain, but he succeeded in getting home all right, bringing with him, amongst other things, fine specimens of *Peliosanthes macrostegia*.

W. J. TUTCHER.

Botanic Gardens, Hong Kong.

SOLOMON'S SEAL.

WHETHER in partly-shaded garden border, in nooks amongst shrubs, in woodland or on its edges, there is scarcely a space where this most graceful plant is not a welcome ornament, and, coming as it does in April and May, when other plants of bold and distinct habit are as yet scarcely developed, its signal merit is all the more apparent.

No plant is more desirable for wild garden-

"IN A SMALL WAY."

NOTES FROM AN OBLONG GARDEN. - IV.

EVERYTHING is very late this year. The Snowdrops, as is their custom, even when they appear a full fortnight earlier, as they did last year, made no sign until a few days ago, and then suddenly appeared in their hundreds; whereupon the Crocuses, not to be outdone, produced a mass of striped blooms, with a few scattered yellow cups prematurely flaunting here and there. Yet a week ago, when I went round, both Snowdrops and Crocuses were hardly showing bud at all. The sparrows, with their annoying scent for saffron, are down at once, of course, and have spoiled a good many of the Crocuses. Saffron is an old-fashioned remedy for moulting cage-birds, but whether it was given as a laxative, which it is,

and was supposed to assist the fall of the old feathers in some mysterious way, or whether it was intended as a colour food, for which purpose it has some adaptability, tradition sayeth not, so far as my library goes. The sparrows, however, will not moult until late August, so they have no excuse but gluttony for their destructive work, which they also carry out on Carnations and Pinks. Every Pink in the garden has had all its leaves tipped, as mistaken gardeners tip the foliage of Carnation and Pink cuttings, thereby causing loss of sap and loss of vigour to the cutting, which wants all it has of the latter to enable it to throw out roots. Perhaps all this is due revenge for the hanging of suet by swinging threads, whereby only such welcome visitors as the tits are able to partake, and the clumsy sparrow has to see himself entirely left out.

The quaint Dog's-tooth Violet is bravely up, with its lovely Arum-like spotted leaves, two folded together and half open, like a pair of hands bringing up a tender pink offering to the moist, soft air now prevailing. I planted a great number of the ordinary (mixed) Ery-



SOLOMON'S SEAL IN HALF-WILD GARDEN GROUND

There were some thousands of plants of *Eulalia japonica* in flower, and their white panicles waving in the breeze made a most imposing sight. Of Palms there were three or four species of *Calamus* in the ravines, and *Phoenix acaulis* was rather plentiful in other places. On approaching the villages (there are two or three rather close together) we saw some good specimens of *Quercus fissa*, *Camphora officinarum* and *Nerbelium Litschii*. The Oak has fine large leaves some 6 inches or 8 inches long and somewhat like those of a Spanish Chestnut. *Cheilanthes tenuifolia* and *Notholaena sulcata* were found on old walls, and *Pandanus odoratissimus* in any quantity near the sea.

The economic products of the district are chiefly Rice and Pine apples. Rice is grown on all the land where sufficient water is available, and the Pine apples on the slopes of the hills facing south. *Pinus Massoniana* is, as before mentioned, grown for firewood. A Chinese

ing in pure woodland, in bold patches with outlying tufts; and nearer home, where wood joins garden, nothing is better for grouping with the May-blooming Poet's Daffodil and as an outlying introduction to allied wood-loving plants, such as Lily of the Valley and Smilacina.

Solomon's Seal has a way of growth and a kind of beauty that are entirely its own. The stem rises nearly upright, and then bends over in a flattened arch that admirably displays the clusters of greenish white bell-flowers that spring from the axils of the leaves. In woodland places it should be planted in different situations, so that in some places where a wood path is in a hollow it may be looked at from below, and the curving arch of the stem and tender beauty of the little flowers may be fully enjoyed, while other groups planted in hollows and seen from above have quite a different aspect, for the leaves seem to lie out flat and reflect the sky.

throniums in the autumn, but they are not visible yet, and I feel rather afraid that they never will be, for they were an auction lot, and for the most part decidedly shrivelled. Auctions present the most vivid temptation to the amateur whose ambitions outrun his purse, but, on the whole, I think it is best to buy less from a nurseryman and pay more for it, unless one is able to attend the sales and look at the lots. With all the care which I have no doubt is taken, the condition of the bulbs is very varied, even at the big London sales whose promoters are of the most undoubted respectability; and when this is taken into account, there is not much saving in the end. For professional gardeners and those who can go to the sales, opportunities are afforded of getting really wonderful bargains; and, indeed, a little list I filled up not long ago brought me some rare Indian Lilies, apparently perfectly healthy bulbs, for a mere nothing; whereat much

rejoicing! Country town auction sales of Roses, &c., are often got up by people who are not at all to be trusted, and the most tempting-looking rows of Rose bushes, all beautifully uniform and most neatly cut and tied up, are apt to turn out very differently to the result promised by their labels. Two or three years ago a couple of men went round this town with a large cart-barrow, whereon were quantities of the most healthy-looking Carnation plants imaginable, each done up neatly in moss and bast and labelled. They found eager purchasers, one of whom, now writing, somewhat distrustful at the time, expended 2s. 6d. on an experiment of five, and was in no wise surprised to find that "Crimson Clove," "White Clove," "Germania," and "Alice Ayres" grew profusely and blossomed sparsely with single blooms of a dirty pink and about as big as a sixpence! To judge by the crowds around that barrow, a good many people hereabouts have been disappointed in Carnation growing. Sometimes we see cartloads of the freshest green Palms, which are offered at low prices. These have been well forced on, and, like most of "all-a-growing and a-blooming's" stock, bitterly resent their open-air peregrinations following on their native hottest of hot-houses, and wholly refuse to be happy in any human habitation. Apropos of the migration of a plant from its first home, I had a gift the other day for my little greenhouse, consisting of a couple of small pots, one containing what had been a thriving *Saintpaulia ionantha*, and the other a small *Gloire de Lorraine* Begonia. Unluckily, these were a secondary bestowal, and had been given by the gardener who grew

them to a friend of mine, who has no greenhouse, with the polite, but misleading assurance that they would grow in her drawing-room. To this end they had been assisted with an over-plentiful supply of hard cold water, and *Saintpaulia* had rotted at the core in the insidious way its family have, whereby the crown of the leaves looks all right, but on examination is found to be only connected with the root by sundry links of rotteness. The Begonia, after the manner of its kind, dropped all its leaves as a protest, and the recovery of either is more than doubtful. Pity, since the rather insignificant flowers of the former—little black-eyed scraps of bright lilac velvet—are so plentiful as to strike a charming note of colour against its grey-green plush leaves, while the deliciously toned crisp pink Begonia blooms crowd all over the plant till it is a very drooping pyramid of clear rose.

A visit to the small frame which helps to supply the oblong winter-tender beauties is also a treat to me. Just now it is full of a neat array of small pots of hybrid Columbinæ—*Aquilegia* is a pretty word, but Columbine a prettier—*Mimulus* of a particularly charming strain, whereof the big blooms vary from palest unspotted primrose to deepest and most fiercely blotched crimson, and single *Pyrethrums*, fast covering their pots with a spread of fresh foliage like carrot-tops. All these, sown last summer, would have stood a mild winter out of doors, but as there was the chance of a hard one, I kept half my stock of seedlings in the frame, and they are four times the size of those in the beds and will blossom earlier, thus

keeping up a succession. Among a few cuttings in the cold frame are some bits of *Buddleia globosa*, which I brought with me from our last garden, and which have rooted beautifully. This shrub is one of my pet plants, and is not half so much used as it deserves. It is pretty either as a bush or on a wall, and has a tropical look which is very attractive, the cool sage-green, pointed leaves, lined under with silver, beating the Willow by superior size and crinkly formation which charms the eye. The Orange balls, about as big as a Cherry, from which it takes its English name—Orange-ball Shrub—are delightful in colour, and it produces them freely when the sun reaches it; and yet its roots can be in sweet moist loam. Another of my favourites is *Veronica spicata*, but I have only the blue form, which seems glad to grow wherever I choose to stick in a twig of it. Very soon we shall have a gay row of Dean's

hybrid Primroses; already they are catching up their brethren, Wilson's blues, which have been struggling to flower all through the snows of January and early February. This is their second year in both cases, so must sow more when July comes. I do not find it advisable to sow any seeds in the open here, for this soil dries very fast on the surface, and all my perennials and biennials are raised in the frame, which can easily be shaded and kept moist, while it is easy to mulch the parched-out seedlings with a sprinkling of cocoa fibre. M. L. W.

Bath.

EUCALYPTUS GLOBULUS.

ALTHOUGH it is usual to disparage this plant either because of its tenderness, the worthlessness of its wood, or its liability to damage from winds, yet it is by far the most useful, as a garden plant, of the many Gum trees that have been tried. Except in the extremely favoured localities of these islands, *i.e.*, the Scilly Isles, the south and west of Ireland, &c., it cannot be left out of doors in winter with safety. It may escape in a mild winter, and there are plenty of records of its "hardiness" in England based on such exceptions. As a matter of fact, it is no hardier than *Acacia dealbata*, *Embothrium coccineum*, and *Fremontia californica*, and is less hardy than *Camellia japonica*, *Azalea indica*, *Chamaerops Fortunei*, and *Platanus tenax*, which are popularly known only as greenhouse plants. But it has considerable value as a sub-tropical plant, as may be seen in the London parks every summer, where its attractive silvery leaves are often used with excellent effect. In conservatories it may be relied upon to grow rapidly into an imposing tree, but thus used it must be ruthlessly cut down and replaced with a new one as soon as it gets too large. In countries where it is hardy it is one of the best known of ornamental trees, and many a picturesque scene on the Riviera, in India, California, the West Indies, &c., has the Blue Gum for its most effective object.

W. W.

WOODLANDS.

BY-PRODUCTS OF WOODS.

THESE are of less consequence now-a-days, owing partly to the reduced demand and to the want of thrifty management on estates. Except in the disposal of the measurable timber, comparatively little attention has been paid to minor forest products. One general reason of that is the very common practice on estates of selling timber standing in the wood. This plan is supposed to save trouble and expense, the purchaser usually taking all risks, removing the timber within a stipulated time, and taking to the top, top-bark, and underwood. When the lots are correctly valued beforehand, the owner knows their exact worth and can get it, this is probably the best plan; but there are few men who can value standing timber well, and great mistakes on the wrong side are common. It is a very significant fact, too, that timber merchants invariably prefer to buy lots standing, and they are too good hands at valuing to offer for any lots unless they are sure of a good margin. Of course, the felling and lotting of timber in large quantities, stripping, drying, and selling the bark, cutting up and disposing of the cordwood, &c., involve a good deal of expense to



SHOOT OF EUCALYPTUS GLOBULUS, SHOWING FLOWERS AND FRUIT.



EUCALYPTUS GLOBULES IN SOUTH ITALY.

the vendor; but the purchaser who buys timber standing has to risk all that also, and if the vendor sets about the business in the proper way, he ought to get all his expenses back again in the price of the timber. By far the best plan for owners of timber is to fell and measure the timber after it is down, and I look forward to the time when, under a better system of forestry in this country, that will be the rule. There is great risk of loss and waste in our present methods of conducting sales. When a tree is down the measuring of its contents in feet is one of the simplest operations and the measure can be verified by anybody; but when trees are valued standing, their owner has seldom even a vague idea himself what they are really worth. The market price per foot is easily ascertained: it is the number of feet that the vendor needs to get at, and all the rest is plain sailing. I have seen valuations of large lots of timber by persons calling themselves valuers in which the number of trees and poles only were banded in to the owner, with a line to the effect that the valuer valued the lot at so much, giving the total sum, and that was all. I had once to act as referee in a disputed case where a whole plantation was sold to a colliery, the difference between the opposite valuers being wide. Not being able to see where the value claimed on one side came in, after sorting out the different kinds of trees and their contents, I asked the valuer "how he got at it." His reply was, "That is my business." The fact of the matter was that either his quantities were not there, or his price was out of reason, and he knew it. At all events he had to make a large

measurable quantity, and sold for firewood and other purposes. Wood-splitters exist in every village in the forest regions, and immense quantities of firewood are stored close by. In some places the villagers (women) are allowed to go into the woods to pick up the brush wood paying a small sum for it and they carry it for miles on their backs to their homes.

Forest produce of the kind described in the forest regions of the continent are to the poorer inhabitants what peat is at the present time to country people in remote moorland districts in Scotland and England. If ever we have again extensive forests in this country, forest industries will no doubt revive, and wood fires in dwellings will be much commoner than they are now with coal plentiful.

FIREWOOD

would now be far more extensively used, in preference to coal, if only it was plentiful enough. That is the sole reason, I believe, why it is not used more extensively, for most people prefer wood fires, if they can have them, and in some houses the fireplaces are made to burn wood. In the south and south-west of England a good deal of wood is burned at present, and whenever coal reaches a high price, the demand for wood is considerable, on the score of economy alone.

Immense quantities of small firewood are consumed now in towns and villages, and regular supplies are furnished to shopkeepers to supply their customers. This firewood is used mainly for lighting fires, and faggots for that purpose are carried right into the country

abatement. One of the first things that strikes the visitor to German forests is the extreme economy practised and the absence of waste. Every scrap of wood is turned to account. Seeing a waiter at a hotel turning out a bundle of what I supposed to be matches, I looked at them, and found they were tooth-picks from the forests close by, and they were the only kind in use wherever I went. Nothing is wasted.

Of course the demand for firewood gets rid of much small forest produce that is frequently unsaleable in this country, and that more than anything else clears the forest of much small top and lop that is left after falls of timber in our own woods to litter the ground till it rots. The German system of forestry really renders a complete clearance of old refuse from the forests a necessity. Decaying branches breed disease, harbour injurious insects, and hinder seeding and planting operations. Hence, after the timber has been removed, all the cordwood and small top is collected, stacked in

from the towns and sold at so much per bundle or dozen bundles. And not a bit of this commodity is home-grown. Quantities are, I believe, imported from the continent, and at all events the best faggots are made from foreign Fir, deal fragments, and refuse. And this goes on in neighbourhoods where much home timber is felled and quantities of faggot-wood left on the ground to rot. Agents to proprietors might collect every bit of brushwood and dispose of it to advantage, but that is rarely done except for home consumption. On numbers of estates poor people would collect the firewood of this description and be glad of it, and willing to pay a reasonable price, but the gamekeeper steps in here on behalf of his pheasants and other game and prevents them. The quantity varies, but for every 100 cubic feet of timber removed from a wood about a ton of top-wood is left. A large portion of this consists of

Cordwood,

pieces from 1½ inches to 5 inches thick, and which is usually cut and ranked by itself. Not so long ago the cordwood ranked as an important item in a fall of timber, 15s. per cord or ton being easily realised for it, which meant 10s. for the owner in the wood, the difference being paid for cutting and sorting. Cordwood is either made into charcoal on the spot or is removed by manufacturers to their works and distilled for its chemical products. There is always more or less demand for charcoal in connection with the manufacture of steel and for other purposes, but it should be well made if a fair price is expected for it. Sheffield steel manufacturers sometimes buy large quantities in the wood and have it burnt there by their own men. In most parts of England charcoal can always be readily sold, and there are usually charcoal-burners in every locality who understand the business, living in the woods during most of the year. From time immemorial charcoal has been an important by-product of woods in England, and the sites of charcoal pits can often be detected in old woods by the groups of seedling trees that have sprung up on them while they were bare of vegetation. Scottish writers on forestry, such as Brown and Grigor, make hardly any allusion to the subject, and charcoal-burning is less understood in the north, but nowhere should cordwood suitable for charcoal be neglected when the quantity is large. We have sold large quantities to the poorest of charcoal-burners, who collected and cut the wood themselves and found the purchasers, paying the forester for each pit before removal, the fraternity being something akin to gypsies in their habits and customs, but adepts at their business. A charcoal pit requires close attention day and night in order to produce the "coal" without waste. All the dust and small has to be sifted out, lump charcoal only being paid for, the dust, as often as otherwise, being left in the wood. After the charcoal man comes the "ramil" burner, who takes what the first leaves in the shape of sticks under 2 inches in diameter. This produces small nodules of coal fit for some purposes, but the demand for it is not great. J. SIMPSON.

(To be continued.)

Lotus Peltophyneus Even in the most favoured spots this will not always pass through our winters out of doors unprotected. For the rock garden it is an ideal plant, and likes a hot, sunny spot where it will grow freely, throwing out long growths of pretty grey-green foliage. Overhanging a ledge of rock or trailing over a great boulder and studded over with crimson Chantus-like flowers, it is really beautiful. It is a plant seldom seen growing in the open. L. R. N. Wales.

KITCHEN GARDEN.

WINTER ROOTS NOT MUCH GROWN.

AT certain seasons, such as we have just passed through, when great havoc is played with the winter green vegetables, there are some things not much grown that are worth extended culture, as they need but simple attention and give variety. Another point is that these vegetables may be grown specially for winter supplies, and for this little glass protection is needed. My first vegetable on the list is

CELERYAC.

a root of which I have several times advised the culture in THE GARDEN, and a vegetable that at the present time is being imported in large quantities from the Continent, and I fail to see why this is necessary, as it will grow as well in this country as in France, but of course to get it equal to imported produce it needs good culture. In this note I shall only briefly describe the most simple, and at the same time efficient mode of growing good roots. As its name implies, it is closely related to Celery, the root being the edible portion instead of the stalk, and, unlike Celery, little blanching is necessary. In my opinion few vegetables are superior when this is well cooked, and those who like boiled Celery would prefer the sweet nutty flavour of Celeryac.

Now and until the end of April is a good time to sow seed, and at the start it may be treated like Celery. For early autumn roots I would advise sowing in the early part or middle of March, and for late use from Christmas to April, the seed should be sown in April. For an early supply a box of seed raised in heat will be ready to plant in the middle of May, and later sowings should be planted in June; in fact, whenever sown it is well to prick off the seedlings when large enough to handle. These will do in frames, and the earliest will benefit by a little bottom-heat. On the other hand, I have sown Celeryac in a cold frame in April, pricked out the seedlings on a warm open border when large enough, and got roots equal to those sown in heat.

When planting out they need care, and the soil should be deeply dug and well enriched with manure. They do well in drills 3 inches deep to convey moisture to the roots. Each seedling should have all suckers removed previous to planting. The plants may be placed in rows 2 feet apart, or even more if land can be spared, and 18 inches apart in the row. They need copious supplies of water during dry weather, and liquid manure or a fertiliser previous to the watering. During growth all suckers that show should be pulled out, and I have in light soil found a mulch of short manure of great value in the summer months. Celeryac remains sound for months after attaining maturity; it is nearly hardy. It may be lifted and stored like other roots, or soil may be drawn up to the crowns early in the autumn and the roots dug up as required. I favour the latter method, as the roots are firmer and sweeter.

SALSIFY AND SCORZONERA.

Both these vegetables are useful at this season and can be grown and wintered in the open in well-drained soil, with litter as a covering in severe weather; but it is, doubtless, the best plan to lift in November and store the roots in sand or fine ashes, as treated thus they are easy to get at when needed in severe weather, and the last-named, being a native of Spain, in severe winters is liable to injury in the colder parts of the country. I mention these two vegetables together on account of their season being the same and both needing the same kind of culture, but it should be stated that Salsify should not be sown in recently manured land, as it is inclined to fork badly, and to prevent this I would advise land that has been heavily manured for a previous shallow-rooting crop and dug deeply. Few roots better repay liberal supplies of food in the way of liquid manure

than this, and, failing liquid, it is well to make free use of fertilisers, such as guano or nitrates, given during growth. An open position is essential, as shade in any form creates a tendency to run to seed. Seed is best sown in April for an early supply, and the middle of May for a late spring crop. Both need much the same space—2 feet between the rows, and half that distance between the plants in the row. Unlike Celeryac, these roots go deep down in search of food, and thus need deeply-dug soil and food during growth as advised above. In poor land they run to seed and are worthless. There are very few varieties. The best Salsify I have grown is Giant and the Mammoth. These are larger than the ordinary kinds, and the newer Russian Scorzonera is superior to others. The flavour of these roots is much liked by many.

HAMBURGH TURNIP-ROOTED PARSLEY.

This is probably much less known than any of the above roots, and on this account is worth describing. It is well worth growing in all gardens where variety is needed, or vegetables in quantity are required. The roots when well cultivated are delicious, and many persons are very fond of their distinct flavour. Much the same culture is needed as advised for Salsify. Recently-manured land causes the roots to spread or fork badly, and though poor land is not desirable, food can be given freely during growth, or the land heavily manured for a previous crop, such as Onions or Celery. Seed for root-production is best sown in March or early April in drills 18 inches apart, and the plants 12 inches apart in the row. They are ready for use in October, and keep good till April if stored in November in a cool place. G. WYTHES.

ILFRACOMBE MARKET IN SPRING.

THE end of last April found me in Ilfracombe, and, without knowing what was in store for me, I discovered that I was in a part of Devon where old-fashioned flowers were grown in abundance and made to pay. Down here in the south of the county the cottage gardens are singularly uninteresting, but in the north it is otherwise. One has heard much of the beauty of the North Devon gardens—too much, in fact, for the grubber from South Wales and elsewhere has ravaged the whole Ilfracombe district, and one may go miles, not only on the high roads, but in the bye-ways, off the beaten track, and find little else but Hart's-tongues and other equally common varieties. Devonshire land-owners are at last awaking to the seriousness of the situation, and the United Devon Association is making arrangements to undertake prosecutions, and pay a part of the expenses if need be; but the grubbers are by no means easy to catch, and when caught the people robbed often refuse to sanction a prosecution. When too late the seriousness of the situation will be recognised.

However, if the hedgerows are losing their charms, the cottagers and farmers are fully alive to increasing the beauty of their gardens. The rich red soil is unusually well provided with the essentials for brilliant colouring, and in it bulbs above all things flourish and increase to an extraordinary extent. Further than this, every flower that can be brought to market finds a ready purchaser.

Ilfracombe Market House is built on two levels, with a drop of some 20 feet between the two, a double set of exceedingly steep stone stairs providing communication. Let anyone who loves a mass of colour take his stand at the head of the stairs, say, at ten o'clock on a Saturday morning in late April or early May, and he will enjoy the scene. Behind and in front of him will be crowded stalls, flowing and overflowing with flowers of all sorts. Tulips and Narcissi, Forget-me-nots and Wallflowers, Scillas of all sorts, stacks of Hyacinths, Anemones, Primroses of every shade, Ribes and purple Flages—every kind of good hardy flower is there. For a shilling you can get enough flowers to keep a house gay for the week, and, what is more, not only flowers—for the good folk have far better taste than many a professed market grower—

but one can get bunches of green of all sorts, and bunches of grasses and great bales of sweet-scented things, such as Southernwood and Myrtle, Lemon Verbena and Rosemary. The flowers of the field are not forgotten either.

There are several stalls devoted to Marsh Marigolds and Cuckoo Flowers, the wild Aquilegia and Water Forget-me-nots, tinted Ivy and Water-cress. Everything is jumbled up and, owing to lack of space, huddled together, but it is a sight never to be forgotten.

The Tulips are for the most part Gesneriana and Golden Crown or Golden Eagle, which you will, but there are many bunches to be seen of good old striped varieties, one in particular that I am very fond of, orange splashed with apricot and rose.

Parrot Tulips have only lately been introduced, and are more expensive than the others, but doubtless as they increase they will get as cheap as the rest. Most of the flowers have to be brought many miles to market over precipitous roads, and several of the carts come with the Tulips cut with long stalks and rammed into 9-inch pots, the bottom of the carts being packed tight with the pots, and then on top come boxes of the smaller flowers. It seems an excellent plan, and the flowers travel straight to the buyer's hand as though they had only been picked ten minutes.

To my mind, the chief gem of the whole show is the Scilla tribe. Nutans and campanulata are to be seen in heaps in all shades of colour, from white, through rosy pink to pale blue, and so on to intense purple. Why are these lovely Scillas so little grown? They are ridiculously cheap, and for planting with a background of shrubs or trees, or, better still, in semi-wild places, they are unequalled.

One old lady brings a cartload of Anemones—and such Anemones! I have never seen a finer range of colouring; and as to her fulgens, they are dazzling. But the pride of her heart is her stock of fulgens bicolor, a variety now almost out of cultivation, and to my mind a most beautiful thing. It is exactly like the type, except that it has stronger foliage and a white band running down the centre of each petal. As the flowering season is on the wane this band is not well defined, and the petals are irregularly flecked with streaks of white.

Poking about among the stalls, I last year found many other treasures, including a splendid crimson Jack-in-the-Green Polyanthus; a dwarf German Iris, both white and purple, half-way in height between pumila and the common form; Muscari comosum, monstrosum and luteum; a funny old-fashioned pale pink Hyacinth with about a dozen semi-double flowers on a long stalk—in fact, I took it to be a double form of nutans until I bought some bulbs and saw the foliage, which proved it to be a Dutch form; and many another thing I saw that I have no room to speak of. All I can say is, go and see; and if you take an interest in the flowers of our ancestors, you will find them at Combe Martin and Bramton, Lee or Barnstaple. The whole district is full of good things, but, above all, go to Combe Martin, where lives the Lady of the Anemones. B. D. WEBSTER.

Newton Abbot.

FERNS.

HARDY FERNS.

UNDoubtedly the best time of the year for re-arranging or dividing hardy Ferns is in March or early in April before they commence to send up their fronds. Moved or parted at this period, their long winter's rest enables them to stand the operation with practically no check at all, and they have the whole of the growing season before them in which to re-establish themselves. Those who may be desirous of starting a collection of good varieties should avail themselves of the opportunity, as while still dormant they travel without damage, and, as we have said, are all ready to start fair in the new

quarters which may be provided for them. The more delicate varieties—that is, as regards their make, for all are hardly as grass—to which we have already alluded in previous articles, should certainly have the protection of a frame or cold conservatory, as few gardens afford those congenial conditions of shade and shelter from wind which permit them to show off their charms to the best advantage. Anyone with a conservatory facing north, where flowers are handicapped by lack of needful sunshine and only exist as scarecrows, would be well repaid by the acquisition of a few good Lady Ferns, Lastreas, and Shield Ferns of the right class, which would thrive under such circumstances. A frame or two under north walls would do the like, and it is a capital plan to keep to the varieties of one species in each frame, as is often done in the Lake district, where our native hardy Ferns are appreciated as they should be. There we walk into a Fern-lover's garden, and find one frame full of Blechnums—no two alike, but all beautiful—another full of Polypodium vulgare in all its diversity, and so on. There, as a rule, the plants are in the soil, a special bed being made of good compost, and the frame simply put over it, due attention being paid to shading and admission of air. A thick bed of ashes, however, at the bottom of a frame and plants in pots or pans serve the purpose well, and admit the better of shifting if the growth becomes too crowded. Cocoa-nut fibre does well for a time as a plunging material, but is apt after a while to rot and breed fungi, and then is distinctly harmful. In the open many of the robust varieties, such as most of the Lastreas or Buckler Ferns, can take care of themselves, and lose little beauty by roughing it; but it is always advisable to embed porous stone or brick-burns between the plants, forming a sort of rockery, even if it be flat, as these serve the double purpose of retaining moisture in the soil and keeping the plants from spreading induly into each other's domains. It is well, too, to divide the plants from time to time when their crowns have a tendency to multiply and form bushes; single crowns always develop to far better advantage. The best site for a rockery is under a north wall, and with a slope facing north or north-east; but some sort of wind-break is needed with such an aspect in many situations, as Ferns suffer perhaps more from wind than from hot and scorching sun. If a Fern needs dividing, it is better at this season to fork it up with as little root-damage as possible and pull the crowns apart, using a knife as a start if necessary, but taking care not to pinch the crowns, in which the future crop of fronds is even now snugly packed, and consequently liable to be damaged by rough handling. Any dead stumps are better removed, but it is early yet (March) to clear away the old fronds altogether, as they serve as Nature's own protection against frost and drying winds. With the starting growth a multitude of fresh roots push from the frond bases, and are fostered by the protective debris aforesaid; hence a fit of tidiness may suddenly expose these and seriously damage future results. If neatness is a *sine qua non*, some light mulching of leaf-mould should be given as a protective substitute round the crowns. In the open ground Ferns are far less dainty as to soil than they are in pots or pans. Good loamy garden mould does for practically all, but it always pays to give a liberal admixture of leaf-mould or brown peat when a Fern bed or rockery is made, and if the soil be stiff this is quite indispensable. A common mistake is planting too closely together. In the first instance, acquisitions are usually young plants, and consequently are installed so as to furnish the bed or rockery fairly well at the outset; hence a single growing season suffices to crowd it, and only the few on the outside get a chance of displaying their beauties, and quite possibly some unfortunates in the middle perish altogether in the struggle for light and room. It is therefore highly desirable to bear in mind the size of the adult plants, and submit to a little bareness at first; and it is also best to put the dwarf forms well to the front. Finally, we beg our readers not to devote good, shady, sheltered, congenial spots for Ferns to the common ones bought from the street hawker or the shilling-a-dozen roots exposed outside

some flower shops like seedling Cabbages. These are not—emphatically *not*—the Ferns we treat of at all. True, if properly grown they are pretty, but their place is the country hedge, or coppice, or glen whence the Fern vandal has plundered them, and where Nature now and again in some inscrutable way transforms individuals amongst them into the varieties, ten times more worthy of cultivation, with which our Fern-hunters and Fern-raisers have enriched us all, though few are wise enough to profit by their successful and persevering quest.

CHAS. T. DREBY, F.L.S., V.M.H.

NOTES FROM NURSERY GARDENS.

HYBRID DENDROBIUMS AND LÆLIAS.

VISITING Mr. J. Cypher's nursery at Cheltenham at any season of the year is interesting, but about this time Dendrobiums and Lælias form an important feature. The flowers of Dendrobium Phalaenopsis are produced in wonderful profusion, and the species and hybrids of the deciduous section also present a picture that cannot be excelled, not alone for the number of flowers, but also for the varied characteristics displayed in the innumerable varieties now in full beauty. The hybrids of the *D. Ainsworthii* section are a host in themselves. *D. splendidissimum grandiflorum* and its near allies produce large flowers of rich

The Cypripediums are represented by the best and rarest forms. One of the finest in flower was *C. Wottonii* (callosum - dilatatum), from Mr. Measures' original stock. Numerous forms of *C. Lathamianum*, *C. Calypso*, and *C. villosum* were in beauty, showing the usefulness of these late winter-flowering Orchids, which are suitable subjects for cool-house treatment.

The Mexican Lælias, like the Dendrobiums, have been for many years a special feature of the Cheltenham nurseries, and remarkable instances of good culture are evident in the numerous natural hybrids and species. The dark section of *Lælia anceps* includes such superb forms as *L. a. Amesii* and *L. a. grandiflora*, which is closely allied, if not identical, with Mr. Chamberlain's fine variety (certificated a few years ago). The subject of the accompanying illustration will convey an idea of the extent to which the white section alone of *L. anceps* is cultivated, 420 blooms being in full beauty at the time at which the photograph was taken. They include such well-known forms as *L. a. Dawsonii*, *L. a. Sanderiana*, *L. a. Williamsiana*, *L. a. Stella*, and *L. a. Hillii*. We should much doubt if a finer show of this section has ever been seen than the one displayed.

H. J. C.

SEED SOWING.

IN these notes I refer chiefly to vegetable crops, though, as a matter of fact, they apply equally to annuals sown in the open border, or more tender ones raised under glass. In carrying out such important work, how few of us escape making the common error of sowing the seed too thickly. Certainly no one would advise such a bad practice,



A DISPLAY OF WHITE FORMS OF LÆLIA ANCEPS IN MR. J. CYPHER'S NURSERY AT CHELTENHAM.

substance and colour. *D. Dulce* (*Lanawianum - aureum*) is represented by the best form we have seen; the flowers are much larger, more open, and of a deeper rose tint than usual. *D. rubens grandiflorum* is another striking hybrid, showing the influence of *D. nobile nobiliss* in its parentage, the sepals and petals being as dark as the last-named species, the lip tipped with purple, and having a broad band of white in front of the rich maroon disc. The species are well represented by finely-flowered specimens of *D. Wardianum*, *D. atrovioaceum*, *D. nobile* in variety, *D. n. Ballianum*, *D. n. nobiliss*, *D. Cooksonii*, with unusually large flowers, and various other species were well represented. The robust growth shows the good effect of Mr. Cypher's system of culture.

and all are, or should be, familiar with the evil likely to follow. Why then do we continue making such mistakes? Probably we do not realise, at the moment when the "pinch" of seed is between the thumb and finger, the number of seeds that "pinch" contains. Some seeds are so small—the *Begonia* for instance—that no little care and patience are necessary in distributing them evenly and thinly over a given space. In this case some slight excuse may be made if the seedlings appear in tufts rather than each one separated nicely from its neighbour; but this certainly would not hold good with any vegetable crop.

Few, if any, of our crops are sown so thickly as Carrots. On cultural lines all seedsmen would condemn such a method, but as a matter of business

they can hardly be expected to be severe with their clients for the wholesale waste of seed. A moment's thought should be sufficient to stay the careless hand of the sower.

If we take the Brassica tribe or Celery, for instance, it is desirable to have a good store of plants to work upon, and there is safety in sowing plenty of seed, providing it occupies sufficient space. Unless it be the different kinds of Beans which are set out with a dibber at regular intervals, how few of our other crops but suffer more or less from the overcrowded state of the seed-bed. When thinned out or transplanted, the plants may out-grow such unfavourable conditions, but better results still would undoubtedly follow had they not been subjected to them.

In sowing the seed of Peas it is necessary one should bear in mind the abundance of haulm many of the main crop varieties make and provide room for its full development. It is impossible for each plant to branch out freely when the seed is sown thickly. The drills should not be V-shaped with the seed huddled together in the bottom; they should be broad, from 9 inches to a foot across, and flat. If the seed is next sprinkled thinly over the surface of such shallow trenches, each plant would be capable of producing far more fruit. The advantage does not end here, as when grown under these conditions growth is robust, and the plants are thus better able to withstand the trying ordeal of drought, the greatest enemy of this vegetable. Compare an ideal row of Peas growing under the conditions described and a crowded mass of pale-coloured haulm wedged together between the supports, which quickly collapses under the influence of dry weather. Again, the rows are often placed too close together. It is far better to have them 6 yards apart instead of 6 feet, and to take some other dwarf growing crop from the intervening space.

The main batches of Celery will soon have to be sown, but instead of crowding the seed in shallow boxes or pans and placing them in heat, select a warm, sunny border, prepare a nice seed bed, and sow on this, covering afterwards with spare sashes or hand lights. If given plenty of room the plants will become sturdy from the first, and when large enough go direct into the trenches, thus saving much tedious work in picking out and encouraging the enfeebled plants raised in a crowded state to become strong and healthy. The same remarks apply also to Broccoli and all our winter crops now being sown. When raised thinly the plants are better able to withstand the check given by transplanting, which usually has to be done during the hottest days of summer.

Many have to trust to animals to give the summer display in the flower garden or borders, and beautiful they are when properly managed, but in many instances how very fleeting is their season, especially during hot, dry summers like the last. With a deep rich soil and the plants very thinly disposed, a longer season and finer flowers would be secured. To instance this we have only to notice to what a size and strength a chance seedling of Mignonette will attain if allowed unlimited room to develop. Many other cases could be quoted did space permit, but perhaps sufficient has been said to draw attention to the evil of thick sowing, a practice which, I think, cannot be too frequently or largely condemned.

RICHARD PARKER.

AN ARTIST'S NOTE-BOOK.

TWO INTERESTING SINGLE ROSES.

THE single Rose named Miss Willmott is a seedling raised in this nursery from Mme. Hoste crossed with l'Idéal. The flower has almost the coppery colour of the Austrian Copper Briar, and the plant is of the same growth as Miss Lowe's single China. It is evidently a "hark back" to the single Chinas.

Rosa berberidifolia Hardy is a somewhat old hybrid raised by M. Hardy, of the Jardin de Luxembourg, in Paris, from *R. simplicifolia* or *berberidifolia*. Its parentage is not known, but that it is a hybrid the departure from the simple leaf of the species shows. It is the only Rose with a blotch like a *Cistus* on each petal.

The cultivation is not quite easy. It is fairly hardy, but wants a dry and warm site,

plant that was grown in the Tooting nurseries as the type about twenty-five years since, as this and the plant now figuring as *l. reticulata* major are, to my mind, absolutely identical. I speak with no slight knowledge of the Tooting stock, for my acquaintance was most intimate with the plant year by year—indeed, it formed part of my charge at the time. In no soil or locality have I ever seen the plant doing better than in the light, silken, sandy soil of Mr. Parker's nursery. Here not only was growth free and abundant, and the long spear-like leaf fully 20 inches high, but the blossoms themselves stood nearly 1 foot in height. More than this, the plant was a free, regular, and abundant seeder in the locality named, and large quantities of the seeds were gathered each year by the writer.

The rich coloured flowers of the plant are so well known and the welcome fragrance so much appreciated, that it is unnecessary to dwell on that point. A more useful item is the culture of this lovely spring flower. The plant does not grow equally well in all localities, and the soil which is of all most disliked by it is that of a close clayey nature: in fact it is almost certain death to plant the bulbs in any such soils. The plant also most strongly dislikes manures, not merely the raw, crude material that is harmful to hosts of things, but it positively dislikes even the very oldest of manures, and not less so the much favoured mushroom bed manure that is recommended right and left for all sorts of things. Even more or less distasteful rich loamy soil. This naturally reduces the soil list to a very small one, and the more fully this is realised and adopted, the greater likelihood is there of success.

The soil best suited to its well-being is of a very sandy, peaty nature. This is far the most suitable, and anyone desiring to do this plant the justice it deserves in the garden should endeavour to imitate this character of soil as much as possible. It is a plant well deserving attention, and a small spot in the garden may easily be set apart specially for its benefit. A good open drainage is essential, also quite 1 foot deep of soil, of which, if a mixture has to be made, quite the one-half should be sand. A warm sunny spot is also necessary. Excellent results should follow the cultivation of this plant in the rock garden where a choice of positions is available. An early bloomer, and in proportion early in maturing, it should be planted in all possible instances in August. The bulbs may be kept a short time in the dry state with impunity, but, in common with all classes of bulbous lilies, the shorter the time the better for the plant. Few bulbous plants are more impatient of the drying-off treatment than these, and if anything prevents the planting being done at the proper time, bury the bulbs in dry sand in boxes, and so exclude the air. With due attention to the above particulars the disease which often carries the bulbs off wholesale may be greatly reduced, if not warded off entirely.

The several varieties of the plant are almost equally well known and equally deserving of attention. The range of colour from the rich violet to the purple, and, again, that of *l. r. evanea*, which may be synonymous with *l. r. corulea*, affords just a glimpse of its great variety in this respect. *l. reticulata* is a very charming pot plant, and grown thus one can enjoy its flowers earlier than is possible when the bulbs are planted in the open ground.

E. H. JENKINS



CHINA ROSE, MISS WILLMOTT.

(From a drawing by H. G. Moon.)

say amongst a few stones at the base of a south wall. It is apt otherwise to mildew, and the warm site is necessary to ripen the autumn wood well. It is thoroughly autumnal or perpetual flowering, which the type is not.

The type, *R. simplicifolia*, is more difficult to grow. I have tried it in sea sand not unsuccessfully, but it needs in our moist winters a glass shade to throw off the wet whilst allowing a free circulation of air.

Cheshunt.

GEORGE PAUL.

IRIS RETICULATA.

AMONG the many species and forms of the early bulbous lilies none are better known than the forms of the above plant. What many years ago was regarded as the type is the finest and most showy of them all. I refer to the

THE FLOWER GARDEN.

THE CROCUS.

SURELY there is no lovelier spring flower than this. I grow all the best varieties of *C. vernus*, the ordinary garden Crocus, but not one of them is open nearly as soon as those named below. There are a considerable number of bulbs in the rock garden planted in masses of each variety. A golden yellow species now in flower is *C. susianus*, or the Cloth of Gold Crocus, an old favourite of our gardens, and mentioned by John Gerard in his "Herbal," published so long ago as 1579. The contrast between the golden yellow petals and the outer surface of rich deep bronze is charming.

With it we have the species *C. chrysanthus*, golden throughout and very pretty. There are various forms of it, and Mr. Maw says he gathered a white variety on Mount Olympus. There are other forms with the petals of a brownish colour outside. Another form with bluish petals, also found by Mr. Maw on Mount Olympus, should be mentioned to show how variable it is in nature. Another species not so well known as the above is also beautifully in flower. *C. Korolkowii*; this is also yellow internally, but the outer surface is brownish. The gem of the collection is *C. imperati*; the inner surface of the petals is of a pale purple, and the outer surface buff with purple markings. This fine Crocus should be in every garden; being widely distributed, it is variable. A curious reddish form is figured in Mr. Maw's book on the Crocus.

C. Fleischerei is in full flower and very pretty, though not strikingly beautiful. The flowers are white, the outer segments of the corolla being stained purple. Mr. Maw says, "This species is best cultivated to advantage in a cold frame, as from its delicate habit and early flowering time, it does not thrive in the open border." It does so here, however. *C. biflorus Weldenii* forms an attractive mass of colour owing to the variation of colouring in the flowers; one variety is pure white and others purplish, tinted with different shades of colour on the outer surface of the outer petals.

C. truscus, stated by Mr. Maw to be in its flowering state on March 20, was in flower here in February on a part of the rock garden sloping to the east. The flowers internally are of a lilac-purple colour; externally the petals are buff, with purple stripes. The plant is of robust habit and flowers freely. *C. vesicolor* was in flower on February 23, the flowers being pale purple, veined with deeper purple. This is a good garden species, and has been well known for a long time in English gardens. Parkinson alludes to it in the "Paradisus," and Mr. Sabine treats this species and its varieties to the number of eighteen to a long paper in the seventh

volume of "The Transactions of the Royal Horticultural Society."

The Crocus sixty or seventy years ago seems to have been highly valued as a garden flower. Dean Herbert took special interest in it. There is a handsome coloured plate of nineteen species and varieties illustrating Mr. Sabine's paper, which is most interesting and practical. When the Royal Horticultural Society established a garden at South Kensington in 1818, Mr. Joseph Sabine was enabled to present the council with a complete set of the known species and varieties. These were added to as new species and varieties became known after the society removed its gardens to Chiswick. Crocuses at that time were given no protection in winter. Mr. Sabine remarks that "Crocuses require no protection in winter, except from mice, which attack them voraciously, frequently destroying the whole of the roots if they are suffered to continue their depredations unmolested. Rabbits also will eat both the leaves and the flowers of several of the kinds; they are particularly fond of the varieties of *C. biflorus*. The common house sparrows, as has been noticed by Curtis (*Botanical Magazine*, tab. 45), are so fond of pecking the blossoms, especially of the large yellow Crocus, that they will soon destroy the beauty of a collection if they are not kept away."



ROSA BERBERIDIIFOLIA.

(From a drawing by H. G. Moon.)

early years of the present century, raised in England. Two leading growers, one in the east, the other in the extreme west of London, were the most successful. One was Mr. George Anderson, of East Ham, Essex, and Mr. Richard Williams, of Turnham Green, the other, Mr. Joseph Sabine, secretary to the Royal Horticultural Society, was also a successful raiser in his garden at North Mimms.

Mr. Williams raised *C. vernus leucorhynchus* and many others of the versicolor and vernus section. The best by far of the autumn-flowering species are *C. speciosus* and *C. zonatus*; both these increase amazingly in our chalky soil. J. DORRIS.

SAPONARIA OCYMOIDES VAR. SPLENDIDISSIMA.

Of the many beautiful flowers and of those that make the most striking display, of all alpine plants that I have had the pleasure of meeting with during my rambles at various times on the different mountain ranges in Italy, France and Austria, none can compare with the many beautiful varieties or forms of *Saponaria ocyroides*.

The first deep-coloured variety which was distributed from the York Nurseries was, I believe, found by Mr. Alfred Wheeler when visiting the Swiss Alps; this was named *S. o. var. splendens*. Some years later, when on the highest parts of the Maritime Alps, one day I noticed something unusually bright in the distance. This proved to be the finest in form, and most brilliant and deepest in colour of any variety I had ever seen. The plant was by no means a large one. It was secured with a good root and safely conveyed to England and propagated. The first two plants of it were exhibited at the Whitsuntide flower show at Manchester, and were greatly admired; so much so, that I remember a gentleman who was very fond of alpine plants gave half a guinea for one of them.

It was not until some years after all this that failing health compelled me to reside in a drier county than Yorkshire. The soil in my garden in Oxfordshire is what the farmers here call "corn brash," that is, it is full of small bits of shelly or flaky limestone and is only from 6 inches to 15 inches deep, resting on hundreds and thousands of tons of limestone rubble; hence the soil is drained to perfection. Some rooted cuttings of this plant were brought and planted on the side of the kitchen garden walk, where a few pieces of stone had been placed to form an edging. In twelve months the plants had made such extraordinary growth, that some of them were fully 1 yard in diameter, and when they flowered they formed one perfect mass or sheet of brilliant rosy-crimson flowers, so closely massed that one could not put a finger in without touching a blossom, certainly the most gorgeous display of this plant I have ever beheld.

During the last few years our gardens and collections have been enriched by several new species



THE LARGER NETTED IRIS (I. RETICULATA MAJOR); FLOWERS ONE-HALF NATURAL SIZE.

(From a drawing by James Cook.)

My advice is, try every kind, autumn, winter, and spring flowering, in well-selected positions in the rock garden. A square of glass may be laid over groups of the winter-flowering species if the weather is unfavourable. The flowers if picked will open at once in a warm room. They seem to thrive well on our rather heavy chalky soil, but I take the precaution of putting some decayed fibrous loam under and over the bulbs at the time of planting. Success or failure will often depend upon the care taken in planting, and also to a certain extent upon the position chosen. All my bulbs are planted where the water can drain away rapidly, and care is taken to encourage the growth of the foliage until it naturally decays.

It may be interesting to some readers to know that many new varieties of the Crocus were, in the

of Saponaria, all of which are good and welcome. We have also now a white variety of Saponaria oxyoides, found by Mr. James Backhouse during his rambles on the Pyrenean Alps.

RICHARD POTTER.

Chertwell House, Witney, Oxon.

PLANTS IN FLOWER AT LA MORTOLA, VENTIMIGLIA, ITALY, ON NEW YEAR'S DAY, 1900.

We have received from Mr. Hanbury a most interesting list of 363 plants in flower in his garden on January 1. Among other species, many of them rare in gardens, are the following:—

Abelia elumensis	Gasteria disticha
Abutilon venosum	Genista monosperma
Acacia F. nesiana	Grevillea Thelemanniana
" microbotrya	Grindelia squarrosa
" nerifolia	Hakea eucalyptoides
" salicina	Haplocarpha Leichtlini
Achania mollis	Hexactenium coccinea
Achillea. Ageratum	Juniperus Oxycedrus
Ageratum conyzoides	Kalanchoe rotundifolia
Albizzia lophantha	Lantana Sellowiana
Aloe Schweinfurthii	Lavandula multifida
Alyssum gemmonense	Lippia chamadrifolia
Amezia Zygocneris	Lopezia miniata
Anthoeris viscosa	Meliantbus Trimenianus
Antirrhinum Orlantium	Mercenialis amna
Arctotis aspera	Moriandia arvensis
Arisarum vulgare	Muralia Burmanni
Asclepias curassavica	Nicotiana glauca
Banksia macroscena	Oreopanax Epremesnilianum
" verticillata	Othomopsis cheirifolia
Begonia heracleifolia	Panicaria officinalis
" incarnata	Passiflora racemosa
Berberis asiatica	Pentstemon campanulatus
Bignonia buccinatoria	Pentzia virgata
" jasminoides	Pieridium vulgare
" venusta	Plectranthus frutescens
Buddleia americana	Polygonum lanigerum
" madagascariensis	Psadia glutinosa
Bouvardia triphylla	Rescala Phytanoma
Calendula trifurcata	Rhus viminalis
Canarina campanulata	Rhynchosia phaseoloides
Carica candamarcensis	Rosa Banksiae L. simpl.
Cassia bicapsularis	" indica hybr. hort.
" coquimbensis	Rovaya pubescens
Casuarina striata	Salvia eacaliaefolia
Cestrum mortolense	Saracha viscosa
" Patoui	Schinus Molle
Cineraria gelifolia	Scutellaria Columna-
Clematis cirrhosa	Senecio hadiensis
Chytia Richardiana	" macrogllossus
Cobaea macrostemma	Sida mollis
" scandens	Solanum Lycoperisium
Coronilla pentaphylla	" psendo-capsicum
Cotyledon gibbilora	Sonchus oleraceus
Crassula Schmidtiana	Sphaeralcea umbellata
Crepis virens	Streptosolen Jamesoni
Cuphea Zinapani	Stephanophysum longi-
Echinocactus corniger	" florum
" flavispinus	Taesonina manicata
Elaeagnus reflexa	" Van Volxemi
Euphephalartos Altensteini	Tecoma capensis
Ephedra altissima	" stans
Eucalyptus crebra	Thea canisensis
" leucocylon	Urospermum Dalechampi
Euphorbia cereiformis	Verbascum malaeotrichum
" Peplus	Vicia Faba
" segetalis	Visnera Mocanera
Freylinia cestroides	Withania somnifera

INDOOR GARDEN.

ZONAL PELARGONIUMS.

THE extremely beautiful and variously tinted flowers produced by the many varieties of Pelargonium zonale now render this plant almost indispensable for greenhouse decoration during the early part of winter.

Probably with the varieties of no other single species of cool-house plants could so attractive and brilliant a sight be afforded as by a group of zonal Pelargoniums in flower. In addition to their undoubted value as ornamental pot plants, their flowers in a cut state are also most useful. Seldom have I seen a more effectively decorated dinner-table than when pips of this Pelargonium were placed upon a foundation of Maiden-hair Fern for the table wreath, the centre vases being filled with the flower-trusses, interspersed with a little greenery. For small table bouquets, too, the cut blooms are very suitable, but arranged in vases for room decoration they are not particularly satisfactory, owing to the petals soon drooping, although

the numerous charming semi-double and double varieties that we now possess have largely done away with this evil, so great a drawback to the single ones. If it is necessary to remove the plants some distance away, a little gum dropped into the centre of the flower holds the petals together.

The culture of zonal Pelargoniums requires a certain amount of careful attention if well-grown specimens are to be obtained. The present is a suitable time for propagation, which is generally effected by means of cuttings. These, short-jointed and firm, should be cut to a length of about 3 inches and inserted singly and made firm in small pots of soil, consisting half of sand and half of loam. Very little water is needed until the cuttings are well rooted, and the best place for them is a heated frame or pit where a night temperature of about 60° Fahr. can be maintained. When the plants are found to have plenty of roots and are seen to be commencing to grow, they ought to be moved directly into 6-inch pots and taken to a cold frame. As a potting compost, good loam, with some silver sand intermixed, proves very satisfactory. In order to ensure a firm and healthy growth it is essential that the plants should be kept near to the glass and for a dry, airy atmosphere to prevail in the pit. By the beginning of June, if the weather is at all seasonable, a bed of ashes, over which a frame is placed, is an excellent position for the summer quarters of zonals. Some cultivators stand them completely in the open, but we find it advisable to make use of a frame, as in the case of cold nights or rough weather protection is then easily afforded by closing the sashes. The cultivator should endeavour to produce plants of a pleasing shape, and to this end the leading shoot must be stopped, and the resulting growths also as may be required, taking care always to pinch back to a node where a wood-bud is situated.

Stimulants in the form of guano and liquid manure may be applied when the pots are well filled with roots; an abundance of water is then also required. Any flower-trusses appearing during the summer should be pinched off. Even when cold and variable weather again sets in, if the sashes are drawn over the plants, they may stay in the unheated frame until late September. In October the zonals must be removed to a warm, dry, airy greenhouse, there to remain until flowers are produced. An excess of moisture in the atmosphere quickly causes the individual flowers to damp off, thus completely spoiling the appearance of the whole truss. A circulation of dry air, brought about by judicious management of the hot-water pipes and careful ventilation, will counteract this.

Frogmore, Windsor.

H. THOMAS.

MALMAISON CARNATIONS IN SPRING.

OLD as well as young plants are now in full growth, and the serious work of another season has commenced. It was customary a quarter of a century ago to propagate stock from cuttings, which were inserted in autumn in pots filled with a sandy compost, and preserved during the winter months in a cold pit, roots being emitted in early spring, when the young plants were potted and kept growing slowly. Not a few old practitioners considered this method of propagation gave superior results to layering. The present practice is at least better in that flowers are produced a year sooner than it is possible to produce them in the old way. I have, however, occasionally increased stock by rooting cuttings in spring. Plants that have been flowering during winter push nice stocky side shoots which are not difficult to root in a warm pit. The cuttings must be covered with glass and protected from the sun until roots have been formed. They are then potted in 3-inch pots and shifted as required till the advent of winter, when they will be established in those 7 inches in diameter, and will form strong flowering plants the following summer.

Potting will require to be undertaken at this time for two classes of plants: one, weakly subjects that have been wintered in 4-inch or 5-inch pots, and which will now need a shift into those two sizes larger, or, to save space, three into a 9-inch pot; and the other, the strongest of last

year's layers, which, shifted on now singly into 8-inch or 9-inch pots, produce much better winter and early spring flowering plants than those shifted on in early autumn. It is most important that the more forward plants should be selected, as bloom in winter is secured only from early-ripened growths that form buds in autumn. Bloom may be taken off these newly-potted plants during the summer, but where there is a sufficient number of plants to meet ordinary demands without flowering them, the central shoot should be removed now in order to strengthen the side growths.

Malmaisons coming into flower require a warm temperature, but they must not be stewed in a close and moist heat. A large structure is best, in which they can be most easily provided with a warm, dry, and buoyant atmosphere, such as we find best suits them at their natural period of flowering in summer. Well-rooted plants at this stage and under these conditions require abundance of water. The suppression of aphid by means of dustings of tobacco powder also calls for unremitting attention. As a rule disease fixes itself on these early-flowering plants, and it is generally advisable to burn them when once their crop of flowers is exhausted. While none of the diseases that afflict Malmaisons can be safely ignored, in the case of young plants it is not so difficult to at least mitigate their bad effects; old and large plants, on the other hand, cannot be so certainly relieved, hence the desirability of destroying all those infected with disease.

Plants in 6-inch and 7-inch pots, to provide a supply of bloom in summer, from this time demand very careful attention. Aphid is sure to effect a footing unless the growing points are regularly dusted with tobacco powder or the structure fumigated at intervals. When plants are clean, one is apt, in the rush of other work, to overlook this; it is, however, a dangerous omission, because aphid has often effected much harm before its presence can be detected on the foliage, whence it is invariably difficult to dislodge.

A check, either from over-watering or from protracted dryness in hot weather, often opens a way for the entrance of disease; therefore careful watering will be found one of the best means of retaining in robust vigour an already healthy stock. Hot sunshine, for the same reason, is inimical to vigour, and shading should be applied early in the season and continued till the blooming period is over.

A common source of weakness in stock arises from allowing all the side growths to grow, and when there are eight or ten of these besides the buds and flowers to provide for, it is no wonder that plants become weakly. Four or five, or at the most six, side growths are a sufficient number to leave on each plant, all the others being removed by means of a sharp side twich while they are yet small. Those remaining on the plants will grow with much vigour, and before they become liable to break down by their own weight they must be slung to the stake supporting the flowering spike. The latter must not be permitted to carry too many buds. If flowers with very long stems are required, it will of course be necessary to leave only the main bud to open; but where stems of, say, 6 inches or 8 inches in length meet requirements, a healthy plant will easily bring forward six good blooms.

Up to the present time the plants have stood quite close to each other, but now they must be allowed more space, and by-and-by they will again need to be set yet further apart. These operations provide a good opportunity to examine the foliage and to remove fungoid spots and decaying leaves. Slight applications of manure can at the same time be sprinkled on the surface of the soil, but little extra feeding is needed, because if manure is too freely used it favours the production of coarse and ugly blooms.

R. PAGE.

IMANTOPHYLLUMS.

Of late years the culture of these beautiful plants has received more attention in the majority of gardens than formerly, and, in my opinion, with splendid results. At the present time (March 16)

we have some fifty plants of different sizes, from single specimens in 6-inch pots to those in pots 12 inches and 14 inches diameter, and all alike have well flowered. They make a grand display in the conservatory. The spikes when cut full length and used in large vases make a fine show, or the flowers taken off singly and used in small glasses with Asparagus Fern or other greenery are quite as effective for the table.

I well remember when these plants were looked upon as belonging to the stove, or at least subjects that required a great amount of heat. All that is now changed. Here, after flowering, the plants are given a growing temperature of about 60° and are well supplied with diluted liquid manure at every watering. Plants that have occupied the same pots for years take an immense quantity of water when growing freely, being well syringed overhead daily to keep the foliage clean, sponging being out of the question here. After the growth is completed the plants are put into a cool house and shaded from the sun until October, when they are transferred to a frame for the winter from which frost is excluded. They receive very little water during the next three months or until the flower-spikes begin to show. They are then taken to a warm house and well soaked with clear water at first, then with manure water at each watering until the flowers begin to open. Under this mode of treatment the plants retain their foliage in the best possible condition and flower with great freedom; the flower-spikes rise well above the foliage, and on some spikes I have this season counted twenty flowers. Few plants require less attention and very few give a richer reward. By resting a few earlier and starting them in heat the flowering season is considerably extended. The main point, where a good display at one time is desired, is to prevent excitement in autumn, otherwise the plants will throw up thin and not flower so freely the following spring. I have always found the flowers wanting in depth of colour in the autumn compared with spring flowering. Where it is desired to increase the stock of existing plants they may be divided immediately after flowering and placed in a moist, warm structure where they soon emit fresh roots. Imantophyllums may be freely increased from seed. I have a number of seedlings which bloom very freely, and make stronger growth than the majority. Some of our largest plants have not been repotted for several years; in some cases the plants have burst their pots and have had to be put into larger ones. With careful attention to feeding regularly with manure water it is astonishing how the plants grow and flower year after year without being repotted. With suitable treatment insect pests are unknown.

DAVID KEMP.

Stoke Park Gardens, Slough.

GARDEN DESTROYERS.

THE SHOT-HOLE FUNGUS.

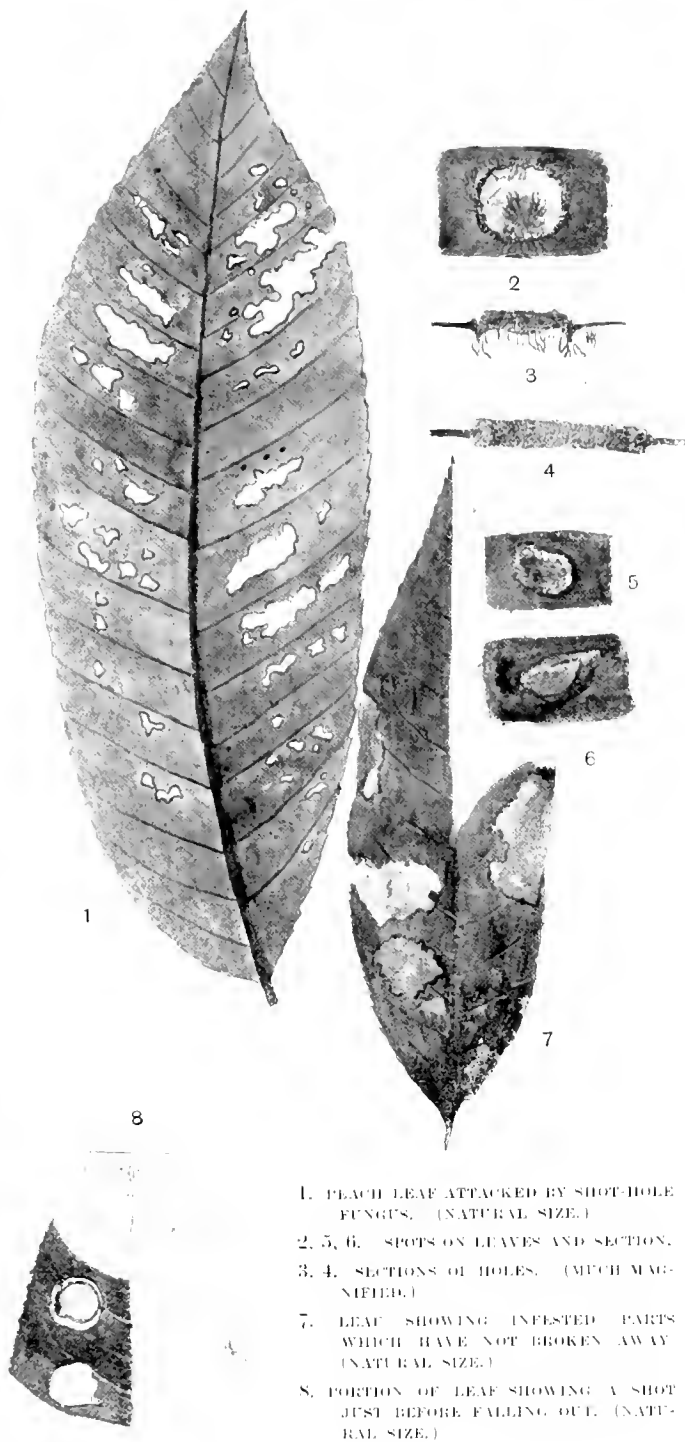
(CERCOSPORA CERCUMSCISSA.)

LEAVES of Peach and Nectarine trees often suffer from the attacks of another fungus that is of a very different nature to the leaf curl fungus, described and figured in THE GARDEN of last week. This fungus, as its name implies, is the cause of the numerous small holes often found in the leaves of Peaches, Nectarines, and Almonds. If the attack is but slight, little or no harm is done, but if it be severe, the leaves fall earlier than they should, and are of less use to the tree before they fall, so that the crop of fruit the following year is probably a poor one. It is generally supposed when leaves are infested by this fungus that they have been attacked by some insect, and surprise is expressed that no insects can be found even after the most careful search. The holes are formed in this way: The fungus, which is a

microscopic one, kills the part of the leaf on which it grows. This dead part soon falls out, leaving a hole of a variable size. If the fungus attacks a part of a leaf near the edge, when the withered portion falls out it leaves a notch almost exactly like what an insect would have made when feeding on the leaf. As soon as this disease is noticed, the affected leaves should be picked off and burnt, and the others sprayed with an ammoniacal solution of copper carbonate, which may be made as follows: Mix 1 oz. of carbonate of copper and 5 oz. of carbonate of ammonia together in a quart of hot water; when thoroughly mixed, add 16 gallons of water; or make 1 oz. of carbonate of copper into a paste with half a pint of water; when well mixed add 9 gallons of water. It is not safe to use Bordeaux mixture, as even when very diluted it has an injurious effect on Peach and Nectarine leaves. If an attack is anticipated, spray with the carbonate of copper solution when the leaves are just opening, and again for some time at intervals of a week. This fungus not only attacks the leaves, but also the shoots and young branches. Any leaves that fall should be collected and burnt. The falling out of the infested portions of the leaves helps to spread the fungus, as they carry the spores to others on which they may fall. There is another fungus that attacks Peach and Nectarine leaves in exactly the same manner belonging to another family; it is known as Phyllosticta persica; but as the means of combating both pests is the same and the differences between them are quite microscopic, it is needless to comment on them now. The leaves of various plants are infested at times much in the same way by fungi belonging to these two genera Cercospora and Phyllosticta, though in some cases the diseased parts may not fall out, but remain as brown withered patches. Mignonette, Ivy, Celery, Geraniums, and Wallflowers are often attacked.

G. S. S.

Narcissus seedlings.—It may interest some of your readers to know I have triandrus albus seedlings now coming into bloom from seeds sown in September, 1897—two and a-half years ago. They have had the protection of a frame in winter. —HENRY BACKHOUSE, *Yelland, Darlington.*



1. PEACH LEAF ATTACKED BY SHOT-HOLE FUNGUS. (NATURAL SIZE.)
 2, 5, 6. SPOTS ON LEAVES AND SECTION.
 3, 4. SECTIONS OF HOLES. (MUCH MAGNIFIED.)
 7. LEAF SHOWING INFESTED PARTS WHICH HAVE NOT BROKEN AWAY (NATURAL SIZE.)
 8. PORTION OF LEAF SHOWING A SHOT JUST BEFORE FALLING OUT. (NATURAL SIZE.)

CORRESPONDENCE.

ARUM LILIES IN ABBOTSBURY GARDENS.
 [TO THE EDITOR OF "THE GARDEN,"]

SIR, The beautiful illustration of the above in the issue of THE GARDEN for March 17 is abundant proof of the luxuriant growth and free blooming of the Callas in the water there. Here they also do well as aquatics, and having a notion that Calla Pentlandi might be induced to thrive in the open under somewhat similar conditions, I experimented last year with a few by forming a puddle-hole at the foot of a rock where a tiny stream could be made to flow at will, and by which a series of miniature pools occupied by Water Lilies are con-

nected and kept full. In this at the end of May a group was planted, but I must admit that in my case it did not turn out sufficiently satisfactory to induce me either to repeat the experiment or recommend others similarly situated to try it. The plants made little growth and produced few flowers, and the few leaves assumed a sickly yellow hue before autumn set in. The roots were not actually under water, but the soil was kept a constant puddle throughout the summer. That the position was a fairly favourable one as regards sunshine, &c., may be judged by the behaviour of the occupants of the chain of small pools already referred to. The upper one was full of *Pontederia* (*Eichornia*) crassipes, which bloomed freely all summer; the next, *Nymphaeas* (Marliac's); next came *Calla Pentlandi*; the next two, *Nymphaeas* again; and the lowest of all, *Calla aethiopia* and *Aponogeton distachyon*, the whole of which invariably do well, growing luxuriantly and flowering freely. I regret that *Calla Pentlandi* proved such a failure, as its bold green leaves and deep yellow spathe would have added interesting variety to this spot. It was selected for trial in preference to *Calla Elliottiana* because the white washy spotting of the latter is to me most objectionable. I hope others have succeeded better and will record their experience. JOHN ROBERTS.

Tany-haleh, N. Wales.

BULBS GROWING IN WATER.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I have grown this winter in the house a bowl of Grand Moirque Narcissus. The plants have been most beautiful, full of blossom; they were grown in water, only propped up with stones. I should be glad if you would tell me the best way of treating the bulbs after the blossom is over.

B. L. D.

[Bulbs that have been forced or grown in water, both of which methods of treatment are somewhat against their nature, cannot be depended on to flower again the next year. If it is thought worth while to keep them at all, they will have to be nursed into well-being by being planted in a warm aspect in well drained soil and left for a year to recover, after which they may be used again, though they may not be so good as properly grown Luteal bulbs, which are now so cheap, that it is hardly worth while to practise the nursing plan. Eds.]

BUCKBEAN GROWING IN A TUB.

[TO THE EDITOR OF "THE GARDEN."]

SIR, It may perhaps interest your correspondent who questions you as to the Buckbean in *The Garden* of March 10, page 189, to know my experience of the plant. I have it growing in a tub filled with clayey loam and smit in the ground, with its edges hidden by small rocks. Here it thrives perfectly, but is unfortunately subject to be attacked by the cats of the neighbourhood, whom I constantly find contentedly chewing the growing stems. Perhaps they recognise the tonic properties of the plant, to which you allude; in any case they appear to enjoy its bitter flavour.

NORMAN RUSHWORTH.

Beckfield, Walton on Thames.

ROSE EXHIBITION.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Your correspondent "Philomel," writing in your issue of last week, mentions the Royal Botanic Gardens as the most suitable place in London to hold a Rose exhibition. May I be permitted to say that this society some years ago made an offer to any recognised floral society to hold their exhibition in the gardens in Regent's Park, the society providing all the usual accommodation free of charge, reserving only the right of its Fellows to be admitted. The offer has been taken advantage of by several well-known societies. I am sure my council would be pleased to offer the use of their gardens for a Rose exhibition of the kind contemplated by your correspondent.

BRANT SOWERBY, Secy.

Royal Botanic Society, Regent's Park.

THE DR. HOGG AND CRIMSON GALANDE PEACHES.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—Please give me your opinion about the two Peaches Dr. Hogg and Crimson Galande. Which of the two do you prefer for a second early house (to be started about January 15)? Which is the more prolific and better flavoured, and possesses the most vigorous constitution? R. K.

[Both of the Peaches in question are recognised in England as excellent varieties. The last-named is an old favourite, but is now being supplanted by the former. Dr. Hogg is, in our opinion, one of the finest of all second early or mid-season varieties; it has the following excellent points in its favour: a hardy and robust constitution, so much so that it can be easily recognised; it is a prolific setting variety, not being in any sense what is known as a bad-dropper; its fruits when well developed are of first size, firm and well coloured. Its flowers are of the largest size, too, and when in flower the tree makes a beautiful display. The merits of Dr. Hogg as a high-class variety are fully recognised by those who cultivate for market supply only. Last season we noted that many kinds of Peaches failed to bear well, being thin in flower; not so Dr. Hogg, which stood out more prominently than ever.

Crimson Galande belongs to the small-flowered section; on the whole its constitution is good. Its fruits do not average so large as those of Dr. Hogg, but of the two they are of higher colour, with more marked traces of colour next the stone. In flavour we consider it to be equal to the other kind in question, but do not deem it to surpass that variety in any one point. Both for prolific fruiting and in constitution the balance is in favour of Dr. Hogg, which kind will remain for years as one of the finest of all the many seedling Peaches raised by the late Mr. T. F. Rivers, of Sawbridgeworth. Eds.]

NARCISSUS PALLIDUS PRECOX.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Some correspondents of *THE GARDEN* seem to have difficulty in keeping this very distinct Daffodil. It has not the habit of multiplying by offsets as readily as more robust varieties of *N. pseudo-narcissus*, but I find it ripens seed pretty freely, which if allowed to fall when ripe and left in the soil undisturbed, comes up and keeps up the stock. But *N. pallidus precox* is a wood plant, and I have never seen it do well for long in exposed sunny borders. In its own home it is invariably found in woods, for though there are other varieties with flowers of the same size and colour which grow on open hills both in the Pyrenees and in the north of Spain, *N. pallidus precox* has very distinct characters of its own, the most obvious being the long loose spathe of the bud, rounded and somewhat nipped in near the base, like that of the wild Anem. Fifteen years ago these Daffodils were abundant in woods close to Bayonne, but not crossing to the west of the river Nive. They are now nearly extinct near the town, except in enclosed grounds. I have seen them flowering in such dense thickets of thorns that I could not get my hand down to them when within a few feet, but I have never once seen them growing wild in the open ground. Two or three years ago I was driving through Landes, a few miles north of Bayonne, in search of wild *N. maximum*, when the road passed for half a mile through an untended thicket in which *pallidus precox* was flowering in profusion. I am afraid that by this time these have all found their way to the English market. The local collectors grow them for a season or two in open beds, but they make poor bulbs there and do not increase or look happy. I would recommend all who have failed with them to try planting them in moist spots in grass under the shade of trees. When once established in such ground here they seem capable of reproducing themselves, even though each bulb may be short-lived. C. WOLLEY-DOD.

Edge Hall, Malpas, Cheshire.

[Experience with this lovely *Narcissus* on a sandy hill-top in West Surrey exactly agrees with the words of Mr. Wolley-Dod. I planted about fifty

bulbs of *N. pallidus precox*, kindly given me by Mr. Barr from one of his earliest importations, and gave them, as I thought, the best treatment in good ground in the open garden. But two years later they were so evidently unhappy, that to offer them a chance of life under other conditions I planted the few that survived in the cove. These have done so well that it is clear proof that such a place is the most suitable.—G. J.]

STOCKING A NEW VINERY.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I should be very grateful for a few hints on the stocking of a new vinery. I have a $\frac{1}{2}$ -span house, 26 feet by 14 feet, facing south, and should like to have several different varieties of Grapes, which I know is often considered inadvisable. It was proposed to plant out within the house seven Vines, and perhaps to try a few in pots. Hitherto I have only grown Black Hamburgs, and know very little of other varieties. I should state that we do not want our Grapes till end of August.

BERBERIS.

[You may easily grow several kinds of Vines in your house of the size named, and we have seen some of the best exhibition Grapes grown in such a house. Though you say that you do not need your Grapes till the end of August, you do not tell us for how long you need them, which is an important point, as in advising you it is essential to give the best kinds in their season. We presume you do not require to use much heat during the growing season, as Vines such as Hamburgs ripen readily at the season named if started early in April and very little artificial heat employed. There is no reason whatever why you should separate your plants, but we do not see that you have much room for pot Vines in a house 26 feet long besides the seven Vines planted out; and though by crowding you could possibly have a pot Vine between the permanent canes, we fear this would not be satisfactory, as you might injure the latter and get but poor results from the pots. There is no objection whatever to your growing pot Vines till the permanent canes have filled the house; indeed, this would be an excellent plan, but you do not tell us the age of your Vines, so that we are unable to judge of space occupied. There are some good kinds you could grow in pots, such as Foster's Seedling, a white early Grape, not a keeper, but one of the best for amateur culture; Madresfield Court, a black Grape; and the Diamant Traube, a fine Sweetwater early Grape. If you planted out, you could add Alicante, a beautiful, easily grown late black Grape; also Appley Towers and Lady Down's, the last being one of the best keepers we have. We do not advise Muscats to be grown with Hamburgs, as they need more heat, though at the warm end of the house Muscat of Alexandria planted out would not fail.—Eds.]

A PARTING-WALL AND ROCKERY COMBINED.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Your recent admirable illustrations of wall gardens have given birth to the thought that this excellent plan for the display of many rare rock plants and other subjects has not hitherto been utilised to a desirable extent. Many gardens exist and are in process of formation where parting fences or walls are necessary within the outer areas. Often it is important to confine such division to small limits, hence hedges are not always desirable or suitable. Why, therefore, should not comparatively narrow hollow walls be constructed to act as the dividing line and grow numerous rock plants upon? Such walls may be constructed of burrs, clinkers, pebbles, or even bricks. As the wall is hollow, the outside may be held securely in place with cement, the centre being filled with a mixture of old mortar rubbish, loam, and peat; the bricks should be used for greater stability. If the compost named is pressed firmly into position, numerous rare rock and alpine plants would thrive admirably—planted each according to the aspect it requires.

W. EARLEY.

LILIUM GIGANTEUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR, It has been well observed by Mr. William Robinson that the introduction of Oriental and American Lilies has entirely transformed the aspect of our gardens. Of the former, the most remarkable illustration is the great Himalayan *Lilium giganteum* (pertaining to the sub-genus *Cardiacrinum*), which when its massive bulb has assumed its full dimensions exhausts itself in the creation of a powerful stem, crowned sometimes at a commanding height with the glory of its funnel-shaped, pendulous, ivory-white, purple-stained flowers. Its perpetuation is entirely dependent upon offsets, of which the largest usually survives, but it takes at the lowest estimate at least four

prove nearly so florally effective if it has not been grown from infancy in its present position and strongly established. The process of root-formation must necessarily in such instances as that of *Lilium giganteum* be exceedingly slow, but when its full capability has thus been acquired, how grandly commanding is the floral result. I had a splendid specimen of this majestic Lily in my garden last summer, which was the result of several years' growth, and attained to a height of over 10 feet, the flowers, which were numerous, being abnormally large and of exquisite hue. But this superb plant was surpassed, at least in dimensions (as I am informed by your contributor Mr. S. Arnott, of Carsethorn), by another which grew in the garden of Cavens House, Kirkbean, Kirkcubrightshire, to a height of 14 feet, the flowers over-topping the

COTTAGE GARDENS.

The air of the country, pure and unvitiated, a liberal space of garden ground, good soil, and, in most instances, methods easy within his reach in obtaining manure, &c., are some of the advantages enjoyed by the cottager. His garden is to him one of his chief delights, and during the summer time he spends not a little of his leisure, early in the morning and oft late at night, attending to the wants of his favourites. True it is that the country has its drawbacks, but then what pastime is exempt from trouble? Water, perhaps, had to be carried a long distance for many weary weeks during the great drought, and sleep was robbed many a time,



A COTTAGE AND GARDEN AT DEANE, NEAR BASINGSTOKE.

years to build up its magnificent flowering bulb. With many cultivators who do not know its nature or elaboration of development, their patience becomes, in the language of my friend, the late Matthew Arnold, "too near neighbour to despair." It is, nevertheless, only when grown from offsets that *Lilium giganteum* reaches the full realisation of its remarkable powers. A bulb, however imposing in its dimensions, obtained from one of our great Lily cultivators, and planted in November amid the most favourable conditions of climate and of soil, however perfectly it may seem to harmonise with its environment, will hardly attain to an elevation of more than 5 feet or 6 feet. Nor will it

lofty garden wall. The foliage of this great Lily is heart-shaped, as luminous as that of the Laurel or the Holly, and highly ornamental.

DAVID R. WILLIAMSON.

Manse of Kirkcubright, Wigtownshire, N.B.

MAKING ELDER-FLOWER WATER.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I shall be greatly obliged if you or any of your readers can give me a recipe for making Elder-flower water, and also where a still can be obtained.

C. A. S.

But what then? the plants survived. One can call to mind simple homesteads in not a few of our villages surrounded by much that appeals to one fond of gardening. Borders full of old-time flowers; plots of well-grown vegetables; fruit trees evincing unmistakable signs of years of good culture; hives of bees, perchance; the quaint-looking summer-house around which creepers lovingly cling; even the door of the cottage itself half hidden with climbing plants, the rough home-made garden seat—all combine to make the place typical of an English cottage home.

Yes, after all, though he may be cut off from what town-folk are pleased to call "social life," the cottager who loves his garden has many compensations. Roses, perhaps, are his special hobby, and who has better opportunities for cultivating them? He makes friends of the farmers, and so one finds him in the neighbouring fields selecting his Briars. He is on good terms with the gardener at the "hall," and each year he upholds his reputation as an exhibitor in the villagers' class at the annual show; or it may be that his intentions are bent on the production of Peas, Beans, Potatoes, and kindred vegetables, and with these he has scarcely ever been beaten, while every year without dissent the villagers have held the opinion that he alone can lay claim to the premier prize for the best kept garden.

Against such a tribunal, is it to be wondered at that no local judge has ever differed? Beyond a couple of frame-lights or so he cannot boast of much "glass," but in these he grows Cucumbers with the best of his opponents, and contrives, with the aid of his frames, to winter a lot of little stuff. Anriculas, too, he is very fond of, and his "Recklesses," as he calls them, occupy a prominent place in his thoughts.

Of his borders he is deservedly proud, because in them are to be found quite a host of hardy plants, some of them tenants of long standing. Peonies, for instance, take up a good deal of space, and here and there are Lupins and German Frises, Rockets and scarlet Poppies, affording bold masses of colour in early summer, whilst Sweet Williams, Campanulas, and Delphiniums are not forgotten. Gladioli, Tiger Lilies, Phloxes, and Statworts are there to give a brilliancy to the place a little later. The cottager, moreover, has many privileges which an artisan, for example, in a town does not enjoy. A house, with a good strip of garden attached, is often to be had at a moderate rental, and his table is furnished with vegetables for most of the year at least; but the town-dweller is handicapped in this respect, as the nearer one resides to a town, the higher is the rent, and long gardens are the exception. Then, again, the purity of the atmosphere has to be reckoned with, and it is due mainly to these conditions that the cottager is enabled to grow his garden produce so well, and to have for so long a time borders of ever-varying and attractive blossoms. W. F.

NOTES OF THE WEEK.

Hamamelis arborea is flowering more freely than usual here this season, the result, I presume, of the thorough roasting the plants were subjected to last summer and the consequent well-ripened wood, but, unfortunately, the wretched weather experienced throughout their flowering season has greatly marred their beauty with one exception. Having a fine plant that was being overcrowded, it was lifted as it commenced to bloom and huddled up on the lee-side of a Yew tree in a sheltered spot, and a few leaves thrown around the ball until favourable conditions occurred for replanting it elsewhere. There it remains, still waiting, but covered with, I think, the most beautiful sheets of bloom I have ever seen, and the dark background of the Yew tree enhances its beauty. All our others are much battered and nearly over. J. R., *North Wales*.

Cœlogynes and Cypripediums at Vivod, near Llangollen. A word or two about the beautiful Cœlogynes and Cypripediums at Vivod, the seat of Captain Best, may be of interest to some readers of THE GARDEN. The extreme vigour and beautiful shape of these plants would make them an ornament to any collection, but what struck me most was the extreme small-

ness of the pots in which—or rather on which—they grew. The reason of this is, that as the plants are used for house-decoration, small pots are found much more convenient than larger ones. I noticed that one or two of the strongest pseudo-bulbs of the Cœlogynes had thrown out a small bulb in place of the flower-spike, which is, I suppose, the result of over-development, which few growers are able to bring about. One plant of *C. cristata* in an 8-inch pot had a diameter of 3 feet 6 inches, carried thirty-six flower-spikes, and bore leaves 16 inches in length. The number of blooms on each spike varied from four to six, while the average diameter of the bulbs was about 5 inches. I also saw a *Cypripedium insigne*, twenty-eight years old and in a 10-inch pot, the measurement of which, by placing the tape loosely over the top, was 78 inches. Mr. Curtis, the gardener, uses an entirely different material for growing Cœlogynes and Cypripediums from that usually in vogue, but his system is gradually spreading in the neighbourhood. —TREYON.

A note from North Wales. Most wretched weather prevails here at present—very severe frosts, frequent snowstorms, and piercing easterly winds. Consequently, vegetation is very backward, which is fortunate in many ways, for, owing to so much rain and snow throughout the winter, there is yet a great deal of planting and groundwork to do. Many tender shrubs are either killed or badly crippled by the prolonged frosts. I fear.—J. R., *Tany-bwlch*.

To lighten London's drab. A touch of much-needed colour has been introduced in a very simple way into the homes of the poor of Lambeth. In December last, by the kindness of Mr. A. Cameron Corbett, M.P., 2,000 children in the parish of All Saints', South Lambeth, were each presented with a Hyacinth bulb and a glass to grow it under. The gifts were accompanied with instructions and the encouragement of prospective prizes. The results, shown at an exhibition of the Hyacinth blooms at All Saints' Institute, have astonished and delighted the promoters. Quite a beautiful display was made by the little exhibitors, some of whom had come from the sully-crowded tenements of Nine Elms.

Narcissus pallidus præcox.—Mr. S. Arnott asks for further information about the cultivation of this charming Daffodil, so I will give him my experience. My success, after several failures, was entirely due to chance. It had been planted in ordinary soil on the western boundary of my little rock garden in close vicinity to a variegated Periwinkle. The Periwinkle soon encroached upon its domain; but the Daffodil, so far from resenting this usurpation, rejoiced in its curtailed root room, and flowered and multiplied well. Last year I was obliged to separate the bulbs, which had grown into lumps as big as two fists. The exhausted soil was removed and replaced by some good loam, and the Daffodils and Vinca replanted. This year they promise to bloom as well as ever, though, like everything else this tardy spring, they have lost their precocity. I believe a great many of the more difficult Daffodils have proved amenable to cultivation by planting them in soil which becomes impoverished by foreign roots. The incomparabilis section all seem to abominate my heavily manured soil, but Emperor and Horsfield are perfectly happy in it. I ought to add that the variegated Periwinkle makes the prettiest possible ground-work for *N. pallidus præcox*. H. M., *Bronsgrove*.

Eremurus himalaicus from seed.

I think it may interest some of those who grow this beautiful hardy "White-hot Poker" to know that it can easily be raised from seed, and that with patience for it takes some time to arrive at blooming size—a stock of it can be had from one's own seed. Last autumn soon after it had ripened I got two pans prepared and sown. One pan I had surfaced with coarse gravel to retain uniform moisture, the other not so treated, and the difference in germination is most marked, for that covered with the small stones is a fine crop, while the other is not half as well filled. The plants are getting quite cool treatment and will be left undisturbed till the leaves fade. The parent plant, which has been now some five years in its present position, last

summer showed signs of a double crown, from having been liberally treated with top-dressings of a rich nature, a sprinkling of chemical manure being added to the rich loam, and just now it is appearing above ground with two large heads, each of which will surely give a bloom. These plants are largely surface feeders from the nature of their thick horizontal roots, and are an interest and beauty that no good garden should lack. Being perfectly hardy and coming up after a cruel frost of 32°, no one need hesitate about obtaining them. I think, if a plant can be now turned out of its nursery pot, it will, as mine did, make unchecked growth and probably flower next June. I shall be very pleased if any reader will give his experience of *E. aurantiacus*, which is said to be quite hardy, and also an edible variety.—J. HILL POE (Capt.), *Kiverton, Naugh, Ireland*.

Anoiganthus breviliflorus. This is one of the South African bulbs that has proved to be very amenable to cultivation in this country, that is judging by the examples that have been grown at Kew for some years past. A pot containing a number of closely packed bulbs is just now in the T range bearing several spikes of blossoms, and a very attractive and at the same time uncommon feature it forms. The flower-scapes reach a height of about a foot, and are terminated by a loose umbel consisting usually of less than a dozen flowers. They are of a rather peculiar funnel shape, having the appearance of being only partially expanded, about a couple of inches long, and of a clear bright yellow colour. This *Anoiganthus* is a native of Natal. Apparently like the *Vallota*, *Gastronema*, and kindred subjects, it succeeds best when allowed to remain undisturbed at the roots.—H. P.

Sidalcea malvæflora Listeri is a prominent and superior member of an important genus of flowering plants and an advance on its parent, *S. malvæflora*, also on *S. candida*, though a variety named *S. m. James Dickson*, which I have not yet met with, is highly commended. *Sidalcea malvæflora Listeri* forms the same bold spikes with conspicuously large blooms as the normal form, but with the addition that the beautifully fringed flowers are of a delicately shaded pink colour. The family generally make very showy border plants, and are not difficult of culture upon warm, sunny aspects and where overcrowding is avoided. To grow them well they should be cultivated upon frontal positions of prominent rockwork, where, between sheltering boulders, they receive slight protection, and their bold spikes display themselves above more lowly vegetation, dwarf grasses, and the like. Besides their beauty and effectiveness when growing, the spikes of bloom last fresh a considerable time when removed from the plants and placed in water.—W. EARLEY.

Veronica spicata.—My plants have been in my possession for many years, and show no signs of altering their dwarf character in whatever position they are. No doubt the plant grows larger and stronger than in the mountains of which it is a native, for the flower-spikes come some 6 inches high or so with me. But it is essentially different in its growth from *V. longifolia*, being creeping and rooting as it grows, while *V. longifolia* grows from a woody root-stock in the same way as the tall Phloxes. Like them, too, it must be frequently divided to keep it at all. The confusion of name cannot be accounted for by similarity of habit when in cultivation. T. J. W., *Woodside Park*.

Crocus gargaricus from Bithynia.

Like many of our spring flowers, the Bithynian form of *Crocus gargaricus* from Mount Olympus is later this year than usual. It was in bloom in the end of February, but it was not until the beginning of March that it was in its full beauty. My best clump, though small, looked very beautiful on one of the best days we have had for some months, when the sun was almost summer-like in its warmth for a time. This little clump had over forty flowers fully expanded, and the brilliant yellow flowers were closely packed together, and really looked very delightful. Their charms were increased by the presence of the bees, which were numerous among the Crocuses, and it was quite cheerful to hear their humming as they flitted about or entered

the golden cups. The Bithynian form of *Crocus gargaricus* is recognised as being more brilliant in its colour than the other forms of the same species. At first I was afraid that this *Crocus* was going to be a disappointment here, as it flowered badly for a year or two after I received the corms from Broussa. It has now quite recovered from the effects of the rough treatment it received in collecting, and blooms as freely as any other *Crocus* I have. Though small, the blooms are very attractive, and its earliness in most seasons is considerably in its favour.—S. ARNOTT.

Soil samples.—We have received a catalogue of the first four thousand samples in the soil collection of the United States Department of Agriculture, prepared by Mr. Milton Whitney, chief of Division of Soils. To all interested in soil investigations this publication will be a useful and suggestive work of reference. Not only does the collection contain specimens of soils from the chief geological formations of the United States, it also includes samples from many of the important agricultural districts, and likewise special collections of wheat soils, tobacco soils, &c., from all parts of the world. Remarks are made concerning the collecting of specimens, their arrangement and classification, and it is stated that sets of representative soils are arranged in boxes, to be distributed to agricultural colleges and experiment stations, with explanatory text regarding their origin, chemical and physical peculiarities, &c. One object in publishing the catalogue is to suggest exchanges with institutions in other countries. *Nature*.

Sternbergia colchica. In THE GARDEN March 24, p. 228, Mr. Smith, of Newry, says I am wrong in supposing *Sternbergia colchiciflora* to be an autumnal bloomer. He writes of *S. colchica*; *I.* of *Sternbergia colchiciflora*. The former name is unknown to me, and Mr. Smith's plant is in flower now. That to which I referred is figured in the *Botanical Register*, vol. XXIII., plate 2008, *Marschall v. Bieherstein* describes it as perfuming the fields of the Crimea in the months of September and October. *Waldstein and Kitabel* also speak of it as flowering in autumn, and in the *Register* it is described as having *flowers autumnales, folia verna*. T. H. ARCHER-HIND, *Coombsbury, Devon, March 26.*

Narcissus minimus. It strikes one with some surprise that so many alpine growers are without this earliest and tiniest Daffodil. I know of many collections which, however rich in other Daffodils, do not possess this miniature one. For some time a little clump, originally from some half-dozen of imported collected bulbs, has been most attractive on a sunny rockery. I have had flowers from this clump in January, but this season they have lingered somewhat, and February had come before the first flower opened. There is much difference in the size of the flowers and in the time at which they open. To day (March 12) two plants have not opened their flowers. In size the difference is noticeable, some one or two being almost as large as those of *N. minor* or *N. nanus*, but others are of that tiny size which made this Daffodil appreciated when it was first introduced. Unfortunately, too many of the bulbs sold for *minimus* give flowers of comparatively large size. This dwarf Daffodil is one of Nature's own productions, and is thus not open to criticism on the score of being dwarfed artificially. Its proportions are perfect, and one is delighted with its little flowers. It is in its true place in the rock garden where its bright yellow flowers can be seen to advantage. S. ARNOTT.

Plants in flower at Highgate. The houses in Messrs. Wm. Cutbush and Son's nursery at Highgate are gay with many flowering shrubs, prominent among which are *Lilae*, *Spiraea prunifolia* fl. pl., *Laurustinus*, *Cytisus Andreana*, *Laburnum*, *Staphyleas*, and some fine pyramid *Genistas*, which will soon be a mass of flower. Small plants of *Azalea Deutsche Perle* are showing an abundance of flowers, while in the propagating houses is a healthy and promising display of *Dracenas*, such as *Sanderiana* and *Lindeni*, *Aralias*, and many other subjects. In another house is a large batch of *Calla Elliottiana*, which is just showing itself

above the soil. Yet another is largely devoted to small but well-grown plants of *Araucaria excelsa* and *A. excelsa glauca*. Outside, a prominent feature of this nursery is the collection of Yews cut into various shapes, such as those of birds, tables, &c. Ivies, also, of every variety are to be seen, while not least beautiful is a large number of very handsome pyramid and standard Bays.

Notes from Corsica. Mr. Woodall's note from Cimiez in your number 1478 suggests to me the following remarks. The frost and snow he speaks of on March 8 at Nice were not noticed here, where the thermometer fell at 5.30 a.m. to only 6° centigrade, though we are only 2° further south. On the 12th instant the first bloom of *Gladiolus gandavensis* was brought into the house, while we have had *Anemones*, *Ranunculi*, *Freesias* and *Callas* for these last three weeks. The latter, being grown in masses and kept in the same place for years, are just now a sight to see. *Azalea mollis* and *indica* are in full flower, while *Acacia dealbata* and *cultriformis*, especially fine in flower this winter, are now forming their seed-pods. A bed of *Beschorneria Decosteriana*, surrounded with *Acanthus mollis*, is just now a sight of beauty. *Kenedyas* cultivated in collection have given great satisfaction, and the *Astilbes* have not been without flower the winter through. *Spiraea Thunbergii* and *Genista alba* and *Andrena* are in full splendour, owing undoubtedly to the dryness of last summer and autumn. In the vegetable department early French Beans show flower, Broad Beans being ready for cropping this week. Tomatoes are out since the first week in February, and begin to form their fruit. We have had some Strawberries in the open, the field showing now a mass of white. The crop of Asparagus, extensively cultivated on this property for export to the Riviera and Paris, is only just beginning, though most years it is in by February 15. It must have had a check in root-action owing to the two hail-storms, though these did no harm to the Tomatoes. The sun all through January and February was unseasonably hot. Asparagus is cropped here in autumn and in spring. Another cause of its lateness this spring may have been the dry and open weather right up to the beginning of the year, preventing autumn digging and sowing all through the island. W. S. E., *La Carascaccia, Ajaccio, Corsica.*

BEST APPLES FOR BRITAIN.

- | | |
|-----------------------|----------------------|
| EARLY. | |
| <i>Dessert.</i> | |
| Irish Peach. | Lady Sudeley. |
| Mr. Gladstone. | |
| <i>Cooking.</i> | |
| Colhu Pippin. | Lord Grosvenor. |
| Keswick Codlin. | New Hawthornden. |
| Stirling Castle. | Manks Codlin. |
| MIDSEASON. | |
| <i>Dessert.</i> | |
| Allington Pippin. | Cox's Orange Pippin. |
| Blenheim Orange. | King of the Pippins. |
| Cockle Pippin. | Margil. |
| Worcester Pearmain. | Ribston Pippin. |
| <i>Cooking.</i> | |
| Bismarck. | Striped Beautin. |
| Lady Henniker. | Tower of Glamis. |
| Lord Derby. | Warner's King. |
| Wellington. | |
| LATE. | |
| <i>Dessert.</i> | |
| Adam's Pearmain. | Fearn's Pippin. |
| Barnack Beauty. | Horwood's Pearmain. |
| Baumann's Red. | Reimette du Canada. |
| Winter Reimette. | Scarlet Nonpareil. |
| Claygate Pearmain. | Sturmer Pippin. |
| Dutch Mignonne. | Winter Ribston. |
| <i>Cooking.</i> | |
| Alfriston. | Newton Wonder. |
| Bramley's Seedling. | Norfolk Beautin. |
| Lanc's Prince Albert. | Sandringham. |
| Wellington. | |

OBITUARY.

MR. T. BOYD.

FRIENDS of Mr. Thomas Boyd, who died suddenly at the Gardens, Callendar Park, on March 19, will be deeply grieved to hear of the removal, at the age of fifty-five years, of one so popular and so much respected by a large circle of friends. Though our friend and neighbour was not quite well for some time past, there was nothing to indicate that there was serious illness. He was born at Hopetoun, near Edinburgh, and had excellent opportunities of gaining an early experience in practical gardening. For many years Mr. Boyd was a successful exhibitor of fruits, especially in large general collections and with Grapes. He was a prominent competitor at all the large international exhibitions in England and Scotland. At Edinburgh, Dundee, and Glasgow Mr. Boyd was often a leader in the van, and returned to Callendar with many valuable prizes from well-contested encounters. He captured two Veitch memorial prizes for Grapes (in both cases they were Black Muscat Hamburgs, a variety somewhat difficult to manage well). At Loch Ryan for some years, Mr. Boyd, when gardener there to Sir W. Wallace, gave a capital account of himself as a young but successful exhibitor of fruits. He came from there to Mr. Forbes at Callendar Park, where his success has been marked as an exhibitor general cultivator of fruits and vegetables, and during the twenty years he has served Mr. Forbes in the fine gardens at Callendar, Mr. Boyd's zeal and interest in his duties has been unremitting. He has left a widow and large family to mourn his loss. M. TEMPLE.

Carron, Falkirk, N.B.

GARDENING OF THE WEEK.

ORCHIDS.

CAPTLEVA TRIANÆ.

PLANTS of this species which have recently passed out of flower will be beginning to emit new roots from the base of the last made pseudo-bulb. It is advisable, as soon as root-action commences, to attend to any repotting or top-dressing that may be required. Unless the plants have outgrown their receptacles, or the potting material is in an advanced stage of decomposition, it is not advisable to turn the plants out of their pots or other receptacles to which the roots have become attached. It is far better in such cases to remove as much of the old material as is practicable and replace it with new. Sufficient drainage should be afforded, and a few pieces of broken charcoal or finely-broken crocks should be mixed with the top-dressing material to assist in retaining an open and porous condition, while at the same time the compost may be made moderately firm about the roots and base of the plants. Water the plants as soon as potting has been done, and every encouragement must be afforded to retain the plants in a plump condition, and every inducement given to assist the new roots to establish themselves in the fresh material. This is best done by frequent damping, so that a desirable degree of humidity may be present in the atmosphere when the temperature has reached the normal conditions. Fresh-potted plants should be shaded from strong sunlight until they have re-established themselves, as this will make the leaves turn yellow, which is likely to give the plants a shabby appearance or perhaps permanent disfigurement. The house should also be kept closer, using the shading to keep the inside temperature within bounds in all the departments when cold winds are prevalent outside.

SHADING.

This is one of the chief items that will require attention at the present season of the year. In districts where the value of light is of considerable

importance, one of the most important questions is how to procure the maximum amount of light while protecting the plants at the same time from injury from over-exposure. This is a most important consideration in London and in the neighbourhood of other large towns, where the smoky and foggy conditions are so detrimental for so many months of the year, that it is necessary to make the most of the more favourable months that remain. We formerly used canvas blinds on all our houses, but now, except on the Phalenopsis and Vanda houses, we use Walter's lath roller blinds. The initial outlay on these is somewhat large, but when we consider their durability and the uses they can be put to in cold weather, they are of considerably less expense than the older system. The advantage gained in light is of great value to the plants generally, and more satisfactory results are obtained. They are easily fitted, and work in a similar manner to the old canvas roller blinds.

THE EAST INDIAN HOUSE.

The occupants of this division will now need attention. Where such species as *Aerides*, *Vandas*, *Saccolabiums*, &c., are grown it will be found necessary to do the required potting before the roots commence to unseat and the flower-spikes make their appearance. For such species as the above living sphagnum moss is the only compost required. Unless the plants have become leggy through the loss of their lower leaves, it is not advisable to turn the plants out of their pots. Carefully remove all decayed or dead material and replace it with the new moss. Where it is necessary to cut down the plants, it is best to detach the roots which have become attached to the pots with as little injury as possible. If they are thoroughly wetted before beginning to remove them, they will be the more easily detached. It is desirable, of course, to bring the basal leaves as near the rim of the pot as possible, but this must be governed by the position of the roots, and they must be cut accordingly. After covering the hole at the bottom of the pot, place the plant as low down as possible; then carefully place the roots inside the pot and fill the remaining space with broken crocks, finishing with a layer of chopped sphagnum, mounding towards the centre, and pressing moderately firm. Water always with soft rain-water. This is best applied at first through a moderately coarse rose. Keep the house close and a liberal amount of moisture in the atmosphere at all times. Carefully shade from the direct rays of the sun for a few weeks. When new roots make their appearance, more liberal treatment may be afforded.

H. J. CHAPMAN.

KITCHEN GARDEN.

SOWING SEEDS.

During this month there are several things needing attention, as the land is now in good working order, and small seeds may be sown. Another sowing of Peas may be made to keep up a succession. As regards salads, small and frequent sowings will prevent waste or a glut at one time; indeed, from now till August it is well to sow Lettuce every three weeks. A start should be made with the early Broccoli to follow autumn Cauliflowers, few kinds being superior to Autumn Self-protecting, and for succession Michauximas White or Snow's Winter are excellent. A good bed of Brussels Sprouts sown now will be valuable for winter use, as I find this vegetable hardier grown early from open ground sowings, and the sprouts, though not quite so large as those sown under glass, are quite large enough, being solid and good. A small sowing of summer or early autumn Cabbage should be made. There are some excellent kinds, such as Tender and True, Little Gem, and Matchless. These small, sweet varieties are much liked when the Pea crop is on the wane.

Cauliflowers are an important crop in all gardens, and though not of great value when Peas and French Beans are plentiful, in the autumn they are much liked. There is a good selection for present sowing. The Pearl sown now will be ready in August, and for later use such kinds as the King of the Cauliflowers, Magnum Bonum, and

for late use Autumn Giant and Mont Blanc are good. Savoys, unless there is a special demand, should not be sown yet. If liked early, the small Earliest of All or Green Cymel is the best. The same remarks apply to the Kales. April is quite early enough to sow this vegetable. For summer use a good sized bed of the Short Horn type of Carrot will be found useful, and should be sown now. In heavy clay soils it is a good plan to use some lighter soil or wood ashes as a top covering.

Spinach is an important spring and summer vegetable. The Carter being the earliest variety I have grown. Needing a large quantity of this vegetable, we sow in long rows on land to be planted in May with the main crop of Brussels Sprouts, and the crop is cleared before it interferes with the Sprouts. Earlier sowings may be made on a south border. The variety noted is a very strong grower, and needs much room and well-manured land. The Victoria Round-leaved is the next best Spinach, though such kinds as the Viroflay and Long-standing are excellent. These kinds all do better with ample space, 18 inches between the rows and thinned to 6 inches apart in the row. I have previously advised sowing Leeks under glass to get large roots, but many cannot practise this, and it is not a necessity, as excellent produce can be grown from seed sown in the open at this date. For early supplies the Lyon is a splendid root, and for later use the Holborn Model is very fine. For spring supplies few varieties are superior to the Musselburgh.

Celery for main crop supplies and late use should be sown in a cold frame close to the glass, and the sashes kept close for a time. Sow thinly and in fine soil. Earlier sowings will now be large enough to prick out on a warm bed, but give ample ventilation in fine weather to secure sturdy plants. We get our late Celery for spring use from seed sown in the open in April, merely covered with mats till it has germinated.

Another good vegetable is Chou de Burghley. This is a late vegetable, and is not grown nearly so much as it deserves. It is best sown now for use early next year, and few green winter vegetables are its superior in quality. Radishes should be sown every fortnight in small quantities. Parsley should also be sown for summer use, and where the plants do not thrive well dress the soil freely with soot and wood ashes or burnt refuse. Another sowing of Turnips should be made, Snowball being one of the best for early summer use.

G. WYTHILS.

Spion House Gardens, Brentford.

NEW AND RARE PLANTS.

VIOLET LA FRANCE.

THIS beautiful single Violet is now fairly well known, and we cannot write more truthful words than those recorded in *THE GARDEN*, January 6, 1900, p. 10, where an illustration is given of it. Messrs. House & Son, Westbury-on-Trym, who showed it at the recent Royal Horticultural Society's meeting, and were given an award of merit, wrote the article referred to. The variety was thus described: "La France is the latest addition, and is an improvement, in many respects, on Princess of Wales. It has only recently been possible to arrive at this conclusion, but they have now been fairly tested. La France is more compact in growth, which is a consideration where quantities of flowers are required and the space is limited. It is also a larger flower and of a richer and darker colour. Lastly, it is certainly more free-flowering than the other."

DENDROBIUM MELPOMENE.

(SIGNATIUM SPLENDIDISSIMUM GRANDIFLOREM.) THIS secondary hybrid, as perhaps might be expected, resembles to a great extent some of the yellow ground varieties of *D. Wiganie*, but the flowers are nearly twice the size. The sepals are pale lemon yellow, $1\frac{1}{2}$ inches long, and the petals

both longer and broader than the sepals, the colour similar to the sepals. The lip is $\frac{7}{8}$ of an inch broad, and similar in colour to the other segments, except the broad maroon disc. It is somewhat broadened and flattened by the influence of the hybrid parent. The well-grown plant carried upwards of two dozen flowers. It is a most desirable addition. Exhibited by Sir T. Lawrence, Bart., Barford, Dorking (gardener, Mr. W. H. White, by whom it was raised). First-class certificate, Royal Horticultural Society, March 27.

ZONAL PELARGONIUM ALL FLOWER.

This is, we think, a very distinct variety. True, there are other white zonal Pelargoniums, but this has a wonderfully neat little truss, and the flowers are as pure as driven snow. The plant is very free both in growth and bloom. It is a variety that will probably be largely grown. Award of merit, Royal Horticultural Society, March 27. From Messrs. H. Camell & Sons.

RHODODENDRON DR. STOCKER.

We should like to know more about this beautiful Rhododendron. It is, we believe, supposed to be a hybrid, with *R. ponticum* as one of its parents. Whatever its origin it is very charming, the shoot shown bearing several large open wavy-edged flowers of delicate colouring, white, with the lower inner half soft lemon. If this hybrid proves hardy it will be a gain, but whether this is to be so or not it is sufficiently beautiful for the conservatory. Shown by Dr. Stocker. Award of merit, Royal Horticultural Society, March 27.

CYCLAMEN PERSICUM FIMBRIATUM.

We have referred to this remarkably distinct strain of Persian Cyclamens in the general report. There is no doubt whatever that these fimbriated flowers mark an era in the history of the Persian Cyclamen, and as the variety of colours extends they will increase in value. Award of merit, Royal Horticultural Society, March 27. Shown by the St. George's Nursery Co., Hanwell.

DENDROBIUM AGGREGATUM.

A FINELY grown plant of this old Dendrobium was sent from the collection of Mr. H. T. Pitt, Roslyn, Stamford Hill (gardener, Mr. Thurgood). The plant carried fifteen racemes of flowers, which are bright yellow, becoming more dense in the centre of the lip. The species has not been previously recognised. Award of merit, Royal Horticultural Society, March 27.

CATTLEYA TRIANE VAR. KATIE WIGAN.

This is a beautiful form, very distinct and delicate. The sepals are $3\frac{1}{2}$ inches long, white, slightly suffused with rose, the petals being as long as the sepals, 3 inches broad, white, faintly mottled with rose. The lip is wholly of deep rose except the throat, which is rich yellow, with some darker orange lines running longitudinally through the base. The plant carried a three-flowered raceme. From the collection of Sir F. Wigan, Bart., Clare Lawn, East Sheen (gardener, Mr. W. H. Young). Award of merit, Royal Horticultural Society, March 27.

ADA AURANTIACA.

A MADE-UP basket of finely-flowered plants of this old favourite was sent from the collection of Mr. J. T. Bennett-Poe, Cheshunt (gardener, Mr. Downes), and the plant having never been previously certificated, the committee gave it an award of merit.

DENDROBIUM CLIO SUPERBUM.

(SPLENDIDISSIMUM GRANDIFLOREM - WARMANUM.) THE sepals are upwards of 2 inches long, the ground colour creamy white, tipped with rosy-purple. The petals are as long as the sepals and broader, white on the basal half, but becoming suffused with deep rose-purple towards the apex. The lip is $1\frac{1}{4}$ inches across, the tip in front deep

purple, then a broad white area shading to yellow around the large maroon-purple disc; the side lobes yellow, streaked with purple. The plant carried about two dozen flowers. The habit of growth shows the influence of both parents, but the influence of *D. Wardianum* is evident. It is a most desirable addition to the *Wardianum* hybrids. From Sir T. Lawrence, Bart., Burford, Dorking (Orchid grower, Mr. W. H. White). Award of merit, Royal Horticultural Society, March 27.

DENDROBIUM NOBILE ALBUM.

This is one of the whitest forms of this popular species we have seen. The sepals and petals are of fine form and substance and pure white. The lip also is absolutely white, very little trace of the faint primrose usually noted in previous white varieties being seen. The shape of the flower and habit of growth indicate the characteristics of *D. nobile*. The plant carried ten flowers. From Mr. J. Gurney Fowler, Glebelands, South Woodford (gardener, Mr. Davis). First-class certificate, Royal Horticultural Society, March 27.

**ODONTOGLOSSUM TRIUMPHANS
RAYMOND CRAWSHAY.**

This is a beautiful variety. The flowers are 3½ inches in diameter and of remarkable form and substance, the whole of the sepals being deep brown, tipped, margined, and mottled at the base with bright yellow, the lower half of the petals yellow, thickly covered with small brown spots. On the apical half there is one solid blotch of brown tipped with deep yellow; the lip yellow at the apex, then bright brown, the whole of the basal half white, with an orange-yellow disc and a few small brown spots at the base. The plant carried a three-flowered raceme. From Mr. de B. Crawshay, Rosefield, Sevenoaks (gardener, Mr. Cook). Award of merit, Royal Horticultural Society, March 27.

SOCIETIES.

**NATIONAL AURICULA AND PRIMULA
SOUTHERN SECTION.**

THE report of this society for last year has come to hand, and we are pleased to know that it is thoroughly vigorous. Sixteen new members have joined during the year, and this surely is satisfactory evidence of the increasing interest taken in the work of the society. The committee earnestly call upon members to continue their endeavours to bring to the notice of their friends and the public the desirability of increasing the usefulness of the society. This can be accomplished by the addition of new members. All friends and lovers of the flower are cordially invited to join, and all will receive, in addition to the privilege of exhibiting at the shows, the annual report, tickets of admission to the exhibitions, and a packet of choice alpine seed saved from the collections of Mr. James Douglas and Mr. Charles Phillips, who very generously present this seed as an encouragement to growers to join the society.

The committee, with a view to encourage the cultivation of the Gold-laced *Polyanthus*, have added two classes to the schedule for these beautiful flowers, one for three dissimilar varieties and one for single specimens. They wish to draw the attention of members to the fact that the hon. secretary will gladly send reports to any member who may wish for extra copies to send to friends who may be likely to join the society, and there must be many lovers of the Auricula and Primula who would gladly join if the advantages of membership were but placed before them.

The committee desire to tender to the Rev. H. Honeywood D'Ombra and the members of the Horticultural Club their best thanks for the use of the club room for their meetings during the season; to the council of the Royal Horticultural Society for the liberal donation of £10 to the funds of the society, and tickets of admission to the exhibition; and to the Rev. W. Wilks and Mr. Wright for the admirable arrangements made for holding the exhibition.

The twenty-fourth annual exhibition of the society will be held in the Drill Hall of the London Scottish Volunteers, James Street, Westminster, under the auspices of the Royal Horticultural Society, on Tuesday, April 24.

The hon. secretary and treasurer is Mr. T. E. Heywood, Auricula Villa, 16, Hamilton Road, Reading.

We are pleased to see that there is a balance in hand of £20 18s. 9d.

**NATIONAL CARNATION AND PICOTEE
SOUTHERN SECTION.**

THE twenty-third annual report of this society, just received, shows a remarkably satisfactory condition of affairs. Many new members have joined during the year, and the interest now taken in the cultivation of the Carnation is pleasing evidence of the successful work accomplished by the society.

To all who love and cultivate the Carnation, the committee

offer an earnest and cordial invitation to join the society and participate in the privileges of membership. Through the kindness of the president, the society are able to offer a copy of the "Carnation Manual" (a most useful and exhaustive work) to all new members, also a packet of very choice Carnation seed, saved from his collection—without doubt, one of the finest in the world.

After referring to other matters, the report says: The schedule for 1900 has been considerably enlarged. The classes for yellow ground Picotees have been placed upon the same footing as for white grounds, and the class for six fancies (one variety) divided into two—one for yellow and buff grounds, and one for other than yellow or buff grounds. In the schedule for 1899 these classes for six blooms of one variety were open to exhibitors in the first and second divisions, but having proved so successful, the committee decided to offer separate classes for each division, and thus further encourage these interesting exhibits. A silver cup is also offered to the winner of the highest number of aggregate points in the classes for undressed blooms, as a further encouragement to amateurs. The committee hope and believe that the very liberal list of prizes now offered will secure for the society an increased patronage and support.

The committee desire to call special attention to the classes for undressed flowers to be shown with a sprig of foliage only and without cards. It will be seen that these flowers can now be staged either in boxes, glasses, or bottles, at the option of the exhibitor.

The committee sincerely hope the appointment of a floral committee for dealing with the question of the yellow grounds, and the decision arrived at at the annual general meeting, will meet with the approval of members. A list is now published at the end of the schedule determining as to each variety whether it is to be exhibited as a Picotee or a fancy. Any yellow ground not mentioned in the said list may be shown on its merits. In compiling the list the committee have exercised a wise discretion in not drawing a too hard-and-fast line in view of the fact of a scarcity of good yellow ground Picotees, but it was deemed necessary that some action should be taken to prevent flowers being shown under both headings. The committee will deal with the question annually, and will not only add new names, but also revise the list as occasion may require.

The exhibition for 1900 will take place at the Crystal Palace, Sydenham, London, the probable date being Wednesday, July 25, but the exact date will be announced to members as soon as settled. The directors of the Crystal Palace Company have most liberally promised £50 to the funds of the society and free passes to members.

The secretary is Mr. T. E. Heywood, who is so well known in connection with the National Auricula Society.

TORQUAY SPRING SHOW.

THE Torquay District Gardeners' Association held their spring show on Wednesday, the 21st, in splendid weather. The whole of the exhibits were arranged in the Palm Court, and the effect was charming.

There was a great falling off in the number of entries compared with previous years, but owing to the fact of this being the first show held since the Palm Court has been inaugurated, the former exhibitors were not so much missed. Among the exhibits was a very fine group of miscellaneous plants, flowering and foliage, from Mr. J. Slogrove, arranged with good effect.

Among the plants exhibited were *Licuala grandis*, *Cattleya Trianae* delicata, *Anacochilus petola*, and several *Dendrobiums*. In the group for a collection of Orchids arranged with foliage plants, Miss Lavets was the only competitor, and here stood out prominently *Cattleyas*, *Cologyas*, *Odontoglossums*, *Lycastes*, *Cypripediums*, and *Dendrobiums* in great variety. In the class for three specimen Orchids Miss Lavets lost the first place by what, in the writers' opinion, was an error in the wording of the schedule. Three distinct specimens of *Cologyas*, *Cymbidiums*, and the beautiful *Angraecum sesquipedale* were staged. Against these stood three well-flowered specimens of *Dendrobium nobile*, which came from Dr. Ford Edgeclow, and took first, Mrs. Hassal coming third.

The classes for Primulas, Hyacinths, Tulips, Freesias, *Dentzas*, were well filled and the flowers in good form. *Azaleas* would have been better for another ten days to bring them to perfection. A very creditable lot of *Gloxinias* for the month of March was staged by Mrs. Hassal.

In the cut flower section were some very pretty arrangements, notably among which was an epergne from Mr. P. W. Bushby, taking first prize, with Mr. Enmet second, and Mr. Davis third. The baskets of flowers grown in the open air showed how favourable is the climate of Torquay, but the arrangement was not first-class. The button-holes and sprays also were not what one could wish for; they lacked refinement. With the tables there was more skill displayed. Mr. Minifie came first with a table beautifully arranged; second, Mr. Enmet; and Mr. Davis third.

The nurserymen were very strongly represented with imposing banks of spring-flowering plants. Among the exhibitors were Messrs. Veitch & Son, Exeter; Messrs. Curtis & Sanford, Mr. W. B. Small, and Mr. Alward.

LINNEAN SOCIETY OF LONDON.

THE next meeting of the society will be held on Thursday, April 5, at 8 p.m. precisely, when the following paper will be read by Dr. B. H. Scott, F.R.S., F.L.S.: "Sphenophyllum and its Allies, an extinct Division of the Vascular Cryptogams." A specimen of Beech wood showing old carving singularly imbedded by subsequent growth will be exhibited by Mr. E. Bidwell, F.Z.S.; also a selection of Dr. A. Henry's latest botanical discoveries in Western China, by Mr. W. Botting Hemley, F.R.S.

NATIONAL CHRYSANTHEMUM SOCIETY.

ON Monday evening last the executive committee of the above society held a meeting at Carr's Restaurant, Strand, when Mr. Percy Waterer occupied the chair.

The minutes of the previous meeting and various matters arising out of the correspondence having been dealt with, the secretary submitted the report of the newly-constituted show committee, which was really a statement defining its duties. It was resolved that some time during the month of July next the annual outing of the society be held at Halton, Bucks, the charming residence in the neighbourhood of the Chiltern Hills of Mr. Alfred de Rothschild, who has kindly consented to allow the visit of the National Chrysanthemum Society.

After the discussion of other matters purely of a formal or routine nature, the meeting closed with the election of several new members.

SWEET PEA BI-CENTENARY CELEBRATION.

SUBSTANTIAL progress is being made towards the celebration of the introduction of the Sweet Pea into Great Britain two hundred years ago. This celebration, as already announced, is to be held on July 20 and 21 at the Crystal Palace, Sydenham, and will take the form of an exhibition of Sweet Peas shown in bunches, in vases, in pots, in pans, in baskets, in bouquets, in wreaths, in table decorations, and in other ways that may suggest themselves to the gardener and florist; at the same time a conference will be held at which papers will be read and discussed. The work of arranging for this conference occupied the attention of the executive committee which met at the Horticultural Club, Hotel Windsor, on Friday, the 23rd inst., when it was decided that the conference proceedings be held during the afternoon on each of the show days. Broadly speaking, the subjects for consideration upon the first day will be the history, evolution, and improvement of the Sweet Pea, also an American view of this popular annual. On the second day it is proposed to deal with the decorative uses of Sweet Peas, Sweet Pea cultivation and classification. It is probable, however, that other matters relative to Sweet Peas will be discussed, but a further meeting of the committee will be necessary ere titles and authors can be announced and the final arrangements made. The desire of the executive body is that the largest possible amount of information regarding Sweet Peas shall be brought into reasonable limits of time and space, for it is hoped that the funds will admit of the publication of the papers read and discussion elicited, together with classification, &c., in the form of authoritative report.

The executive committee reports that the actual income up to the date of meeting is, in round figures, £250, this including subscriptions and special prizes. The hon. secretary, Mr. R. Dean, Ranelagh Road, Ealing, stated that, owing to the immense demand, he had practically distributed the whole of the two editions of schedule and circular; consequently, it was decided to have a further 500 of each printed. Letters from several continental and American gentlemen were read, and in each case the writer expressed his sympathy with and interest in the movement, and his intention of being present at the celebration. Mr. N. X. Sherwood's generous offer to place at the service of the committee, for the purposes of classification, the immense trial of Sweet Peas his firm Messrs. Hurst and Sons are this season conducting at Kelvedon was unanimously accepted, and Mr. Sherwood's thoughtful generosity in this matter was heartily applauded.

**ROYAL HORTICULTURAL SOCIETY.
MARCH 27.**

THERE was an excellent show at the Drill Hall on Tuesday last, when, besides a good display of Orchids, hardy flowers were a feature of much interest.

FLORAL COMMITTEE.

Messrs. W. Paul & Son, Waltham Cross, again showed a large and extremely pretty group of hardy flowering trees and shrubs, including a great variety of subjects, such as *Lilacs*, double French *Cherry*, *Pyrus Malus floribunda*, *P. M. floribunda Scheideckeri*, *Magnolia Soulangiana* and *Cerasus Fortunei*. This group was awarded a silver-gilt Flora medal.

A silver-gilt Banksian medal was voted to the St. Georges Nursery Company, Hanwell, for a fine group of Persian Cyclamens, part of which was devoted to the new *imbricata* strain, which was given an award of merit. This strain has both the petals and leaves fringed.

Mr. John Russell, Richmond, Surrey, staged a fine group of hardy flowering shrubs, both bushes and standards, including *Genista Andraena*, *Azalea Anthony Koster*, standard *Lilacs* and *Pyrus Malus floribunda intho-sanguinea*. This obtained a silver Flora medal.

Mr. John May, St. Margaret's, Twickenham, obtained a silver Banksian medal for a group of fine well-grown plants of Persian Cyclamen.

Messrs. J. Veitch & Sons, Chelsea, showed a group of seedling *Imantophyllum minimum* in its various shades of orange and allied colours; they also had some plants in bloom of *Viburnum Tinus lucidum*. This latter is better than the ordinary form and forces well. Both these groups obtained silver Banksian medals.

Roses were delightfully shown by Messrs. F. Cant & Co., Colchester, and a bronze Banksian medal was awarded. The exhibit consisted of a pretty stand of cut Roses, among which were the beautiful *W. A. Richardson*, *Catherine Mermet*, *Mme. de Watteville*, *Marquis Siso*, *Mme. Guinoisseau*, *The Bride*, *Rubens*, *Perle des Jardins*, &c.

A handsome group of the new *Azalea*, *Fielders White*, was also awarded a bronze Banksian medal. This was shown by Messrs. R. & G. Cutburt, Southgate, Middlesex.

Messrs. J. Peed & Sons, Norwood Road, S.E., exhibited a group of *Imantophyllums*, together with other plants, such as *Azalea Deutsche Perle*, *Pandanus Veitchii*, *Hyacinths* and *Dracenas*.

Messrs. William Cutbush & Son, Highgate, staged a group of forced shrubs, containing *Staphylea colchica*, *Magnolia Alexandrina*, *Viburnum Tinus*, *White Thorn* and *Laborinus*.

Mr. Isaac House, Westbury-on-Trym, Bristol, was the exhibitor of a group of Violets in pots, including *La France*, which obtained an award of merit, *Sulphurea*, *Marie Louise*,

Princesse de Lamotte, a new Italian variety, R. Augustine, and Princess of Wales. These Violets are becoming more popular.

A group of hardy flowers was shown by Messrs. T. S. Ware, Limited, Tottenham. It contained, among other things, *Anemone blanda*, *A. vernalis*, *Saxifraga apiculata*, *Hyacinthus azureus*, various *Narcissi*, hardy *Cyclamens*, &c.

Mr. H. J. Jones exhibited a pretty group of Tulips and *Narcissi*. Among the Tulips were Lord Derby, Joost van Vondel, Kaiserkrone, Artus and White Swan.

Mr. J. A. Kenrick, Berrow Court, Edgbaston (gardener, Mr. Croyer), showed a collection of seedling *Amaryllis* in varying shades, from deep red to white streaked with red.

Mr. J. T. Thomycroft, Eyot Villa, Chiswick Mall (gardener, Mr. F. Menzies), sent two pots of fine specimens of *Iris germanica*, which had been forced to show its value for that purpose.

From Messrs. Wallace & Co., of Kilnfield Gardens, Colchester, came plants of *Tulipa Kaufmanniana*, *Iris sind-jaricensis*, *Chionodoxa gigantea*, lilac-blue, and *Hepatica cornelia* Warley Blue, a pretty, bright blue flower. They also had cut blooms of the type of *Iris stylosa* to compare with a plant of *I. s. speciosa*, a most interesting exhibit.

Messrs. Paul & Son, Cheshunt, sent a plant of the double Persian Lilac, and also blooms of Rosa Andersoni and Rosa hybrida Anemone, both single pink varieties. Messrs. W. Paul & Son, Waltham Cross, sent *Lilac Belle de Nancy*, slightly double, lilac Doyen Keteleer, white. From Mr. John May, Twickenham, came a fine plant of *Cyclamen Lady Roberts*, a pretty pink form. A plant of *Præciana albicans* var. *striata* in flower was shown by Messrs. F. Sander & Co., St. Albans. This firm also sent a basket of *Pteris argentea*, a variety having somewhat silvery and finely-cut fronds.

Mr. C. Springham, Llandegon-on-Wye, Chepstow, showed a bloom of the green *Helleborus viridis*. *Deutzia Lemouinei* Boule de Neige came from Messrs. J. Veitch & Sons, Mr. H. J. Jones, Lewisham, S.E., exhibited a plant of a new dark crimson *Marmalade Carnation*, H. J. Jones.

Mr. Hayward Matthews, Thames Ditton, sent a plant of the red *Carnation Hypatia*. From Mr. F. W. Moore, Royal Botanic Gardens, Glasnevin, came a plant of *Chionodoxa luciliae alba*. Dr. Stocker, besides the *Rhododendron* mentioned in our list of new and rare plants, also sent some blooms of the lovely pale yellow *Acacia Riciana*. From Rev. C. T. Digby, Warcham Rectory, Wells, Norfolk, came plants of *Primrose Warcham* seedling. This is of the same colour as the wild *Primrose*, but larger.

NARCISSUS COMMITTEE.

This committee awarded a silver Flora medal to a large and very handsome group of Daffodils exhibited by Messrs. Barr & Sons, King Street, Covent Garden. The group contained *Narcissi* of almost every form and a large number of varieties.

Mrs. R. O. Backhouse, Sutton Court, Hereford, obtained an award of merit for Daffodil Comet, a very pretty, small, bright yellow trumpet-shaped variety.

Messrs. W. Mauser & Son, Garsney, sent a seedling *Narcissus*, *Sonnet*. Six jars of well-grown Daffodils, grown in cocoa-nut fibre, were exhibited by Mr. Robert Sydenham, Birmingham.

ORCHID COMMITTEE.

Mr. H. T. Pitt, Rosslyn, Stamford Hill (grower, Mr. Thurgood), sent a good group. In the back row were some finely-flowered plants of *Oncidium sarodes*, *Epidendrum O'Brienianum*, and *Vanda tricolor*. Among the numerous *Dendrobium*s was a fine specimen of *D. aggregatum* with upwards of a dozen spikes of flower; *Cymbidium Lowie-ehmannii* with a four-flowered raceme; the pretty little *Epidendrum Endresio-Walshii*, a hybrid derived from the species indicated by the name; *Spathoglottis aureo-Veillardii*, the sepals yellow suffused with rose, the ground colour of the petals yellow, the whole being covered with minute purple spots; the front lobe of the lip purple and yellow at the base; the side lobes purple mottled with yellow. *Cypripedium*, *Miltonias*, and *Odontoglossum*s were well represented, amongst them forms of *O. Hamcwellianum* and *O. Adriane*. *Angraecum modestum* and *A. fastuosum*, with its fragrant flowers, were very attractive. A fine plant was shown of *Phaius Norman* with two spikes of flower. A silver Flora medal was awarded.

Messrs. Hugh Low & Co. sent a group in which were numerous plants of the highly fragrant *Cattleya Schroderei*, *Dendrobium Brymerianum*, *D. Findlayana* and *D. barbatulum*. *O. Andersonianum* and *O. Adriane* were also well represented. A silver Banksian medal was awarded.

Messrs. F. Sander & Co. sent a small but interesting group, consisting of some finely-flowered plants of *Odontoglossum crispum*, *Oncidium Wilton*, *Dendrobium atro-violaceum*, *Lycaste Skinneri* and *Cypripedium* in variety. A silver Banksian medal was awarded.

Mr. N. G. Thwaites, Christchurch Road, Streatham, sent a finely-flowered plant of *Dendrobium nobile* Cooksonii, *D. n. ballianum*, a creamy yellow form of *D. Ainsworthii* intertextum, *D. Wigmania*, and *Odontoglossum* in variety.

Mr. E. Wigan, Bath, Clare Lawn, East Sheen (gardener, Mr. W. H. Young), sent *Masdevallia Pombouxi*, a hybrid derived from the intercrossing of *M. Veitchii* and *M. caudata* Shuttleworth. It has the intermediate characteristics of the parent species both in colour and form. *Cattleya Nagai*, a hybrid having *C. Lawrenceana* as a parent and showing to a great extent the influence of that species. A dark form of *C. Trianae* was also exhibited.

Mr. De B. Crawshaw, Rossfield, Sevenoaks, sent *Odontoglossum triumphans*, *Imperator*, a heavily marked form; *O. nudus*, *Crawshawianum*, one of the finest spotted varieties we have seen; *D. excelsum*, *Crawshawianum*, and others.

Mr. G. W. Law-Scholfield showed *Cypripedium Shilliamum* with a two-flowered raceme.

Messrs. J. Veitch & Sons sent *Cypripedium Miss Kohler* (miss-striatum) *Argus*, a pretty form having the intermediate characters of the parent species used in its production.

Mr. A. J. Keeling sent four varieties of *Laelia longiana*. Mr. T. Lawrence, Et., sent the yellow *Laelia Cowani*, like a orange-yellow variety of *L. lara*.

FRUIT COMMITTEE.

There were very few exhibits before this committee, but all were interesting, two awards being given for special merit.

A first-class certificate was awarded to Rhubarb Daw's Champagne, a remarkably early variety, five other kinds that had been grown side by side with it being very inferior. This variety got an award of merit early in February, and as a forcing variety it far exceeds the excellent Hawke's Champagne in size, colour, and earliness, and will be a great gain to those who value early Rhubarb. It was exhibited by Mr. W. Pompat, Twickenham.

Apple King of Tompkins County received an award of merit. It is one of the best American dessert varieties, and is valuable for its lateness. A large and handsome fruit, it was introduced into this country many years ago by the late Mr. Rivers, of Sawbridgeworth. This was exhibited by Mr. Parker, Goodwood Gardens, Chichester. From the Duke of Richmond's gardens also came eight other varieties of Apples of excellent quality, the cooking fruits being very superior. They comprised fruits of Wellington, Lane's Prince Albert, the old French Crab, a good keeper and cropper, Norfolk Beauty in fine condition, Curt pendu Plat, Lemon Pippin, splendid specimens of Sturmer Pippin, an old dessert Apple well worth extended culture, and a fine lot of Beauty of Hants, &c. A seedling Apple was sent by Mr. C. Springham, Chepstow, Monmouth.

THE TRADERS IN POISONS OR POISONOUS COMPOUNDS FOR TECHNICAL OR TRADE PURPOSES PROTECTION SOCIETY.

The above society has been formed to secure the amendment of the Pharmacy Act of 1868, whereby it may be made legal for traders other than pharmacists to sell poisons and poisonous compounds for technical or trade purposes. The initial meeting was held on December 6, 1899, at Euston Hotel, London, where a number of influential firms were represented, and it was resolved that the existing unsatisfactory conditions of the Pharmacy Act of 1868, whereby poisonous compounds can only be sold legally by chemists, should be ventilated in the agricultural and horticultural and seed trade papers. A second meeting was held on the 6th inst. at Euston Hotel, when it was resolved to extend the sphere of this society to all those trades which are in any way affected by the existing Pharmacy Act, and which would be benefited by an amendment of the said Act to enable them to retail poisons or poisonous compounds for any technical or trade purpose, in original sealed packages, as received from the wholesale dealer or manufacturer. A committee has been nominated, with power to add to their number, who have appointed Mr. G. H. Richards as treasurer, and Messrs. Dobbs & Hill, of Worcester, as legal advisers. Officers and a permanent secretary will be appointed, and to meet expenses it will be necessary to obtain subscriptions from those interested. Among the gentlemen present at the last meeting there were guarantees given amounting to £150, and as expenses will be considerable, it is earnestly hoped that a sum will be subscribed sufficient to carry on the work to a successful issue. Since it is desirable to make the movement popular, the minimum subscription for membership has been made 5s. per annum, or a donation of 10s. in cheques and post-office orders should be made payable to the order of G. H. Richards, hon. sec., *pro tem.*, and crossed "London and County Bank, Lambeth branch, and forwarded to him at the temporary offices, 128, Southwark Street, London, S.E.

THE READING GARDENERS' SOCIETY

A VERY large attendance of members assembled on Monday last in the Club Room of the Old Abbey Restaurant to spend an evening in "A Surrey Garden." By the aid of bright views and under the guidance of Mr. Alex. Wright, of Bucklebury Place Gardens. The garden was that of Fildknap Park, which was entirely planned and maintained for several years by Mr. Wright, who in a very interesting manner explained the different alterations that were made and the reasons for planting particular varieties of trees, shrubs, and flowers. Messrs. Basket and Neve spoke of the very interesting evening that had been spent, and congratulated Mr. Wright on the splendid way in which he had laid out the grounds and gardens under his charge. On the proposition of the chairman, Mr. E. Fry, a hearty vote of thanks was accorded to the lecturer, also to Mr. G. Smith, of Cintra Lodge Gardens, for staging some beautiful specimens of the White Grape Hyacinth, and to Mr. Crebleby, The Gardens, The Honeys, Twyford, for a splendid plant of *Cineraria stellata*.

TRADE NOTES.

A NEW SPRINGER.

We have received for trial from Messrs. Benton & Stone, of Birmingham, a simple syringe (White's patent triple). We find on trying it that it is an excellent syringe, throwing a powerful spray to a considerable distance. By a clever and extremely simple automatic mechanism, that cannot possibly get out of order, the spray is changed at will by merely turning the syringe in the hand from a single jet throwing a powerful column of water, to a coarse spray resembling that of a medium rose, or one that is finely diffused. It is a simple and effective tool, well worthy of commendation.

A NEW LAWN-WEEDER

We have received from Messrs. Vaughan, of Birmingham, a lawn-weeder that should commend itself to those who desire to free their lawns from Dandelions, Plantains, &c. The tool has a pair of handles, by separating which the jaws open. These are of blunt chisel shape, opening like pliers; they are placed so as to be just on each side of the weed, when a moderate pressure sends them into the ground. The handles are then brought together, and the weed is gripped and brought up. The handles are of walking-stick length, so that the user need not stoop.

ANSWERS TO CORRESPONDENTS.

Iris Kæmpferi (PERKINS). This may safely be moved in spring.

Removing flower-buds from Tree Pæonies (PERKINS). Whether it is advisable to remove the flower-buds from the Tree Pæonies the first and second years after planting depends on the size and strength of the plants; but if they are small or the usual nursery size, it would be well to remove them to encourage growth.

Planting after Daffodils (PERKINS). Advice is asked as to what to plant in Daffodil beds when the foliage dies down. This is in June, when half-hardy annuals such as *Phlox Drummondii* or *Salpiglossis* might be planted, or plants of this class whose roots are not too robbing. Anything with very persistent growth should be avoided, or it will hinder the ripening of the bulbs. For this reason it is undesirable that Daffodils should be in beds that are meant to be kept smart and well furnished during all the flower season.

Begonia flowers not opening (H. C. R.). It is difficult to state the reason of the enclosed *Begonia* seldom opening, for the plant is undoubtedly judging by the specimen sent, in the best of health. At the same time, some forms of *Begonia* and this is one, never open to the extent that many kinds do. Very probably yours originated from a seedling, in which the closed character is more pronounced than usual. Apparently it is a rosy form of *B. Carrieri*. Admission to the Royal Gardens, Kew, is at 12 o'clock, or before, by anyone really interested in horticulture. Application should be made at the curator's office.

Violets unsatisfactory (PERKINS). The Violets that have lost most of their leaves and show a brown transparent spot on the few that remain are probably attacked by a fungus, possibly induced by too rich treatment and too little air in the case of those in frames, and by too soft and rich growth from over-manning in those in the open bed. Plants affected should be taken up and burned to prevent the fungus spreading. We recommend fresh planting in a different spot with clean stock from another garden. If the querist is a Fellow of the Royal Horticultural Society, the scientific committee would, no doubt, name the disease if ample specimens were sent to them on any of their days of meeting.

Iris stylosa (NETFIELD). When grown in a warm situation this flowers well through the winter, but there may be some conditions, such as undue dampness, or insects or fungus injuring the crowns of shoots, and thus causing the failure of which you complain. It is also sometimes desirable to place a handlight over these winter-blooming Irises to furnish that warmth and protection from heavy rains and snowfalls they seem to need. How deep are your roots planted? Generally it is best to plant rather shallow, that is from 1 inch to 2 inches under the soil. Then it is the rule with some growers after planting, where glass is not employed to place some light Heather or Fern over the clumps. Certainly the Iris needs some nursing during hard or wet winters.

Thinning bloom on fruit trees (CROMER). Generally it is good policy to thin bloom on fruit trees when they seem overdone, but on the whole it is best to wait until the bloom is over and has set. Then when the fruits are found to be too plentiful it is wise to thin them ere they swell. This is good advice in relation to Apples and Pears. In the case of stone fruits it is best to wait to see how far the process of stoning is passed through, for often many fruits fail to do so successfully, and then fall. But all thinning should be done early, and when there is a large set, one half the crop may be removed at least, not taking all at once, but twice or three, just as the fruits are found to be too thick in places. Over-cropping trees is a great evil and should not be allowed. You may well try for experiment, considerably thinning the bloom to note the result.

Seedling Orange (NETFIELD). There is no necessity for you to graft or otherwise manipulate your seedling Orange plant. Simply grow it on as at present, using a compost of one half good old turf loam, the rest being of equal parts of well-decayed leaf-soil, old hotted manure and sandy peat. A little white sand and wood ashes may also be added. Possibly your plant will be all the better if got into a larger pot, but for a plant 1 1/2 feet in height, a pot 6 inches across will be ample. Seedlings need a few years' patience to cause them to flower and fruit. Your plant, being from two to three years old, should have been rather taller before now, but it may have been in rather poor soil. Should it, after it has flowered and fruited, be found worthless, you can then have it grafted with a better variety. Young tops set into pots in sandy soil, covered with a bell-glass and stood in a strong bottom-heat, will make rooted plants in a few months.

CATALOGUES RECEIVED.

Double Hollyhocks, *Webb & Brand, Suffolk Walden.*
Floral Guide, *H. Cunnell & Sons, Swadley Kent.*

GARDENING APPOINTMENTS.

MR. A. COLEMAN, late head gardener to General Lord A. G. Russell, Eghurst Park, Basingstoke, as gardener to Lord Stalbridge, Motcombe House, Shaftesbury, Dorset.

MR. D. ANDERSON, formerly head gardener at Monkstown Park has been appointed head gardener to Mrs. Pease, of Willow Park, Booterstown, Dublin.

Mistletoe seeds. If any of your readers would kindly send me a few Mistletoe seeds to graft on some old Apple trees, I would be very grateful. M. WILSON, *Carrington, Edinrathstown, Co. Longford.*

Correction. On p. 216, second paragraph of *Saxifraga hursaria* article, line 11, for "including," read "excluding."

THE GARDEN.

No. 1481.—VOL. LVII.]

[APRIL 7, 1900.

WATER GARDENS.

WITH ESPECIAL REFERENCE TO THE HYBRID NYMPHÆAS.

WHEN the history of gardening in the present century is written, a distinct era will be formed by the introduction of the hybrid Nymphaeas from English and foreign raisers, hybrids that have brought to the lake and pond surface the glorious colouring of the species of tropical climes. Their acquisition is a precious gain, and has transformed many an ugly lake into a garden of living beauty, with flowers of rich and tender colours, as delightful as anything in the hothouse and conventional "summer bedding."

We draw attention to this wonderful race as this is the season for planting, and those who have not yet considered the lake surface as providing a place for a beautiful garden should introduce the Water Lilies, remembering that the hybrids are thoroughly hardy, equalling in vigour and frost-resistance the white Lily of our ponds and river back streams. In many an otherwise interesting garden a needless blot is the lake, as bare of flower life as a gravel path, but capable of rich effects through the summer and autumn from the hybrid Nymphaeas, forming big floating groups, jewelled with masses of petals, varying in their colouring from deepest blood-red to pure white, the plants showing too as great diversity in growth. Some, the pretty miniature Nymphaea pygmaea and allied forms, are for the margin, and lead up to those remarkable hybrids, the *Mariacea set*, *albida*, *Chromatella*, *carnea* and other handsome forms.

The Water Lilies are happier in a sheltered quiet lake than in quite open water, and they are not flowers for the large domain merely, but for gardens of even moderate dimensions, where they are more under control than in extensive lakes visited by rats and other enemies of water flowers in general, and Nymphaeas in particular. In a sheltered, yet not over-shadowed, lake the plants make rapid growth, and bloom with wonderful freedom through the summer until the cool autumn days make full flower development impossible.

It is a pleasurable sensation to seek the water garden when the great leafy groups bear their rich burden of flowers, open wide in the sunshine, and be-gemming the surface with masses of yellow, crimson, glistening white, deep red, and innumerable shades. The flower gardener

who undertakes the growth of the plants for the first time need not fear that failure will result from embarking in this recent phase of English gardening, as with few exceptions the plants are hardy and strong in growth, and the flowers may be gathered for table decoration, thus fulfilling a novel and delightful mission in the house itself.

But it is not profitable to try experiments with species not hardy, or at least their hardiness must be proved by persistent trials in various positions. The species that have imparted so richly their colouring to the hybrids are not for the open garden, unless in some favoured spots, which cannot be accepted as general conditions for Nymphaea culture. Interesting, it is true, is this experimental gardening, growing outside the beautiful Water Lilies of warmer lands than ours, but they possess none of the hardiness of the hybrids. Where no pond or lake exists, one may grow the smaller forms in tanks and tubs, and thus add appreciably to the interest of the garden.

Water gardening is not confined to the Nymphaeas. The water margin should be also a garden of flowers, and not some ugly stone, brick or cement edge, which of course renders flower life impossible. In not a few gardens and parks some ugly stone is considered sufficiently interesting and beautiful as a margin to the water. A world of flowers is thrust aside when opportunities of introducing moisture-loving plants are not regarded—plants that provide a procession of flowers from the early spring until the threshold of winter the *Irises*, the larger *Spearwort* (*Ranunculus Lingua*), the *Globe Flowers*, *Japanese Primrose*, and kinds that live in the water, *Buckbean*, *Arrowhead*, and a host of things that occur to the mind when thinking of the beauty of some natural stream coloured with the flowers that are happy only in moisture. Of the value of the good grouping of *Bamboos*, *grasses*, and plants of bold growth—*Polygonums* and such like—near the lake we have given from time to time illustrations. The flowers by the margin and the Nymphaeas upon the surface are in our thoughts at this season of planting.

VERBENAS IN THE FUTURE.

In an article in the *Gardeners' Chronicle* by a well-known florist, entitled "The Verbena Revival," attention is drawn to the merits of a delightful plant that has of late years been much neglected. This neglect has no doubt arisen from the immense growth in popularity of hardy plants. But though the Verbena is

only suited for putting out in summer, it is much too good a thing to be allowed to fall into disuse.

Another reason for its late loss of popularity may lie in the fact of its undoubted "miffiness" and unwillingness to live out our long winters as scarcely-rooted cuttings under glass. It is true that many losses occur by damping off, but it is too good to let go for want of due care and vigilance.

We shall be glad if at blooming time nurserymen and others who possess selections will send us flowers to report upon. We read with pleasure that some of the old self-coloured varieties are still to be had, and recognise some very old friends among the names of the white, scarlet and purple colourings quoted in one catalogue.

We are strongly of opinion that those old varieties with a scarcely defined or very small white eye are much to be preferred to those of more recent raising with large white centres. The large white eye gives the plant in the mass (and the *Verbena* is essentially for massing) a chopped-up look that certainly detracts from its use as a garden plant.

We heartily agree with the writer in our contemporary in expressing a hope that more attention may be given to this fine autumn plant, and that it may regain its former popularity both in our gardens and on the show table.

The original type, *Verbena Melindres*, is in itself a very beautiful thing. The whole plant is smaller and rather more condensed and refined than the garden varieties, but the flowers are numerous and of a particularly satisfactory shade of scarlet.

The danger with the garden varieties is that of getting them too large and coarse. What is wanted is strong constitution and short growth. We have already in *THE GARDEN* pointed out the error, so often fallen into by seed growers, of taking "dwarf and compact" as the chief standard of excellence in the port of a plant, but in the case of the *Verbena*, as in that of some other plants of trailing habit, some condensation is a distinct gain, because the nature of the plant is to sprawl unduly, and therefore to space its blooms too widely for good garden effect.

For definition of good habit in the *Verbena* one may bracket it with *Heliotrope*. The two plants have rather the same way of growth and the same kind of garden use, and in both an exaggerated sprawl, and a loose, weak flower is a defect. No one rule can be offered for general adoption as a guide to this kind of judgment about the merits of garden plants. Persons of good and sound taste and a fair knowledge of horticulture, by long watching the ways of plants and comparison of individuals, come to see, by what one may call an acquired instinct, why a garden flower is good, and why of two of a kind one is better than the other. Sometimes the show judgment is an excellent guide, as in the case of *Hybrid Perpetual* and

Tea Roses, though with other flowers it is often only a partial guide. But the keen gardener or amateur who truly loves flowers is independent of shows in the matter of judgment, for he can see for himself what is a good flower and why it is good.

SPRING GARDENING IN THE PARKS.

It is not the fault of those responsible for the beautifying of public parks and gardens if dwellers in crowded cities and suburbs know little of the delights of spring in meadow and wood. At this season in the heart of cities throughout the British Isles flowers are expanding in their fulness, splashing with colour the velvet turf and showing the charm of simple grouping. There is much bad gardening in the park as well as in the private domain, but this early flower gardening in the grass and in the bed and border we wish were even more extended, within reasonable bounds, as excess in anything, however beautiful and wholesome, means future reaction. In Regent's Park the early flowers are prettily grouped in the grass, the Scilla, Snowdrop, Crocus, Daffodil, and the Hyacinth, and this well-planted open space does not stand alone in showing the quiet beauty of masses of early flowers in groups. The great mistake is in planting too thickly, desiring, maybe, mere masses of colour without the beauty of the simple grouping revealed in the scattering of flowers in the meadow. This is a blemish of many good English gardens, striving to gain effect at the sacrifice of natural beauty. Every flower of the garden is not well placed in the grass, and there are strange effects from the use of things seen to better advantage in a border or bed. Lumpy Hyacinths of the conventional show order are not pretty in the grass, but in one park last year we remember this grotesque assemblage of nodding heads, weighted to the soil almost with the heavy clusters of blossom. This is grass gardening made ridiculous, though a well-meant endeavour to scatter flowers everywhere; but there are right and wrong ways of accomplishing this, and the gardener we use the word in its broadest sense—should so plant and distribute a flower that it may teach a wholesome lesson. To stick scarlet Geraniums in the turf is not less foolish than to show the Hyacinth of the glass bottle in the same unfortunate way.

But we are happier in giving praise where praise is due than in dwelling upon a few examples of bad taste in planting flowers that are not easy to distribute in the way that Nature follows in scattering her gifts over the English meadow. Simple, natural grouping is not readily acquired by everyone, and for this reason it is wise to refrain from their too liberal use and planting things out of harmony with their surroundings.

THE EDITORS' TABLE.

At this season the flowers of the garden are coming forth abundantly, and we invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit tree, shrub, orchid, or hardy flower, and they may be addressed either to Miss Jekyll, Munstead House, Godalming, or to Mr. E. T. Cook, 20, Tavistock Street, Covent Garden, London.

NOTES OF THE WEEK.

Potato culture in Britain, 1899.—Last year 547,682 acres were occupied with Potatoes—England 79.8 per cent., Scotland 23.2 per cent., and Wales 6 per cent. In each of the British Isles the yield of tubers was below the decennial average per acre, whilst the average of 5.62 tons for Great Britain as a whole showed a falling off equivalent to one-third of a ton. During the last fifteen years the 1899 average has been exceeded ten times: the extreme yields over this period were 6.64 tons per acre in 1895, and 5.17 tons in 1897. The total weight of the crop is estimated at 3,077,000 tons, as compared with 3,283,000 tons in 1898, and of this quantity England is credited with 2,254,000 tons, Scotland with 650,000 tons, and Wales with 173,000 tons. The largest yield of which we have any record was 3,592,619 tons in 1895; the smallest was 2,608,193 tons in 1897, as a result of which our imports of Potatoes underwent an extraordinary expansion, more especially from Germany.

Nuttallia cerasiformis.—Whilst the flowers of this shrub have no bright colours to recommend them, they are so abundant and so graceful, that the species may be included amongst the best of the few shrubs we possess whose flowers brave the winds of early March. At a short distance the plant might be taken for a Ribes, one of the greenish-flowered Currants. The habit is the same—a thicket of erect stems bearing numerous short, pendent racemes of blossom. It belongs, however, to the Rose family, and is sometimes called *Prunus californica*. A large bush at Kew now in flower produces male blossoms only, so I conclude male and female flowers are borne on separate plants. The feature of the shrub is the great abundance of its racemes, an abundance I have never known it fail in. Each raceme is 2 inches or 3 inches long, carrying ten or twelve flowers. The small petals are white, but it is the larger green calyx that gives the prevailing hue to the plant when in bloom. The *Nuttallia* is a native of N. California and is quite hardy here.—B.

Todea superba and T. pellucida in the open garden. On reading the article on "Hardy Ferns" in your issue of March 31 it occurred to me that some of your readers might be interested to know that two very beautiful Pinny Ferns generally grown in greenhouses can, with a little care, be safely grown all the year round in the open air. I allude to *Todea superba* and *T. pellucida*. They require constant shade and moisture in summer, and when subjected to more than 11° of frost, a slight covering of dry Bracken in winter. There are in most gardens corners where the sunlight never falls, and if sheltered from strong winds they could be made into snug nooks for these beautiful Ferns. The protection in winter is easily enough given. The climbing Fern, *Lygodium palmatum*, is also hardy in a similar position, and I think there are very many garden owners who do not know that the Canadian Maiden-hair (*Adiantum pedatum*) is as hardy as the commonest Fern that grows in a fence-bottom. —YORKSHIRE.

Tecophylæa cyanocrocus.—This delightful bulbous plant, to which the English name of Chilean Crocus has been applied, is now in flower in the open in Mr. Archer-Hind's garden, Coombe-bisacre House, S. Devon. Beautiful as are the respective blues of the Scillas and Chionodoxas, the tint of the Chilean Crocus is still more lovely, rivalling, if indeed not excelling, the Gentian in depth of colouring. In the instance under notice the bulbs are planted at the foot of a south wall in a compost of leaf-mould, peat and sand, and at a depth of 10 inches below the surface. At first sight such a depth appears excessive for such small bulbs, but doubtless the success that has been attained is mainly due to this deep planting. The bulbs in question were planted two years ago, and give every appearance of being permanently established. In the bright March sunshine the lustrous blue of the satiny petals has a charming effect, and in gardens where the Chilean Crocus can be successfully grown, the display of spring flowers in the open air will be exceptionally enhanced by its

inclusion. *Tecophylæa cyanocrocus* is rarely met with in flower except under glass protection, but a few years ago I noticed it in bloom in the gardens of Abbotsbury Castle, Dorsetshire. Under glass, as mentioned by Mr. H. J. Elwes (p. 186), it forms a brilliant addition to the more generally grown occupants of the greenhouse.—S. W. F.

Kerria japonica under glass.—Of late years we have at Kew seen many departures from the hardy shrubs commonly employed for flowering under glass early in the season. Just now an instance of this occurs in the case of this *Kerria*, bushes of both single and double-flowered forms in the temperate house being laden with their golden blossoms.—T.

Erica hybrida.—Under the name of *Erica mediterranea hybrida*, Messrs. Smith & Sons, of the Darley Dale Nurseries, have for several years past been sending out one of the most charming and valuable Heaths that can be grown out-of-doors in our climate. I have ventured to give it the shorter name that heads this note because if it be a hybrid between *E. mediterranea* and *E. carnea*—the two species that Messrs. Smith regard as its parents—it is nearer *E. carnea* than the former. Its great virtue is its early flowering. This year, for some reason, it was not so early as usual; still it was some time in advance of *E. carnea*, which is the next earliest of the hardy Heaths. In the season of 1898-99 it was in flower by the early days of December, remaining a beautiful feature for at least four months. The flowers are very similar to those of *E. carnea*, but the plant is taller, more erect, and altogether of sturdier habit. Both these Heaths as well as the white variety of *E. carnea* should be in every garden. Among dwarf shrubs in February and March there is nothing that rivals them in the bright red-purple of the flowers or in their indifference to any of the "many weathers" an English March can give.—W. J. B.

Hepatica angulosa.—This lovely spring flower, which commenced to blossom in January, is now a picture of exceeding beauty in places where it succeeds, bearing flowers far larger than those of the type, with starchy petals of a charming tint of blue that at first sight, though of paler hue, remind one of the blossoms of *Anemone apennina*. It must be admitted that this *Hepatica* is somewhat capricious in its behaviour, but its beauty is of such a high order, that any trouble incurred in providing for its requirements is well repaid by subsequent success. Perfect drainage is a *sine qua non*, stagnant moisture being fatal to the plant. A deep root-run is also an important consideration, and for this reason a somewhat elevated position in the rock garden, where in porous soil the root-fibres may strike deeply down along the partially buried masses of stone, is particularly adapted to the needs of this *Hepatica*. Care should be taken that lime does not enter into the composition of the soil, and a partially shaded site, protected from the sun's rays at midday, is preferable to one thoroughly exposed throughout the entire day. Copious waterings are beneficial during arid summers when there is any danger of the roots suffering from drought.—S. W. F.

Prunus (Persica) Davidiana.—The cold and sunless winter and the inclement weather which has prevailed for some time since have been unfavourable to the flowering of this charming shrub or small tree. It has been considerably later than last year, but has suffered less because of its lateness. It came into bloom in the beginning of March. To speak more correctly, perhaps one should say that the white-flowered variety came into flower at that time, as the rose-coloured form is not open to-day (March 19). While both are pretty, I have a preference for that with white flowers, which is, I understand, the type, although I say this subject to correction. The flowers of the rose-coloured form—which is called *rubra*—are not so clear in their hue as one would wish. One would not like, however, to be without either, as their early blooming makes them very welcome in a sheltered garden. They are leafless at the flowering time, but the bare branches with their pretty single flowers close along them are very

pleasing indeed. This flowering Peach, which comes from China, is perfectly hardy here, the only drawback to its value being caused by frosts coming on after the flowers have opened. The name of *Prunus Davidiana* is that adopted in the "Kew Hand-list of Trees and Shrubs," but it is occasionally catalogued as *Persica Davidiana* (Carr.), *Amygdalus Davidiana* and *Armeniaca Davidiana* are other synonyms. The early period at which it blooms calls for a sheltered place and a position where it can be protected if necessary from frosts when in bloom. It is a precious plant, of great value to those who have little or no glass. S. ARNOTT, *Carschoorn, by Dumfries, N.B.*

Hardy Fuchsias.—I was much interested in a letter in THE GARDEN, p. 222, advising growing hardy Fuchsias in the south. Here 900 feet above the sea they grow most luxuriantly, and have done so for nearly fifty years. I have two hedges of *Fuchsia globosa* behind herbaceous borders each 20 yards long. Last year it was 4 feet high and very thick, though only planted three years since and very small pieces were put in. I have the Fuchsias cut down every year because they grow too large and straggly. In the summer they are a mass of bloom. *F. gracilis* does equally well, but is smaller and a less showy form. C. J. B., *Walsingham, Co. Durham.*

Aubrietia Souvenir de W. Ingram.—This fine variety, the largest in size and deepest in colour of all the rose-tinted Aubrietias, aptly commemorates the work of the late Mr. W. Ingram at Belvoir, where he raised spring gardening into a fine art, and was one of the first in this country to attempt the evolution of a rose-coloured Aubrietia. It must be nearly ten years ago when I in one of my visits to Belvoir saw in his nursery garden a batch of seedling Aubrietias he had bred up from one which had a tinge of pink in it, and which, I think, he originally obtained from M. Max Leichtlin, of Baden-Baden. The contrast afforded by the colour of the blossoms of the type named after the before-mentioned honoured continental raiser is very conspicuous against the finest of the blue varieties, such as *Eyrei* and *violacea*, to be found in gardens. The red variety, like the blue, varies from seed, and it is not difficult to get deep coloured strains by selecting from the seedlings the most distinct and propagating by means of cuttings and division. Seed should also be taken from the best and sown, and attempts be made in this way to improve upon any leading variety. There are possibilities in the Aubrietia, and it is well to bring them out. R. D.

Galanthus virescens. While one would not call this an attractive Snowdrop in the ordinary sense of the word as applied to flowers, it has at the same time some quiet beauty which makes one prize it. I have, unfortunately, only one bulb at present, the remains of a small clump which was attacked by the fungus about two years ago. I was glad to see it come into bloom, as I was afraid I had no bulbs of this variety left; its flowers look so unique with their outer petals of pale green, shading off to white at the edges, and with the inner petals entirely green. It is a late bloomer, and a seedling from it, raised by Mr. Allen, has the late-flowering habit of the parent, but has not the green colouring in any degree beyond our ordinary Snowdrop. The history of this Snowdrop, so far as known, is related in the paper by Mr. F. W. Burbidge, which appeared in the "Journal of the Royal Horticultural Society," vol. xiii., part 2. Its first appearance does not appear to be on record, but it was grown by Professor Fenzl, the late curator of the Vienna Botanic Garden, from whom Herr Max Leichtlin obtained two bulbs. The latter afterwards sent two bulbs to this country, one going to the Rev. Harpur-Crewe, and the other to Mr. James Allen. It is by no means a difficult Snowdrop to grow, and I had a nice little clump when the annoying *Polyactis galanthina* made its attack upon it. I hope *Veltheia* may have the effect of keeping it away in future. S. A.

Chorozemas in bloom. In the flora of Australia the natural order Leguminosae is strongly represented, and among the different members are some of our most beautiful greenhouse shrubs,

notably the Acacias and Chorozeas, of which last we have many forms, but, with the single exception of *C. Henchmanni*, a strong family likeness runs through the whole of them. They are all rather loose-growing subjects, whose slender branches are clothed with leaves in some instances almost like those of the Holly, but much smaller and harsh in texture. The Pea-shaped blossoms are produced in many-flowered racemes at this season of the year, and very bright and cheerful they are, the colour for the most part being some shade of red or yellow. A few years ago Messrs. Low brought forward a new variety under the name of *C. Lowi*, which is one of the best of all, and is particularly valuable for flowering in a small state. It is characterised by unusually bright-coloured blossoms and very dark green Holly-like leaves. These Chorozeas need a compost consisting principally of sandy peat, and they should, in common with the general run of hard-wooded subjects, be potted firmly. During the latter half of the summer they may be stood out of doors for a time, but care must be taken that they do not suffer from want of water. Red spider is sometimes liable to attack the foliage, but it may be kept down by the free use of the syringe. H. P.

Crocus Tommasianus. This lovely little Crocus has made a brave show this season and seems yearly to grow upon one's affections. As

and the one called *atropurpureus* is hardly of the colour signified by the name; it is more lilac. I have only flowered a few seedlings from my own plants. So far, these are exact reproductions of the parent clump, but I hope to save seed from the best coloured lot. A cheap Crocus like this might be more largely planted. I see it can be bought for 2s. 6d. per 100. S. ARNOTT.

PALM IN AN IRISH GARDEN.

THE Palm represented in this illustration was sent to me some six or seven years ago from the French Riviera, by a *palmariste* named Brunel, under the name of *Phoenix senegalensis*, but I have now reason to believe that it is not that kind at all, but *P. canariensis*. The exceptionally severe frost of January 4 and 5, 1895, when 29 were registered here, cut this Palm down to the ground, destroying every vestige of foliage, but as soon as the summer weather came it shot up finer leaves than ever before, an additional proof that when a frost is not severe enough to injure the roots of a plant, it does it good, acting upon it as a tonic.

W. E. GUMBLETON,
Queenstown, Co. Cork, Ireland.



PHOENIX CANARIENSIS AND EUFALIA ZEYRINA IN MR. GUMBLETON'S GARDEN, NEAR QUEENSTOWN, IRELAND.

the clumps become larger the effect is finer, and the weather which has prevailed for a week or two has given the flowers a better opportunity of lasting in flower than usually falls to their lot. Like many other flowers, its colouring is not easily put into words. I see that it is called "pale sapphire-lavender," a description which certainly does not err in the direction of flattery. It is pretty in its bud state, the plants varying from almost white to lavender in the colour of the outer segments. It is at its brightest and best, however, when it opens to the sun. Then its little flowers display their full beauty. Like many other species, it is variable in shade, and I see that Mr. George Maw remarked that Dean Herbert said that the segments were occasionally marked with a darker blotch toward their summit. Has anyone seen this form? Mr. Maw does not appear to have met with it, and I have never come across it. One clump that I have here is particularly bright in colour, and is deeply flushed with a glowing rosy shade at the ends of the petals when open. There are two selected varieties in the market, but these are not so distinct as one would like. That named *pallidus* is lighter in colour, but the flowers are not of very good form,

WOODLANDS.

BY-PRODUCTS OF WOODS.

BARK has been and probably always will be one of the most important by-products of Oak woods, although the value of bark has fallen off greatly of late. To the owner who sells his timber standing it is often an almost lost product, because it is difficult to assess its value fairly on the tree, and the purchaser will hardly allow anything for it. A crop of bark is almost as easily spoiled by bad weather as a crop of hay, and the purchaser, who buys it with all risks with the standing timber, and has to hurry it, may be, out of the wood on account of the game, sometimes loses by it. The bark should, however, be an important item in every sale of Oak timber to the owner of the trees, who will take the trouble to fell his own lots and sell the

bark separately. He should realise at least 20s. net per ton at present prices of about £3 15s. delivered to the tanner. Every 100 feet of timber or thereabout should yield 1 ton of bark, and some single trees will yield that much. Hence, in every considerable fall of Oak timber the quantity of bark is large, and represents a considerable amount to the vendor. It goes far towards paying expenses, and if the bark can be chopped up in the woods, a considerably better price may be had for it.

BOBBIN WOOD.

This is a term employed to denote the small wood of Sycamore, Birch, Beech, and Oak, principally from 6 inches down to 2 inches in quarter girth. In the Highlands of Scotland

carriage wheels as blocks. These are called "chokes," and so great is the quantity used on railways, that chokes are one of the things for which estimates are annually invited by railway companies. They are usually of Oak, and are never made of anything but the refuse tops and branches of trees that have been trimmed for sale. They are sawn off about 2 feet long, bevelled roughly at each end, and are then ready for use. The middleman can buy the timber for such purposes, lead it home, perhaps miles, convert it into chokes, and deliver them to the railway company at a profit.

Another commodity used on railways and colliery tramways are pegs to hold the rails in the chairs and for other purposes. One has

Hazel and any other wood that is tough and long and about 1 inch thick. This is "crate-wood," and can always be well sold by the acre or lotted in bundles. I have known a crop of crate-wood to pay all the costs of felling, lottling and disposing of a large lot of timber, but the wood was old and thin, or the crate-wood would not have been so good.

The common Elderberry is not considered a very valuable forest product, but larger quantities of it are sold than might be supposed. The wood when old enough is very hard, and is used for pegs by shoemakers and for making butcher's skewers, &c. On one estate, where the Elder had become a nuisance in the woods, I advertised it and had applicants directly who



CARDUONS IN A GARDEN CLOSE TO THE CHURCH OF ST. JOHN LATERAN, ROME.

at one time, and now for anything we know to the contrary, large quantities of Birch used to be sold for bobbin wood, or the bobbins were made in the wood and sent direct to the consumer. Large quantities are now sold in the midlands. The whole of the thinning of one large plantation, consisting of Sycamore chiefly, squaring 4 inches half way up, about 20 years of age, I once sold to one man for bobbins at the rate of 8d. per foot cubic, a very good price for thinnings.

MISCELLANEOUS PRODUCTS.

I daresay travellers by rail have often seen slinters putting short blocks of wood under

only to reckon up the number of sleepers on a railway, double them, and multiply again for constant renewal to estimate the quantity of timber used for that purpose alone. I used to supply one country customer who did nothing else but make pegs, and never sold him anything but dead, sap-rotten Oak for his purpose, and which was useless for anything else. As foresters know, although the sap-wood on old Oak limbs may be gone, the heart is usually hard enough, and this "peggers" buy cheap and convert into pegs sufficiently good for the purpose.

UNDERWOOD.

The most valuable underwood consists of

cleared the whole off at 5s. per ton net. After that I had applications for Elder wood till none was left old enough to cut. J. SIMPSON.

ROMAN KITCHEN GARDENS.

A broken, crumbling stretch of the ancient Aurelian wall forms the boundary of the modern Ludovisi quarter of Rome, and in an angle of its sheltering embrace, hard by the gate where tradition says that Belisarius sat and begged in his blind old age, it holds to-day a simple kitchen garden. Go where one will, outside the gates, and not unscolded, as in the

present instance, even within them, such gardens, half vegetable ground, half vineyard, are to be met with, and luxuriant breadths of plummy *Finochio*, or silvery Cardoons, may be seen nestling under many a time-worn buttress and battered ruin. The special garden in question has been a source of perpetual interest since the December day which saw it invaded by a host of labourers, armed with the long-handled shovel which in Italy does duty for the spade. Short work was made of turning the rough ground, encumbered with the waste of the lately-gathered crops, into well-prepared beds of moist black earth ready for the hands of the sower and planter. "The ploughshare is made of iron, but the spade is pointed with gold," says an Italian proverb, and much of the land that we should plough is tilled with the spade, for the yield of ground, spade-worked, is doubled, and bands of casual labourers such as these are glad and thankful to earn, by digging, their poor wages of a lira or a lira and a half a day. The shovels soon went their way and the dibbles came into action, and before many days were over, Endive and Lettuce and *Finochio*, with every conceivable form of Cabbage and Broccoli, were marshalled in serried ranks across the empty beds. By Valentine's Day the garden was green again with the quickly-growing crops, the fruit trees were coming into flower, Broad Beans were blossoming, and Peas, supported by "sticken" of tall Arnudo reeds, were beginning to make their first young pods. But alack! no birds were left to hold their blithe festival. Guns and traps had put an end to every bright little life that should have made merry amongst the Almond blossom, and the tiny morsels had, likely enough, been served up, Italian fashion, skewered between sippets of bread. The massacre of birds in Italy is shocking. To say nothing of thrushes and redwings, it is pitiful to see strings of robins and finches hanging up in the poultry-shops, and this wholesale destruction of insect-eating birds is a serious evil which takes its own revenge.

At the upper end of the ground stands the great *pozzo*, or tank, ready as soon as dry, sultry weather sets in to pour its reviving streams into the runnels between the beds, and then, as evening draws on, we may watch the gardeners banking up a canal here, or making an opening there to guide the irrigating water into the right channels. Near the *pozzo* the silver grey coronals of a long bed of Cardoons are a continual feast to the eye of form and colour. In contrast to these are the finely-cut deep green leaves of *Finochio dolce*, which occupies a great portion of the ground. This good gift of the vegetable world is essentially Italian, and deserves a passing notice. It is often mistaken by English people for our pot herb Fennel, the usual accompaniment to mackerel, and the question is continually asked why it is not grown in our gardens on the Italian plan: but it is altogether different. The wild plant is common in many parts of Italy, but must not be confounded with the giant *Ferula* which springs from the mouldering brick rubble of many an old Roman ruin. Under cultivation it is called Sweet Fennel, and is treated much in the same way as Celery, and then the clasping bases of the leaves become white and succulent, forming an oval bulb, crisp and slightly aromatic, which is very popular either



ROMAN GARDEN LABOURER: PEASANT FROM THE CAMPAÑA.

as salad or cooked in various ways. I believe it has been tried in some parts of England, though not with success, but in Italy the smallest garden has its patch of *Finochio*, and furrow after furrow may be seen in the Roman market gardens, to which it lends its own special grace. Yet another unusual crop is the white Lupin, always lovely with its folded silky leaves holding the dewdrops in their hearts, but one is tempted to ask its use, except perhaps as a fodder plant. We get an answer at any street corner where vendors congregate, for there is sure to be one or more with a pan of boiled Lupin beans, most popular of light refreshments, as the empty husks everywhere strewn about bear abundant witness.

Between the rows of *Finochio* and the taller crops are thrifty plants of tufted Endive or crisp Cos Lettuce, for there is no waste of time or space. No need in South Italy for ground to lie open for the pulverising frost to do its work, or to wait for lengthening hours to bring a little fostering sunshine; no finding of work for dark wintry days when soil is iron-bound or snow lies thick. The patient unceasing toil goes on year in, year out, but less wearisome at this season, may be, than when the fierce sun drives the labourer to his well-earned noontide rest. As we watch the work go on, the gentle persistence of it rather than the vigorous attack points the contrast between southern and northern peoples. But there is no idleness; rather there is a sort of hopeless industry which is deeply pathetic, for taxes are a heavy burden on the produce of the land and the pittance is hardly won. But, *pazienza!* Faces light up with kindly smiles often enough

though the heart is heavy; and though the time is long in coming, we may hope that a better day will dawn. There are those in Italy, as in England, who believe that national prosperity and happiness are greatly bound up in the "wise development of the resources of the land," and who are steadily pursuing their way towards that end. These, too, say "*Pazienza!*" and work on and hope on.

K. L. D.

(To be continued.)

THE INDOOR GARDEN.

DOUBLE PRIMULAS.

FEW plants give such a good supply of bloom for cutting from as do the double varieties of *Primula sinensis*. The old double white, or Stuarti, as it is sometimes called, is the most prolific. The same plants will give a continuous supply of bloom from September to the middle or end of March, or even later, but by this time it is not so serviceable, as after the sun gets more powerful the flowers wither very much during the daytime. The same plants may be grown on for two or three years, yet it is better to divide them annually, or cut them up and make cuttings. The safest mode of treatment is to clean off all the old leaf-stalks close to the stem and then earth them up with some leaf-mould and sand. Roots will soon be produced from the stems, and if carefully cut off close to the old soil and potted singly in small pots, healthy young plants may be established with little risk of losing them. Care should be taken in preparing the soil, which should consist of good loam, leaf-mould, and a liberal supply of sand. After potting they should be kept in a close frame where there is a little bottom-heat, taking care not to give them too much moisture and to keep them shaded until well established. It is very important that they should have a little warmth to give them a start, and after they are well established they may be removed to a cooler position. During the summer they will do well in a cool frame. Light being essential, a frame under a north wall, where they can get the full benefit of the light without being exposed to the direct rays of the sun, will suit them better than where they have to be shaded. When potting the plants on into larger pots a little manure may be added to the compost, and they should be potted moderately firm, keeping the crown well down on to the surface of the soil. If the plants are dealt with during this month, with good treatment they will make strong plants suitable for 6-inch pots.

In addition to the old double white referred to above, there are other varieties which, though not quite so prolific, are very desirable. The pink varieties, Balfouri, Peach Blossom, and carminata flore-plena, closely resemble each other and are very pretty. Earl Beaconsfield is a stronger growing variety and the flowers are not quite so deep in colour. Annie Hillier, pale flesh-pink, is one of the best. Of whites, alba plena grandiflora is pure in colour and makes fine trusses; candidissima is another worth mentioning. The varieties with dark leaf-stalks vary, sometimes being pure white or more or less striped with pink and purple. Marchioness of Exeter, Princess, Mrs. Barron, and White Lady all have the same tendencies, but the first-named has most colour. The other three may be considered identical with each other.

A. HEMSLEY.

RIHAPS ASPERA.

I SAW a house full of this fine Palm in Mons. Van Compernelle's garden at Bruges last year, and as it was quite new to me, bought a large clump, consisting of the original imported crown

and eight young sucker growths, which had come up in eighteen months from the time the crown was planted on its arrival from Japan. I have so far seen no other plants, and the variety does not appear in any catalogue that I can see. Does any reader of THE GARDEN know it? Mons. Comperolle told me that a large importation came over to Holland and Belgium two years ago, and that curiously it had been little grown, but he thought that it was not a new plant. It certainly is an exceedingly rapid grower, and with an established plant there are so many suckers, that the foliage is all on different levels, and the stems, which incline to be lanky, are completely hidden. I judged it to be a pretty tough variety, and was told that last winter the plants stood 5° of frost at Bruges. This year my plants have stood 10°, and are only a little browned at the ends of the leaves. Emboldened by this, I think I shall try one out-of-doors next year, but I should like to know if the experiment has been made by anyone else. I asked Mons. Comperolle whether he thought plants would survive a winter here in the open, with rather a curious result. He naturally enough did not know where Devonshire was, but proudly informed me that he had an "enormous" map of England on which I could show it him. The "enormous" map was hung up in his office, it is true, but the printer had no room for Devon and Cornwall, and the map ended in a straight line on the left-hand side, cutting off the conformation south-west of England somewhere on a line with Taunton! Apparently, to the foreign mind, two counties more or less is a small matter.

Newton Abbot.

B. D. WEBSTER.

IVY-LEAVED PELARGONIUMS FOR WALLS.

It is often a puzzle to know what to plant at the base of a high greenhouse wall, both with the object of covering the wall and for producing flower, either for the embellishment of the house itself or for using in a cut state. I can safely affirm that plants put out at the foot of such a wall, even if it be 10 feet or 12 feet high and the root run limited, will flourish for at least fifteen years. During that time such plants will produce an extraordinary quantity of blossom, provided, of course, they obtain a liberal supply of water at the roots, good drainage, an occasional surface dressing with manure, and immunity from aphides. The advantage of this section of the Pelargonium over the ordinary zonal type is that they are quite evergreen, blossom more freely the year round, and what is of equal importance, the petals do not fall nearly so quickly. Stout plants put out in February 2 feet apart in a compost of three parts loam to one of half decayed horse manure and leaf-mould, with a sufficiency of old mortar rubble, charcoal, and vegetable refuse to keep the whole porous, cannot fail to cover the wall completely in a short time if the points of the strongest shoots are nipped out now and again to increase their number. As to variety, any that are free-flowering and are of combined vigorous growth cannot be wrong. Marie-Crousse, pink Souvenir de Charles Turner, and Robert Owen are a trio well worthy of attention.

RIVIERA NOTES.

SPITE of occasional storms and heavy rains, the increasing heat of the sun brings on vegetation so rapidly here, that it is a little sad to hear of the cruel cold that checks all growths in the north. To see the tall sulphur Snagdragons and scarlet Poppies already flowering on sunny banks is a startling reminder that summer is at hand, a reminder that is intensified by the green tips on a few early Fig trees.

Before the Violets are quite over I want to remind gardeners why these big new Violets are so often accused of being scentless. How many times have I, with many others, been puzzled by the utter scentlessness of a bunch

of flowers I knew to be freshly gathered from the bed. A fortnight ago we had a spell of beautiful weather with very dry atmosphere, and I found to my surprise that a bed of big Princess of Wales Violets that I had accused of having little scent perfectly filled the air for yards round with perfume. A few nights ago there were some cold and heavy dews, and this same bed of Violets became almost scentless. To-day, after heavy rains, there was no scent whatever to be found, spite of a warm sun, so it is evident that the large open blossoms on long stalks suffer much more from cold and wet than the modest little old Violet whose blossom was hidden under the shelter of its tufted leaves. Any shelter that will screen the blooms from damp or rain will prevent these Violets from becoming scentless. Of course I am not suggesting that Violets can keep their scent long when gathered, but I am convinced that wetting the blossom, either artificially or by exposure to rain and dew, is the real cause of much so-called scentlessness, and anyone who will protect his Violets from dew or rain will not fail to find the flowers sweeter.

The transition from spring flowers to those of early summer is rather sad just now, and I hardly think that the glory of Tree Peony and Iris of many colours quite compensate for the Anemones, the Peach blossoms, and Carnations of a southern spring. The day after the equinox I saw the first flower-spike of a Horse Chestnut in bloom with fully-developed foliage, while next it was another tree of the same species whose buds had not even burst and were still in the shiny-sticky stage. There is no tree whose individuality is so strongly marked as this, and one wonders what the cause can be.

Bougainvilleas are now at their very best, and certainly give an effect that nothing can rival. This winter's cold has not been enough to touch them when grown on sheltered walls. The rich orange Bignonia venusta has at last reached Riviera gardens, and is beginning to make a glorious mass of colour when duly sheltered and cared for, but it is a plant that needs a little nursing in this climate.

EDWARD H. WOODALL.

THE FLOWER GARDEN.

TUFTED PANSIES SPRING PLANTING.

OWING to the character of the weather early this spring season, planting operations are somewhat later than usual. For some years past it has been the custom to plant out in their flowering quarters the bulk of the Tufted Pansies during the earlier half of March, and from this early work the results have been in every way satisfactory. The hard and unsuitable weather of late has deferred spring planting, as it would not be wise to take the plants in hand in such weather.

The condition of the stock of cuttings inserted last autumn is fairly satisfactory, the stronger growing kinds being distinctly the better. Among the most noteworthy kinds of comparatively recent introduction a few have done well; the majority, however, are far from pleasing in their appearance just now, but a few days of more genial weather quickly encourages the plants into vigorous root action, quite altering their character. Plants intended for stock purposes for the past three or four years have been subjected to a very trying experience, the exceedingly hot and dry seasons for several years in succession undoubtedly weakening the constitution of several of the best

sorts. Notwithstanding the fact that exceptional measures were taken last season to keep the plants in a cool and satisfactory condition at the roots, the plants for stock purposes were never in a poorer and weaker condition. In proof of this, it will be sufficient to state that instead of the majority of the cuttings rooting, although extra pains were taken to ensure this, a number of excellent sorts were absolutely lost, and others with which little difficulty had previously been experienced presented many gaps in the rows, and to make up the necessary quantity for planting, some of the old plants will have to be broken up.

In a normal season the Tufted Pansies are seen to great advantage in the south, and it is a matter for regret that some growers intend to use the plants less freely than has been the case in the past. The present time is a favourable opportunity to bring the claims of this useful, hardy, free-flowering subject before the readers of THE GARDEN, as the planting may be carried out within the next few weeks. Many failures in the past have been brought about through the use of a type of the plant which cannot be considered of a tufted character, and those who have compared some of the newer kinds with those sorts which have been grown in our gardens for many years must acknowledge their superiority. The newer sorts in most cases possess a habit which is dwarf and compact, or which is dwarf and crawling in its style of growth, and, in addition, they are wonderfully free-flowering, so profuse, in fact, that it is necessary once or twice at least during their long period of blossoming to remove the blossoms that the plants may enjoy a well-earned rest. Growers need not now confine their selection to, say, white, yellow, and blue sorts, as many charming varieties with blossoms of other good and distinct colours provide sufficient material to satisfy the most fastidious taste. The edged and fancy flowers, too, have their uses, and when contrasted with the self-coloured sorts they are very effective, and also present a somewhat unique display when grouped together in the borders or in beds by themselves.

The use of Tufted Pansies as cut flowers for vases and table decorations is deserving of encouragement. For this particular purpose they have few equals, especially when small glasses, tubes, and shallow bowls are arranged with their fragrant blossoms. The plants are so floriferous, and one can cut and come again so frequently, that the question of renewing the supplies becomes quite a simple matter.

When planting give each plant ample space to do justice to itself. Too often, unfortunately, they are so crowded, that in a short time they become overgrown. At least 9 inches between the plants should be allowed, and if the garden soil was liberally enriched with good manure when it was deeply tilled, the intervening space will soon be filled with growth of a healthy kind and the groups present one mass of colour. Plant firmly, and if the weather be rather dry for any great length of time, give the plants a thorough watering. Stir the surface of the soil frequently.

D. B. CRANE.

CHIONOSCELLAS.

AMONG the many possibilities which exist in gardens containing a number of plants belonging to the same natural order, one of much interest is that of obtaining hybrids between plants closely allied. We have several such, and there is every likelihood that many more might be obtained by means of artificial fertilisation instead of trusting to the insects and winds to do the work. Among these bi-generic hybrids which have appeared are the Chionoscellas, which, as the name would indicate, are the products of the union of the Chionodoxa and the Scilla. As yet there are not many in existence, as their rate of increase is not very rapid in the few gardens into which they have found their way, and also because they cannot be depended upon to reproduce themselves from seeds. I have at present under observation a number of seedlings raised from one of these Chionoscellas, and find it interesting to see how some of them have reverted to one or other of the original plants.

This want of fixed character in the seedlings is possibly a little disappointing, but it also affords a prospect of more variety making its appearance. Some of these seedlings, whether they come near the *Chionodoxa* or the *Scilla*, are quite distinct in form or in shade of colour. I am selecting the best as time and opportunity offer.

The *Chionosillas* which have come from the original cross between the *Chionodoxa* and the *Scilla* are not numerous, but those which have come into cultivation are pretty plants of much merit from a garden standpoint. They are good growers and more floriferous as a rule than either the *Gloria* of the *Snow* or *Scilla bifolia*, the other parent. In general appearance they are mostly like the *Chionodoxa*, but the perianth segments are cut to the base, like *Scilla bifolia*, in some. So far as I know, no one has said anything about having raised seedlings between the *Chionodoxa* and *Scilla sibirica* or *Scilla campanulata*, but last year I saw a flower which seemed to be between a *Chionodoxa* and one of these Spanish Squills, though I could not ascertain what *Scillas* were grown in the garden whence it came. Of course the Spanish Squill usually blooms too late for the *Chionodoxa*, but late-planted bulbs of the latter might bloom at the same season. The whole subject is of much interest, and its ventilation may lead to the addition of many charming flowers to our store of spring-flowering plants if a few can be persuaded to take up the work. S. ARNOTT.

Carsethorn, by Dumfries, N.B.

NOTES ON APPLES.

GROWING APPLES FROM CUTTINGS.

THE VARIETY BURR-KNOT.

I HAVE read notes on this subject the writers of which have considered raising Apple trees from cuttings a very simple matter. Indeed, they have gone so far, I believe, as to say they would strike as easily as Currants or Gooseberries. Not having had any experience in the matter, I cannot say much about it, but the general opinion appears to correspond with that of your correspondent in THE GARDEN of March 17 (p. 197), that, with the exception of a few sorts, they will not readily emit roots. My reason for taking the subject up, however, is to mention a variety that will root from branches inserted in the ground. I allude to Burr-knot, which is also called Bide's Walking-stick. The following description is taken from Dr. Hogg's "Fruit Manual": "The tree is a close and compact grower, and a profusion of burrs are produced on the branches which emit incipient roots. If a branch furnished with these burrs is inserted in the ground it will take root and become a tree. The name of Bide's Walking-stick originated from a person of that name having cut a branch for a walking-stick in Cheshire, and brought it to his place near Hertford, and inserting it in the ground, it took root and became a tree." This variety has been familiar to me for several years; there are a number of trees in the garden here. It is also very common in cottage gardens in the villages round about, and all the trees appear to have been raised from cuttings or small branches. It does not appear in any catalogue that I am familiar with, and one does not often see it mentioned. It is said to be a Lincolnshire Apple. The tree is a compact grower, and being grown from cuttings it makes a good bush, but it should not be planted in exposed situations, as the roots are thin and weak. The fruit is ripe in October, and will last until the end of November or middle of December. It is a desirable variety on account of its free cropping quality. I have never known it to fail. Last year when so many kinds failed to bear fruit, Burr knot carried a full crop. It is not affected by any disease or insect pest, the foliage always being clean and healthy. J.

LIKE your correspondent "E. M." I have been pottering about among Apple trees and propagating

them in various ways for a good many years, and am forced to come to the conclusion that propagation from cuttings will not suffice to keep up the stock of those kinds that root freely in that way, and which are certainly limited in numbers. It is something more than fifty years ago since I first began to strike Apple cuttings. At that time there was a small Apple tree a good deal grown in cottage gardens in Yorkshire called Burr-knot. This was the only Apple tree I knew that every cutting, no matter what part of the tree it came from, always grew, but it was not a very valuable sort, and probably it has disappeared. I mention it because it struck so freely and was so common in small gardens. In the garden where I was employed about that time we had the handsomest little collection of Apple trees in pots I have ever seen, all from cuttings. It is true a good many of them were of the Codlin family, but the collection also included King of the Pippins, Golden Pippin, Rymer, and a few others the names of which I forget now. Since leaving that place I have worked in a good many different counties, and have struck Apple trees from cuttings in some of them. Manks Codlin is certainly one of the best to strike, but I have never had any difficulty with any of the Codlins. I have tried cuttings of various sizes, but prefer branches about as thick as one's thumb, and I generally select a branch or branches with little clusters of excrecences running over the bark, and that will when planted develop into roots. Where there is a little bunch of these embryo rootlets the saw is inserted and the branch cut off there, and after the wound has been dressed, the cuttings are planted in rows across a north or at least a shady border somewhere and the soil made very firm, and the ground is mulched all over with moss litter manure. If the following spring happens to be dry, water should be given freely. The best time to take off the cuttings is about the first week in October. But though own-rooted Apples will be a long time coming in quantity from cuttings, they may be got some other way. I see own-rooted Apples are quoted in the catalogue of one firm, and if that firm finds the demand increases, they will, I have no doubt, find some means of supplying them, though I think it will be more likely to be done in layering than in striking cuttings. It will take time to establish store grounds of our best fruits, but I daresay it could be done, and in the course of time all our best kinds of Apples might be obtained on their own roots. But I do not anticipate that Apple trees on their own roots will make as much growth as when grafted on a vigorous stock. Therefore, those who want big trees might still have to plant grafted trees, but for small gardens there would be a lot of surface-rooted bushes wanted that will increase in size and value annually, and whose chief requirement would be an annual mulch of rich compost. E. HOEDAY.

APPLES ON WALLS.

THE very sensible letter of Mr. Thomas Coomber on this subject (p. 127) recalls my first experiences in the matter. These lay so widely apart as Perthshire, in Scotland, and Devonshire, in England. In the first case the variety was the old Nonsuch, grown on the southern gable end of a cottage in which the main fire for cooking and warming was seldom out night or day throughout the season. The tree covered the entire space, the branches being trained horizontally from 9 inches to 10 inches apart. The tree, probably from the heat of the chimney and the sun, suffered a good deal from the woolly aphis, but I never knew it to miss a crop, while the colour was so bright and the flesh so juicy and luscious, that most of those experts who tasted it proclaimed it an improved variety. Peasgood's Nonsuch, which I have often recommended for use on walls, is very much larger than the common Nonsuch.

My second experience of Apples on walls was gained in a famous fruit garden in Devonshire. The walls stood on the southern slope of a hill, and thus became a conspicuous object at a distance. They were furnished with perfect trees, models of training, symmetry, and fertility. The distant

view was rather puzzling, at which the fruit looked almost like Peaches and Nectarines, but on entering the garden it was found to be the finest run of dessert Apples probably in Britain. But then surely this was a waste of force to devote southern and western walls in the sunny south of England to dessert Apples, however excellent. I was assured that this was quite a mistake. The two most useful fruits in that garden were Grapes and Apples, and besides the walls devoted to Apples there were enough and to spare for Peaches, Nectarines, Plums, Cherries, and Pears, but none of these remained long in season in sunny Devon. Peaches soon melted, Cherries shrivelled, and Pears became mealy, but good Apples girdled the year round with the most refreshing and welcome fruit for dessert. The kinds grown were Ribston, Golden Pippin, Nonpareil, Newtown Pippin, Cox's Orange Pippin, Russet, Cockle Pippin, Pearmain, Mother, King of Tomkins County, Melon, King of the Pippins, Margil, Spice, Calville Blanc Malingre, &c. The Ribston Pippin alone sufficed to convince me that no climate or shelter could be too good to grow and finish such superb Apples as these.

All the Nonsuchs are excellent for cooking, and are also much enjoyed for dessert by those who thoroughly relish a crisp-fleshed, juicy Apple. The new and larger Peasgood's Nonsuch keeps till Christmas, while the old or common variety is in its best season from September till the beginning of November. Peasgood's Nonsuch is one of the largest and handsomest Apples, the prevailing colour being crimson and gold, and it is doubtful if it has yet reached its maximum size or colour on south or west walls. Some of the best results reaped from Apples on walls have been from trees on the Paradise stock. On a large scale and with long runs diagonal training provides them with wide areas. Again, diamond training forms a striking and telling disposition alike of flowers and fruit. Cordon Apples for market may become a little fortune, as the form of the tree saves the fruit from being bruised through winds and storms. While the cordons tastefully disposed add new interest and beauty as well as profit to walls, espaliers, filling small places, generally run to waste. D. T. F.

[Best Apples for Britain. We have received many articles upon this subject, which will appear next week.]

AMERICAN NOTES.

PLUM GUTHRIE'S GREEN.

THERE are so many new varieties of Plums being introduced now-a-days that the old ones are rapidly forgotten, and yet I am often surprised to find how much better some of the old ones are than some of the new. I think it would be as much worth while occasionally to go over the list of old and perhaps discarded varieties, and see what there is worth a re-trial, as to spend so much time and talent wrestling with the more recent novelties.

One of the good old Plums is that called Guthrie's Late Green, and described in nearly all the older works on pomology. This variety was raised by Mr. Guthrie, of Scotland, who seems to have been a man much given to the production of new Plums, sort of an H. A. Terry in his day. The fruit has all the general characteristics of the Green Gage, Bavay, or Reine Claude, to which group it belongs, the points of difference being of minor importance. The different varieties of this group, although much alike, have slightly different adaptations to special soils or climates, or special palates, so that some gardeners prefer one and some another. Other fine old, and more or less neglected varieties of this group are Washington, Bleeker, Lucombe, Nonsuch, General Hand, McLaughlin, Jefferson, Bryanston, Golden Gage, Peters' Gage, and Lawrence Favourite. These are all fine Plums, and I think most of them are worth growing yet to day. F. A. WARE, in *American Gardening*.

A NEW CHERRY PEST.

THE Cherry maggot is a new and serious pest in New York. During the past season many bushels of fruit were ruined by this insect. The fly lays its egg on the skin, as the fruit begins to turn red,

and from this hatches a maggot which eats its way to the pit, and is carried off when the fruit is sold. The worst thing about this disgusting pest is that it is so hard to detect its presence. Some affected fruits show a sunken place on one side, but others appear perfectly free from injury, and are sold to the consumer as sound fruit. The protest comes mostly from the buyer, after he has put the Cherry in his mouth. As yet, no satisfactory remedy or preventive has been found. R. N. Y., in *Canadian Horticulturist*.

FLORAL CLOCKS.

The old notion of floral clocks has lately been revived in these pages, but however interesting the subject may be, these flowery parterres could never have been a success as accurate timekeepers. Like the sundial itself, flowers, too, very often depend on sunshine (or sun-heat) for their time of opening, and, on the other hand, flowers of many kinds close on the approach of rain, or when there is a more or less sudden decrease of temperature. However well carried out, no flower clock could prove to be aught but a partial success, since the flowers enumerated for their construction do not all flower together, or even at the same season of the year, even in the same gardens or places. Hence, as Kerner says, "the floral clock of Linnaeus has fallen into oblivion, and the younger generation of botanists scarcely know its name."

As Canon Ellacombe has kindly pointed out, Linnaeus's own account of this phase of flower gardening is told in his "Philosophia Botanica," but, so far as I know, by far the best and most complete modern accounts of flower clocks, &c., is to be found in vol. II. of Kerner's "The Natural History of Plants" (Oliver's translation), pp. 215-219; the why and wherefore of flowers opening and closing being also therein clearly explained.

Many, if not most, of the plants alluded to by Linnaeus in this connection were not garden flowers at all, but mostly weeds, natives of Sweden and Norway, such as the Dandelion, Sow Thistle, Hawk weed, &c. Apart from sunshine, the latitude,

elevation, aspect, &c., of a place naturally make a difference in the time particular species open their flowers. Thus the floral clock adapted for the latitude of Upsala would not do for that of Innsbruck, 13° further south. There was often as much as two hours' difference between the opening of the same flowers at the two places. For example, *Nymphaea alba* opening at Upsala at 7 a.m. did not open at Innsbruck until 8 or 9 a.m., and *Anagallis arvensis* opening in the one place (Upsala) at 8 a.m. did not open at the other till 9 or 10 a.m. The last plant is also, like Tulips, Croci, and many other flowers, "a shifting index," so to say, seeing that it does not open at all on dull, wet days, and may close at any time during its usual hours of remaining open. The whole subject of the opening and closing of flowers is very complicated. Some open in the dark if the heat is sufficient, while others close in darkness, no matter what the temperature may be. Then it is now well known that both leaves and flowers have the power of transferring light rays into heat under certain conditions, so that the question becomes a very complex and intricate one, even to the most skilful botanical physicists themselves.

To return to the flower clock, however, we may say that the subject though in its broader aspect is most fascinating, yet its practical importance from a chronological point of view is slight indeed. Still, if one is absolutely determined to make a flower clock, a good deal of study and labour would be essential. My own plan would be to make a combination of a sundial and a floral clock together on the ground, so that if the flowers failed to open and close at their appointed time I should still have the dial during sunshine to guide me, and to show how far wrong or right they were. But even a marine chronometer would not tell me if my flowers were a fortnight or so behind time.

Seeing that flowers are so dependent on external conditions all their lives, so subject "to circumstances and conditions entirely beyond their own control," I think it is just a little unfair to expect them to keep time for us in our gardens. Even the hardiest of native plants and trees do not, because they cannot do so. Here in Dublin all our spring flowers are fully a fortnight, or even three weeks, behind their usual dates, and I have no

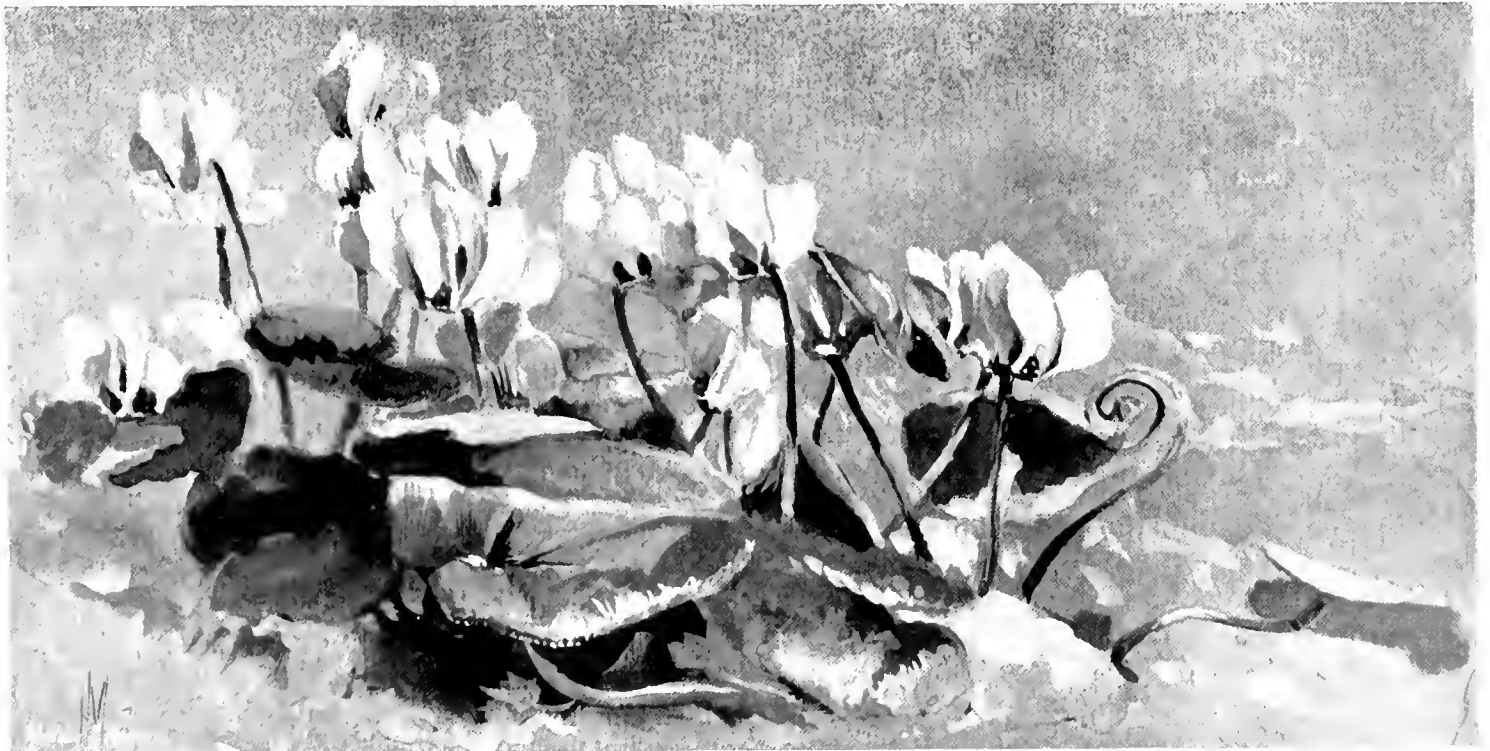
doubt the same is true, more or less, in other localities.

As to the good taste of making floral clocks I need say nothing. The American public gardeners may have tried to do it, and if so I would ask them to tell us of their success. To me the attempt savours of a revival of that which would be better left to the past, like carpet-bedding and maps of the world in flowers, or other mechanical devices in gardens that are, alas! not of the past. A floral clock, to me at least, appears to be a return to "false ideals," and not in vogue with the healthy and rational progress in the art itself, which is Nature. F. W. B.

AN ARTIST'S NOTE-BOOK.

CYCLAMEN COUM.

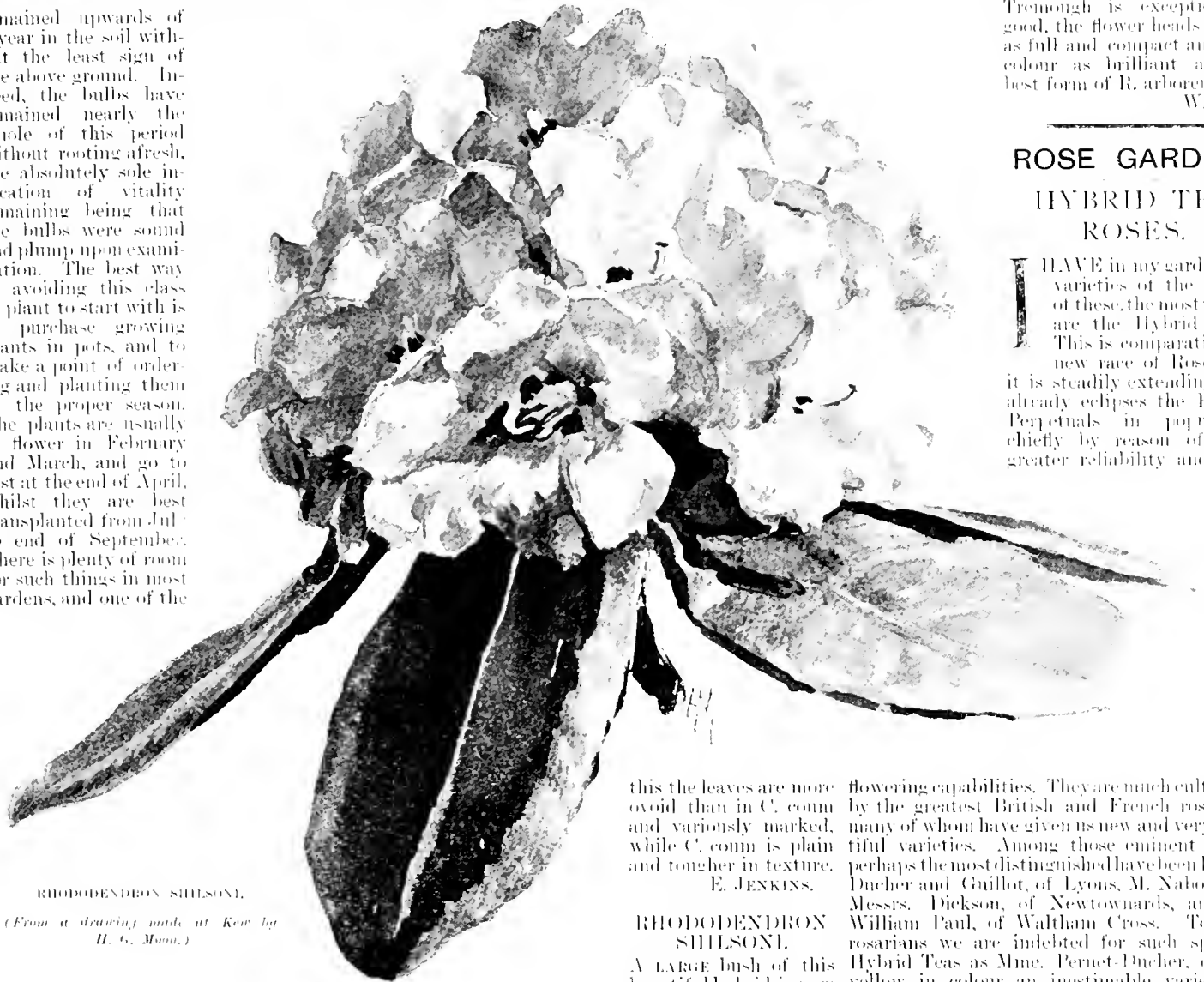
THIS pretty and graceful *Cyclamen* may be regarded as the typical central figure of other allied forms such as *vernum*, *ibericum*, *Atkinsi*, and, as in not a few other instances, either the hybrids, or the latter-day forms, or geographical variations of the plant are vastly superior as garden plants. This is very true of these pretty spring flowers, for if we accept *C. ibericum* as merely a geographical variety of *C. coum*, we have in the former a plant vastly superior to *C. coum*. With regard to culture, there is nothing difficult to overcome, the only thing necessary being to carefully select the position for them, and having well planted them, leave them alone to become established. It so happens, however, that the corms of these pretty hardy spring flowers are impatient of much disturbance on the one hand, and strongly resent on the other that worst of all treatment to which these at times are subjected, viz., the long retention of the corms or tubers in an absolutely dry state. I have known instances where the corms, planted after a long period of this treatment, have



CYCLAMEN COUM ROSEUM.

(Drawn in Messrs. Barr and Sons' Nursery at Sighthelm by H. G. Moon.)

remained upwards of a year in the soil without the least sign of life above ground. Indeed, the bulbs have remained nearly the whole of this period without rooting afresh, the absolutely sole indication of vitality remaining being that the bulbs were sound and plump upon examination. The best way of avoiding this class of plant to start with is to purchase growing plants in pots, and to make a point of ordering and planting them in the proper season. The plants are usually in flower in February and March, and go to rest at the end of April, whilst they are best transplanted from July to end of September. There is plenty of room for such things in most gardens, and one of the



RHODODENDRON SHILSONI.

(From a drawing made at Kew by H. G. Moon.)

best of positions for them, and where they do not at any time interfere with other things that bear their company, is the hardy fernery.

The root-fibre suits both classes of plants. Where possible, these pretty spring flowers may be freely planted in the fernery, and usually they do well. Near the base of large bushy shrubs is also good for them, and similar places as they occur in the garden. In the rock garden they may be freely grouped wherever there is shade. Half-shaded pockets suit admirably, and where a free mixture of loam, old mortar, cow manure, sand, and sandstone rock can be given them, with a drainage pretty secure, there need be no fear of failure. The type has purplish-red flowers that are somewhat crimson at the mouth. There is also a pure white variety, *C. c. album*, and a rosy-red form known as *C. c. roseum*, or sometimes called *carneum*. It is this pretty form of which an illustration is given. The pure white kind was raised by the late Mr. J. Atkins, of Painswick, the plant receiving a first-class certificate from the Royal Horticultural Society as long ago as 1868. This plant has the same foliage as *C. corni*, the flowers white, with dark mouth. Our gardens to-day are also indebted to the same hardy plant enthusiast for the many charming hybrids that figure as *C. Atkinsi*, originally a hybrid of the *C. corni* section. In

new Himalayan house at Kew. It was raised ten or more years ago by Mr. R. Gill, gardener to Mr. Henry Shilson, Tremough, Penryn, Cornwall, from *R. barbatum* and *R. Thomsoni*. In the same house at Kew there is also in flower a large bush of *R. barbatum*, also from Tremough, and the relationship between it and *R. Shilsoni* is easily seen. At the same time the influence of the other parent, *R. Thomsoni*, is evident in the shape of the leaves, the larger size of the flowers, their deeper colour, the campanulate calyx, and the glabrous ovary. The leaves of the hybrid are oblong or ovate-ovate, dark green above, pale underneath, 3 inches to 4 inches long and 2½ inches wide. The flowers are shallow-campanulate, over 2 inches across, and of a dull red colour. In *R. Shilsoni*, therefore, we have a distinct and worthy addition to the two *Thomsoni* hybrids previously known, namely, *R. Luscombei* (*Thomsoni* - *Fortunei*) and *R. Harrisii* (*Thomsoni* - *arborum*). I have lately seen flowers of a *Rhododendron* from the garden of Mr. Thomas Acton, of Kilmacurragh, which Mr. Moore believes to be a hybrid raised at Glasnevin from *R. barbatum* and *R. Shepherdi*, and which has the floral attractions of the best forms of both parents. There are forms of *R. barbatum* of third-rate quality, but that from

Tremough is exceptionally good, the flower heads being as full and compact and the colour as brilliant as the best form of *R. arborum*.

W. W.

ROSE GARDEN.

HYBRID TEA ROSES.

I HAVE in my garden 180 varieties of the Rose: of these, the most valued are the Hybrid Teas. This is comparatively a new race of Roses, but it is steadily extending, and already eclipses the Hybrid Perpetuals in popularity chiefly by reason of their greater reliability and free-

flowering capabilities. They are much cultivated by the greatest British and French rosarians, many of whom have given us new and very beautiful varieties. Among those eminent raisers perhaps the most distinguished have been Pernet-Ducher and Guillot, of Lyons, M. Nabonnand, Messrs. Dickson, of Newtownards, and Mr. William Paul, of Waltham Cross. To these rosarians we are indebted for such splendid

E. JENKINS.

RHODODENDRON SHILSONI.

A LARGE bush of this beautiful hybrid is now flowering freely in the

Hybrid Teas as *Mme. Pernet-Ducher*, canary yellow in colour, an inestimable variety for garden decoration; *Papa Gontier* and *Franetta Nabonnand*, also very effective and florally effusive; *Gustave Régis*, nankeen yellow in complexion, very pretty in bud; *Innocence* (*Pernet-Ducher*, 1897), a recent acquisition, with pure white flowers; *Marquis Litta*, *Bardon Job*, only semi-double, but of brilliant aspect and richly decorative; *La France* and *Caroline Testout*, *Souvenir de Mme. Eugène Verdier*, *Marquis of Salisbury*, and that grandly growing and flowering variety *Gloire Lyonnaise*. These are among the finest of French introductions; while *Kaiserin Augusta Victoria* was introduced by Lambert and Reiler in 1891. Among those of British origin, some of the most notable are the varieties raised by the late Mr. Emmett, such as *Viscountess Folkestone*, in fragrance and floriferousness a rival of *La France*; *Clara Watson*, a Rose of great attractiveness, introduced by Mr. Prince, of Oxford, after its raiser's death, the grandest in my garden of all Hybrid Teas; the somewhat mainly coloured *Grace Darling* and *Lady Mary Fitzwilliam*, the latter of which has been surpassed by *White Lady*, its extremely handsome derivative, raised at Waltham Cross. Mr. Paul's *Aurora* I possess and admire, but his *Temyson*, which I must ere long acquire, I have not yet seen. From the Messrs. Dickson, of Newtownards, Ireland, we have received several varieties of the highest merit and distinction; conspicuous among these

is Mrs. W. J. Grant, introduced by them in 1895, with large, freely-expanding, brightly-coloured, and richly fragrant flowers, known in America as Belle Siebrecht, its original name in this country rightly remaining what it was. Their Marjorie, though of very dwarf habit and not in my experience very reliable, is one of the sweetest of all Roses, a veritable gem, while Bessie Brown, of very recent introduction, and its beautiful predecessor, entitled Killarney, are universally regarded as great acquisitions.

The importance of such Roses for garden culture can hardly be over-estimated, combining as they do the vigorous constitution of the Hybrid Perpetuals with the delicate refinement and fragrance of the Teas. In their strength and sweetness are harmoniously blended to form the faultless Rose.

D. R. WILLIAMSON,

Manse of Kirkcaldie, Wigtownshire, N.B.

CORRESPONDENCE.

(The Editors are not responsible for the opinions expressed by their correspondents.)

DEEP CULTIVATION.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—I thank Mr. Beckett for now giving a few details which, as I said before, should have accompanied his first drastic advice. Your correspondent finds in practice that he cannot trust his subsoil without the agency of something else similar to the material of the top spit buried. I maintain that it would have been better to have worked a good part of the rubbish-heap material into the first bad spit of subsoil, which in time would be in a fit state to bring to the surface later on. This practice would not interfere with the immediate cropping and sowing, and at the same time give a deeper tilth. It is well known to every practical man that if the so-called rubbish-heap is converted into a slow fire, it produces one of the best possible materials for mixing in a spit of bad heavy subsoil, and if one happens to have a heavy collected heap, which in practice is at various times raked off the surface of the heavy land, put this also on your rubbish-heap fire, which will further add to its quality; in fact, it is a valuable material for all use, from the culture of Orchids to the kitchen garden, which is a very wide selection, irrespective of what is said in a recent issue of this paper. The ballast material which I advocated is of a mild description, which pulverises under the influence of any ordinary winter, and very valuable I have always found it during my experience of over thirty years. Mr. Beckett's plan of boring deep holes and filling them with good soil for the production of long taper roots for exhibition is a very old plan.

A few articles from some of our successful gardeners would prove interesting reading. Frequently have I been asked, "What can I do to get my Brussels Sprouts and Cauliflowers to finish?" The great trouble in the majority of cases arises from the mischief caused by the maggot of the *Anthomyia brassicae*. JAS. R. HALL.

For Warren, Cobham, Surrey.

IRIS RETICULATA.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—The note by "South Hants," p. 229, on his remarkable success with this Iris is very interesting. *I. reticulata* is an excellent illustration of the truth that there are plants which evade all general prescriptions for their well-being. We occasionally hear of its multiplying like a weed in the gardens of the most diverse soils and climates, but such instances are much rarer than confessions of whole or partial failure. That it cannot, in many places, be grown into a large stock is proved by the fact of the price remaining practically what

it was twenty years ago. The truth seems to be that few districts are exempt from the appearance, sooner or later, of the dreaded "ink-spot" disease. This is a fungus which appears as a small black spot or stain on the white envelope of the bulb, spreads rapidly, and finally consumes its entire contents, so that badly affected bulbs are lifted as nothing but blackened and empty bags. My own experience is as follows: When I came to my present home, in 1881, *I. reticulata* was quite unknown in the neighbourhood, and I congratulated myself on having made quite a discovery in the way it thrived and increased in my soil, a medium flinty clay or chalk. Then came the disease, suddenly after some half-dozen years of immunity, and I lost nearly all my stock. The importation of fresh clean bulbs was quite unavailing. But a few years ago I noticed that stray plants which had somehow been introduced into my kitchen garden were developing into strong and healthy clumps. As sometimes happens, pressure of other work prevented my rescuing these for some seasons, and meanwhile they were annually lost after the disappearance of the leaf and trenched into vegetable quarters or Daffodil beds, often very deeply and in heavily-manured soil. Either by reason of, or in spite of, this treatment, *I. reticulata* took a new lease of life, and the produce of these clumps has given me ample stock for my borders and for a nice nursery bed. Curiously enough, the disease seems to have vanished for the time being, even from the old quarters of the Iris where it was so destructive. I think there was long ago in THE GARDEN some discussion on the benefits of kitchen garden soil for *I. reticulata*. The term is a sufficiently vague one, except that it implies much manure and much digging. I leave it to others to assign the cure to deep planting, manuring, or both, and to explain how the disease came into my garden and why it has fled. One or more points about *I. reticulata*. Can anyone give me an assurance that a major form really exists? I have never been able to obtain it. Does the dull, puce-coloured variety possess a scent in anyone's garden? It is commonly described in catalogues as fragrant, but here it is absolutely scentless and as inferior to the type in this as in other respects. As to the specific name of this Iris, it is commonly described as the "golden-netted" violet Iris; but "reticulata" was applied not to any markings of the flower, but to the hempen mesh-like tunic of the bulb. GEORGE ENGLEHEART.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—When bulbs of undoubted hardness die out, look for the fungus, and it is probable that "A. C. B." (p. 195) will find the cause of his failure with *Iris reticulata* and its allies in the black spot to which the bulbs are subject. A very interesting note appeared last summer in, if my memory serves me, the *Gardener's Chronicle*, and by Mr. Wesley-Dod, in which soaking the bulbs for some hours in a weak solution of formalin was offered as a remedy. I tried it, and thereby saved many bulbs. I regret that I cannot now refer to the paper.

Notwithstanding losses from this disease, my stock of *Iris reticulata* (including *I. Kralcei* and an early dwarf form which appeared amongst some seedlings, in colour a claret as intense as is the true purple of the type) continues to increase. *I. histrioides*, *I. Bakeriana*, and *I. Danfordi*, added two years ago, are likewise thriving. *I. Histrio* has always been a trouble, mainly, I think, because it starts into growth so early, but the bulbs I have received have not invariably been in the best condition. Though an occasional bulb may grow from year to year until it forms a clump, I should recommend "A. C. B." to take up his bulbs annually when they go to rest, or, at least, every second year. He can then sort out any unhealthy ones and change the site not unimportant when a fungoid trouble has to be encountered.

It may be a small matter, but I have noticed that the leaves in decaying form holes in the ground which reach down to the bulbs. The fungus, I think, may find its way down, and therefore I close such holes by forking over the surface.

Planting should be done early in August or September, as the bulbs suffer if kept long out of the ground. Dig deeply and, need I say, add no fresh manure. If anything is required, a little well-decayed leaf-mould will suffice. Some silver sand about the bulbs will be an advantage, though, perhaps, not absolutely necessary. My soil is a good light loam and well drained. I give no winter protection.

In conclusion, I would say, take care of the offsets. I am sure many failures with bulbous plants arise from neglect of these, and in constantly growing from young stock may lie some of the success of the Dutchmen. JAMES SNOW WHALL.

Worsop.

MUTISIA DECURRENTS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Having been for many years an admirer of this grand evergreen wall shrub, I have read with much interest the recent references to it in THE GARDEN, and am happy to be able to corroborate all that has been said of its perfect hardiness in the neighbourhood of Edinburgh. I knew the plant well in Mr. Jemmer's garden, as also in the Botanic Gardens, and have seen the specimen in the Comely Bank Nursery while it was covered with its gorgeous blossoms. Other plants, though much smaller, are to be seen in other places, and all seem to be quite at home, notably one planted out from a pot about two years ago in the Messrs. Grieve's nursery at Redbraes. It was only 3 feet long when planted, and in the following summer produced four of its large Gazania-like, orange flowers. Last year it seemed to have all the appearance of good health. I am not aware that any specially prepared soil was supplied to the older specimens to which I have referred, but Mr. Grieve informed me that his plant had been treated to a few spadefuls of sandy peat, and this fact may prove suggestive to Mr. Arnott and others who, having failed in the past, may be inclined to make another trial. OMEGA.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—I am much obliged for the remarks on the above from your correspondents, and hope some day to make another trial of the plant. My difficulty is to get one. It is no longer to be had from the source whence I got my former supply. If anyone should be aware of any being for sale and would send me a postcard, I should be very pleased. T. J. WEAVER.

Thirskwood, Holden Road, Woodside Park, N.

LINARIA PALLIDA.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—In THE GARDEN, March 24, p. 228, *Linaria pallida* is recommended for the rock garden. A word of warning may be useful. It is extremely pretty, but in my rock garden has become a most troublesome weed. F. A. STURGE.

Cool Effa, near Wexham.

PLANT SHELTERS IN HOLLAND.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—The shelter Mr. Wilson describes (p. 196) is practically the same as a kind we sometimes use in Holland, only instead of being of iron our hurdles are made entirely of wood, which is rather a disadvantage, as wood rots away after a few years, that is to say, those parts of the hurdle which touch the ground, notably the principal poles. On the whole, however, I cannot say that in our line of work, *i.e.*, bulb-growing, these shelters are of much practical use. If very early-growing bulbs which require shelter, like many Fritillaries, Tulipa Greigi, &c., are grown on the south side of the shelters they naturally come on much faster than if grown on the open ground, but then the hurdles do not at all protect the plants from the March and April night frosts. For these bulbs we find the best plan is to grow them completely exposed, but as soon as they show above the ground to drive in a few stumps around the beds at about 6 feet

apart. Over these some laths are fixed, and during frosty nights mats made of reed are rolled over the beds. In Holland these mats can be bought very cheap. A 6-foot mat, measuring when rolled out about 30 feet square, costs about 1s. 6d., and when not too roughly handled will last for three winters, so that for 6d. we can cover 30 feet square. Of course there is the labour of unrolling the mats in the evening and rolling them up in the morning, but this is well counterbalanced by the very good results we get. The mats are at about 1½ feet above the ground. A further advantage of this plan is that when very sharp frosts occur which will penetrate under the mats they can be left on until the plants thaw gradually. For plants which require shade during the summer, like Hellebores, Trilliums, Hepaticas, &c., we use the same plan, only the mats are made much more open.

Haarlem, Holland. J. Hooc.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—Wooden shelters are in use in several of the nurseries at Bruges, and I took particular notice of them last year, as I had not seen them before. Most of them are fixtures, stand 7 feet to 8 feet high, and are formed of laths nailed to stout wooden uprights, which are let deep into the ground and are further strengthened by struts. The laths are nailed on each way across and across about 1½ inches apart, crossing one another at right angles. The screens seemed to answer their purpose well, and I was told that they lasted many years. They were to be seen protecting many things, though for the most part Araucarias, but in one nursery, that of Mons. Van Compernelle, I think, there is a large plantation of young standard Bays surrounded with screens. I am inclined to think that if Mr. Wilson arranged his laths both ways, after the Bruges plan, his screens would be neater and also stronger.

B. D. WEBSTER.

Newton Abbot.

THE CALIFORNIAN BUSH POPPY.

(ROMNEYA COULTERI.)

[TO THE EDITOR OF "THE GARDEN."]

SIR, I see in THE GARDEN (p. 169) that Mr. Webster asks for information as to the culture of *Romneya Coulteri*, and as I grow and bloom it very successfully without any trouble, I think I can help him. His error is in leaving the last year's wood. I leave the old growth as a protection during the winter, but as soon as the new shoots appear at the base the old wood is cut down to the ground like any other herbaceous plant. In case you may like to reproduce it, I enclose a photograph that I took last summer of my largest plant. I had then thirty-seven expanded blooms besides numerous buds. When I planted it eight years ago it was a very small plant. It was put in a warm corner facing south-west, and it now covers 10 feet of ground and is 5 feet high. It has no protection and blooms freely every year.

Tregford, Berks. F. G. COLERIDGE (Capt.).

EAST LOTHIAN STOCKS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Mr. Crook's note on growing Stocks in pots for flowering in spring and his reference to the plants grown at Dillington Hall remind me of the beautiful plants of the East Lothian Stock East Anglian gardeners generally grew in my younger

days. In one garden the seed was sown in July in fine soil and covered with a hand-light, the plants being wanted to flower at the end of April and during May. As soon as the seedlings appeared air was freely given, the top of the hand-light being removed in fine weather. In September the plants were potted into 4-inch pots, two plants in each, in a compost of three parts loam and one part manure, leaf-mould, and coarse sand. At the end of October they were placed in a cool pit close to the glass and fully exposed, except in frosty weather, the soil in the pots being kept fairly moist. In February each pair of plants was shifted into a 6-inch pot and liberally assisted with weak liquid manure till the bloom commenced to expand. Nothing can be more beautiful or useful than Stocks in pots when well grown, and their fragrance is delicious. Some of the plants referred to were retarded for flowering early in June, being stood on ashes behind a north wall. These were valuable for cutting or mixing with other plants in the conservatory. Autumn-raised plants are much better for flowering at the period named than plants raised from seed sown in heat in January or February. East Lothian Stocks often get rough-and-ready treatment when grown in the open.

our soil is naturally light. On the other hand, our rainfall is over 80 inches in the year. Under these conditions *Narcissus pallidus precox* flowers abundantly every year, ripens a great quantity of seed, and what I do not gather sows itself. The border is full of seedlings. My gathered seedlings grow freely in a rather moist and peaty reserve bed, from which they are planted out anywhere. I cannot say I have found any place where they refuse to grow and flower. Mine are exceedingly varied both in colour and shape, being probably collected wild bulbs. I think that, as Mr. Arnott says, the plant must be one of those easier to grow in the north than in the south. A. M.

STERNBERGIA COLCHICIFLORA.

[TO THE EDITOR OF "THE GARDEN."]

SIR, *Sternbergia colchiciflora* must still be in existence at Melburn, the home of the Hon. W. T. Strangways after he became Earl of Hechester in 1858. Many years ago now, I was shown a flower of a *Sternbergia* there, the first I had ever seen, and I remember distinctly that it was fragrant. The flower, as far as I recollect, was much the same as *Sternbergia lutea*. SHERBORNE.



CALIFORNIAN BUSH POPPY (ROMNEYA COULTERI) IN BERKSHIRE.

To do them justice they must have good soil well enriched with cow or horse manure, be watered with liquid manure, and have all exhausted bloom-spikes promptly removed. Thus treated, it is surprising what grand plants they will make and the length of time they will flower.

J. CRAWFORD.

NARCISSUS PALLIDUS PRECOX.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Mr. Arnott asks for further accounts of the behaviour of *Narcissus pallidus precox*, which seems in some gardens to be so difficult to grow. I got some bulbs some years ago, and, knowing that they had the reputation of being difficult, I followed advice which I had seen in THE GARDEN, to grow them in a very dry place. I therefore put them in a small border which slopes to the south and is eaten up by the roots of a scrubby Oak. At the back of the Oak is solid rock, and below the border the path is cut down about 15 inches, the border being edged with big stones to that depth. Nothing, therefore, could be better drained, and

BOOKS.

The New Forestry. The author is of the opinion that the planting of forests on the continental system, or something approaching it, should be practised on large estates in England. The chief difference between the two systems (if, indeed, we may be said to have a system) is that our plantations are much more thinned, so that an acre of ground that with us only carries 300 trees will on the German system bear ten times the number. We space out the trees so that each may have air and light, whereas in Germany "the general theory of the system is that thick planting at the outset and dense culture throughout are the first essentials in the production of good timber; second, that thick planting leads to the early establishment of the overhead canopy, promotes height growth, and protects the soil, preserving its fertility, and keeping it in a more uniform degree

* "The New Forestry" By John Simpson. Sheffield: Pawson and Brailsford.

of temperature and moisture than is found in open woods or where the ground is exposed; third, that density or crowding causes the struggle for existence to set in early, in which struggle the trees begin to shed their lower branches while they are still young, grow in the desired cylindrical shape in their stems, are free from knots, and produce timber of the best quality for all purposes; lastly, that the quantity of timber produced to the acre is greater than can be produced by any other system, and the value of the crop proportionately greater."

Mr. Simpson strongly advises that the care of game and woodland should be placed under one responsible head, instead of forming separate departments, between which there is often a good deal of unavoidable friction. This seems to be a most desirable combination. On the subject of the difficulties and jealousies that commonly arise between the forester and the gamekeeper, we read: "The only way to obviate this state of things is to class the woods and game together, and place both under one responsible and capable head. It is immaterial whether the forester learns the keeper's duties or the keeper learns the forester's, but the former is by far the more likely man for both posts. As a rule he is a better educated man than keepers usually are; his duties as a forester furnish him with as many opportunities of acquiring a knowledge of game as those of the keeper do, and on most estates he already performs not a few of the keeper's duties. It is not proposed to abolish the office of head-keeper, or to upset generally existing arrangements, but it is proposed to class the game as a sub-department under the head of 'woods' or 'forests,' and work the two conjointly. This is the German and French plan; the gamekeepers are foresters, and all sporting expeditions are conducted in Germany by the *obersforstere*, who possess a knowledge of natural history, to which gamekeepers in this country are total strangers. By this plan the two departments would be worked without friction, and things would shape themselves accordingly and go on smoothly with much advantage to the proprietor."

A list of trees and shrubs that bear seeds and fruits eaten by pheasants is given, with the sound advice to plant them in considerable masses in clearings at intervals throughout the denser woods. The list is a fairly copious one, but it is strange that it should not include the valuable evergreen sub-shrub *Gaultheria Shallon*, that offers warm shelter 2 feet high, an abundance of excellent food, and that flourishes even under trees on the poorest soil.

The kinds of trees Mr. Simpson most strongly recommends for planting in quantity are the hardy Pines and Scotch Fir. "Of the nearly £18,000,000 worth of timber imported from abroad, over £14,000,000, according to Government returns, represent Pine timber, consisting of Scotch Fir, Spruce, and, to a less extent, Weymouth and Pitch Pine. The three first succeeded well enough in this country, but the Scotch Fir is the most valuable of the three and the most extensively used. And the consumption of Pine timber is increasing at an almost incredible rate, especially since the wood-pulp trade assumed such dimensions. This consumption takes no account of the Larch and Fir timber of home growth also consumed, which is large, only it does not enter into competition with the foreign timber of the same kind in the uses to which it is put. Here, then, we have three species

the Scotch Fir, Spruce, and Weymouth Pine to which should be added the Larch, making four species which supply by far the greater portion of the enormous quantity of timber used in this country, which could be grown more quickly, and probably more successfully and profitably, than any other species in almost every part of the British islands."

Whether the general adoption of the continental system of forestry would ever be practised in England is a matter of considerable doubt, though it would probably be of much advantage on large properties where there are considerable areas of hill or mountain waste if these occurred within the reach of a ready market. The great forests of Germany are Crown property, and the Government

has the power of placing certain restrictions even on those that are the property of private owners. Then, again, the forest and roughest copse land is in England of so much greater relative value as harboutage for game. Such land earns a yearly value that will probably exceed that of the same area under a forest crop, which would (except for the price of the two thinnings, of which that of the first is scarcely worth considering) only come to the hammer in a hundred years. Moreover, unless the forestry is on a very large scale, there is nothing that causes an owner so much trouble and difficulty as the profitable sale of timber.

Then in our much more variable climate, the danger to young planted stock of two or three consecutive severe winters must be taken into consideration. We hear of young Ash destroyed three years in succession by spring frosts, and of a large piece of seedling Sycamore carefully fenced in, but all dead, smothered by grass; and even when good timber is ready for sale, we hear sinister rumours of the "knock out" system being prevalent among buyers.

With these facts in view, we think it likely that our woodland will in the main continue to be, as heretofore, tracts of wooded land the home of furred and feathered game, of infinite beauty and interest to the naturalist and lover of Nature (a point we



MR. F. H. ARCHER-HIND.

think important, but that does not have our author's sympathy), rather than as distinct areas bearing timber crops.

But the land is wide, and there is room for both; and those who are interested in the planting of trees will do well to read all that is written in a book whose every page contains interesting records of the experience of an able forester.

My Gardener. The scope of the book is thus stated in the introduction: "I will indicate the best kinds and varieties of vegetables and hardy fruits and flowers, and how to grow them . . . and the manner in which the most ordinary kind of garden and allotment work should be done, for, no matter however simple any kind of work may be, there is always a right and a wrong way of doing it." It is a simply written hand-book, rather specially addressed to those who do their garden work themselves. It contains a good deal of practical advice and is illustrated by cuts of the usual catalogue character. The price is not stated, but is probably moderate.

My Gardener. By H. W. Ward, F.R.H.S. London: Eyre & Spottiswoode.

WORKERS AMONG THE FLOWERS.

MR. ARCHER-HIND.

WE are happy in being able to give a portrait of our good friend Mr. Archer-Hind, and we leave him to tell his own story of his work amongst the flowers of the garden. His notes upon

the Hellebores will be read with unusual interest, as these beautiful flowers have been made his especial study, with the result that a glorious series of varieties for their colour and form has been raised for the English garden:—

"My gardening days began now long ago, for from the time that I was a schoolboy, when George IV. came to the throne, I had a garden of my own, and was always devoted to flowers."

"I was favourably placed, for in my father's garden at Elswick, in Northumberland, the best flowers of the day were to be seen, grown where in olden times the monks had chosen a sheltered spot for their residence. Two old Mulberry trees remained as evidences of their attempts to grow what was not quite suitable to the climate, though they did occasionally ripen their fruit."

"An early taste for gardening generally grows in later years, and a rather extensive collection of the best herbaceous and alpine plants which I got together on the banks of the Tweed accompanied me to Shropshire and Cambridgeshire, and finally to this county (Devon) nearly thirty years ago. Compared with others it is not an extensive collection, but is sufficient to give pleasure not only to myself, but to many who have come to see my garden."

"In the counties I have named the wild flowers have always been my special study. Each has some peculiar to itself, but Shropshire bears the palm, having, I believe, more than half the known British plants growing within its bounds."

HELLEBORES.

IN the earlier volumes of *THE GARDEN* (vols. xvii. to xxx.) the treatment of these plants, so far as my experience has gone, has been so frequently given, that it would be idle to repeat it here in detail. I will only say that the interest attached to the subject is almost inexhaustible. By crossing one species with another, and again and again crossing the hybrids thus produced, endless new varieties are obtained; new forms, new combinations of colour result from year to year, and the present generation of experimentalists have the benefit of a goodly field to carry on the work.

It is worth all their skill, since, whether as they appear in the border or as cut flowers, the unique effect of so much beauty and variety in the earlier months of spring is wonderful, and would have astonished gardeners in my early days, or even thirty or forty years ago. It was before that date that I first took them in hand, but with slight success. Not more than five or six were to be had; some had been lost, most never introduced; but by watching my opportunity I ultimately collected nearly thirty reputed species. In the meantime, those I had gave me spontaneous hybrids of considerable interest, and by subsequent systematic crossing, both hybrids and varieties have multiplied yearly. Two species I have long wished to obtain, but without success, viz., true *H. lividus* from Majorca, and *vesicarius* from Syria: the former has long been lost, but I remember it seventy years ago, and its exact habitat is still known. The latter has, I believe never been

seen in England. Linnaeus classed the common Winter Aconite (*Eranthis hyemalis*) and also the little Canadian *Coptis trifolia* amongst the Hellebores, and, I believe, before his time the *Astrantia*, *Trollius*, and probably others were included; but now the family is, for the present at least, defined, and popularly distinguished as Christmas Roses and Lenten Roses. I have never succeeded in crossing the Christmas Rose (*H. niger*) outside its own family, neither have I so far raised any cross from our native *H. fetidus* nor the *Helleborus trifolius* (*argutifolius* of Viviani), the only representative of the class in Corsica. With regard to the Lenten Roses, I am inclined to think that all of them, whether with persistent or non-persistent leaves, may be crossed one with another, and their hybrids still further indefinitely extended into varieties. This is the task I would set before young lovers of their gardens.

T. H. ARCHER-HIND, F.L.S.
Coombe House, South Devon.

GARDENING OF THE WEEK.

KITCHEN GARDEN.

EARLY BEETROOT.

BEETS are forced in very few gardens, and, unless needed for special purposes, it may not be necessary to do so, as of late years the introduction of the Globe varieties has been a great gain as regards earliness. To get a few early roots for salad purposes, a considerable gain in time may be secured by sowing three or four seeds in small pots, thinning to the strongest when large enough, growing in cold frames till the end of April, and then planting out on a warm border. Another plan is to sow a box of seed in a warm house, placing it in a frame when the seed has germinated, and pricking out when large enough. Beetroot is easy to transplant, but care must be taken not to break the roots.

EARLY CROPS IN THE OPEN GROUND

are raised with less trouble, and may be sown on a warm south border or at the foot of a wall, thinning early, and feeding as growth is made. Few vegetables respond more quickly than Beetroot when surface-dressings are given, say, in showery weather, either in the shape of nitrates or liquid manure. The Turnip-rooted Beets need liberal treatment, as, having only a small tap root to depend upon and making their growth in a short time, they need ample food. For present sowing I do not know of a better variety than Carter's Crimson Ball. This is a great advance as regards shape, size, colour, and earliness on the old Egyptian Turnip-rooted form, and is specially suitable for poor or shallow soils. Sown now, it will be ready for use in three months. If long-rooted Beets are preferred, Sutton's Black is a beautiful root, both as regards quality and earliness.

ASPARAGUS.

Early in April is a suitable time to sow Asparagus seed, either in permanent beds or for future planting. If for the former purpose more preparation is necessary, as the roots will occupy the land for a much longer time and the soil will need good culture. I am not a lover of sowing seeds for permanent use, as the land needed may be made better use of if plants about two years old are planted, seeds occupying the land for quite two years when it might be bearing another crop. Whatever plan is adopted, by doing the work early in April a longer season's growth is obtained, less injury from drought, and less watering needed. If plants are purchased there should be no delay in having the soil in readiness to receive them, and in heavy clay soils it is advantageous to use some fine material at the roots if the soil is in a lumpy condition, and care should be taken to spread the roots out carefully, cutting a wide flat drill 6 inches to 8 inches deep previous to the planting, each plant

being made firm as the work proceeds—indeed, in our light soil we gently tread them in. I prefer beds on the flat to raised ones, and there should be ample room, at least 2 feet between the rows and 15 inches, or even more, between the plants. With seed to form permanent beds the same advice holds good as to space, but sow thinly in shallow drills 3 inches deep and thin early to the required distance. Plants sown for lifting or forcing later on may be closer, 15 inches to 18 inches between the rows, and half that distance between the plants in the row.

TURNIPS.

In an earlier note I referred to the value of Extra Early Milan and the White Gem varieties for sowing in frames, and the same advice still holds good as regards varieties for the first crop in the open. To these should be added Snowball, one of the most shapely roots grown and of excellent quality. It will now be safe to sow larger breadths of this vegetable than advised earlier, as with more sun-heat germination will be more rapid. These roots, making their growth in a short time, need rich soil or that recently manured; failing this, a liberal use of a good fertiliser will be beneficial. I need not go into details of sowing, distances and position, as the culture is fairly well known, and the roots do well in an open position and well-drained soil. This sowing will give the midsummer supply.

CARROTS.

These are best when grown quickly and used direct from the soil. To effect this it is well to make several sowings, and for summer use the Early Gem and Model or the Short Horn section are advised. For later supplies any of the intermediate type, or Favourite and Model, are well adapted, and these sown at the end of this month will be valuable for autumn supplies. Carrots, unlike Turnips, do not need fresh manure, as too much causes the roots to fork; at the same time, good land is necessary, such as was well enriched for a previous crop.

G. WYTHES.

Syon House Gardens, Brompton.

INDOOR GARDEN.

FUCHSIAS.

Old plants which have up to now been kept dry at the roots in cool quarters may be brought out, pruned into shape, and started gently in a house with a temperature of about 50° at night, and in which a hotbed of leaves and manure will be a great advantage. Water must still be withheld for a few days after pruning, and very little will be required after the first soaking until the plants are ready for potting, which should be carried out when the new shoots are less than an inch long. Autumn-struck cuttings make excellent plants, and this is the best way of raising stock where the propagating quarters are likely to be overcrowded in the spring. The young plants should now be shaken out from the cutting pots and potted in some good material, consisting of two-thirds fibrous loam, one-third leaf-mould and decayed manure in equal quantities, and a good sprinkling of sand. If a few old plants were started for the production of cuttings a few weeks ago, the cuttings will now be ready for insertion, giving them the benefit of a close propagating box until rooted.

SHADING.

During the first bright days of the year much harm is often done to tiny seedlings and tender growth by outbursts of sunshine, alternating with dull skies. A strict watch on the weather is necessary, and shading material should be kept in readiness to cover all such things whenever desirable.

WINTER-FLOWERING HEATHS.

As these go out of flower they should, if intended to be kept for another year, be cut back into shape, but not too close to the base of last year's shoots, as they refuse to break freely from very hard wood. After pruning place the plants near the glass in a nice light greenhouse, and take great care not to over-water, as the roots, not having much top growth to support, are liable to die off from an overdose of water. Hard water should never be

given to these plants. As a safeguard against mildew the plants should be well dusted with flowers of sulphur.

EPACRIS.

The erect-growing forms of *Epacris* comprise most of the best varieties, and these, too, should now have their annual pruning. They bear harder cutting than the Heaths, and as the production of a few strong shoots, in preference to a crowd of smaller ones, gives the best results, this should be the object aimed at. After pruning, it is advisable to keep the plants in a close atmosphere to induce the young growths to come away freely, and there is no danger in so doing, as the *Epacris* is not liable to mildew. Repotting should take place when the most forward of the new growths have reached rather less than an inch in length, and the pots used should be large enough only to give the plants a bare shift, and the soil best suited to their requirements consists of fibrous peat and sand. Pot firmly and keep the collars up above the new soil. *Epacris* are not nearly so much grown now as they were formerly, and have given place to the easier grown soft-wooded plants, but there cannot be a doubt that gardens have lost much by the change.

SEEDLINGS.

By this time there will be many seedlings of early sown things such as *Begonias*, *Streptocarpus*, &c., ready for pricking off, and I find it best to adopt the nurseryman's plan of pricking off such things in little clumps early rather than to wait until they are big enough to set out singly, for the soil in the seed pots turns sour and is not conducive to growth, while the disturbance of the plants and the move to fresh soil appear to give them the impetus needed, and much time is gained. For a few days after pricking off a little extra attention must be paid to shading, and the pans or boxes should be lightly sprayed over with the syringe two or three times a day.

BEGONIA GLOIRE DE LORRAINE.

Cuttings from the base of these plants will now be showing freely, and as soon as they reach about 2 inches in length they will be fit for insertion, striking them in small pots in a propagating frame with a fairly moist atmosphere. Avoid striking cuttings made from last year's stems, for though these may be got earlier, they persist in making flowers and get stunted in growth. Those of the right kind taken off later will soon overtake such as these and make far more satisfactory plants.

J. C. TALLACK.

Shipley Hall Gardens, Derby.

FRUIT GARDEN.

PEACH TREES INDOORS.

ALL now are in different stages of growth, and must be treated accordingly. If the fruit is set and grown to the size of Hazel nuts it should be thinned, as undue delay in this work is direct loss of strength to the trees. Take off the smallest fruit where there are two on one node, and all between closely placed branches and those that cannot swell to their fullest size without being deformed against trellis wires, taking off other fruit to one, two, or three on each piece of wood, and leaving for a crop the largest and the best placed fruit to receive the fullest benefit of the rays of the sun. As soon as the fruits have perceptibly increased in size, go over them again and further reduce the quantity to very nearly the number for a crop, leaving a few over to be taken off when the stoning period is reached. A suitable number to leave is about one fruit to every square foot-spread of the trees, a few over for the largest, and under for the smaller. Consideration also must be paid to the vigour of the trees. Those growing in recently made borders may be allowed to carry a heavier crop than those in exhausted borders. For Nectarines, about 9 inches square may be allowed for each fruit.

If many fruits are left on a tree over and above a fair crop, they do not add to the weight of eatable pulp and the flavour is not so good. The increased number of stones so tax the power of a tree, that it has not the strength, after stoning, to add to the

pulp. At the time of thinning fruit, to avoid crowding of foliage, thin out young shoots. Those on the end of the old wood in front of fruit and not required for next year may be stopped at 2 inches or 3 inches long, so as to give the fullest space to growth required for next year. Weak wood of last year's growth, without fruit, may be taken out, cutting in front of a young shoot, which will grow on in place of it. Train and tie young shoots to the trellis, and for this purpose go over them as often as required.

A mild forcing temperature is beneficial at this stage, ranging from about 55° at 6 a.m. to 63° in the daytime, with a rise of 10° to 15° from sun-

where the trees are weak. That containing lime, ammonia, and phosphate suits them. For trees in bloom maintain a sweet, buoyant, moderately warm atmosphere, with a temperature of about 50° at 6 a.m., and rising to 60° in the day, must be maintained, and ventilation applied rather freely. Where ripe Peaches are required to be as late as possible in the autumn, retard the trees when they are coming into flower by keeping the house wide open and shaded from bright sunshine until the bloom begins to open.

Peach trees in pots require the same general treatment as those planted out, but sharp attention must be paid to watering. When the stoning

ing in colour than by the water-side, as depicted in the accompanying illustration. Over the glistening pond sides the trees hang their graceful branches, reflected in the clear surface—a picture the artist delights to paint.

MR. PATRICK NEILL.

IN addition to the article on horticulture in the "Edinburgh Encyclopedia," referred to in the interesting note in *THE GARDEN* of March 24, Mr. Neill, in collaboration with the Rev. John Smith, wrote the treatise upon the same subject for one of the editions of the "Encyclopedia



SILVER BIRCHES BY WATERSIDE IN BURNHAM BEECHES.

heat; a little over this at closing time will do no harm. In fine weather use the syringe freely twice a day will not be too often. In the morning and at closing time, while in dull weather the damping of the surface of the border cover may be sufficient. Maintain a sweet atmosphere with ventilation at the apex of the house when it is mild, putting it on gradually in the morning as the temperature rises, avoiding strong currents of cold air. Keep on a crack of air through the night when it is mild. Peach trees should not at any time be allowed to become quite dry at the roots, and as growth advances the demand for moisture at the roots is great; therefore copious supplies must frequently be given, with manure occasionally

period is completed, they may be brought along in a temperature a few degrees higher than is given in the first swelling stage. Some early varieties of Peaches and Nectarines brought out in recent years take but a short time in stoning, which makes them adapted for bearing ripe fruit early indoors.

G. NORMAN.

The Gardens, Hatfield House, Herts.

THE BIRCHES AT BURNHAM.

IN the beautiful Burnham Beeches a note of silvery colour is given to the landscape by the Birches, which here and there break in upon the view, and in no spot are they more charm-

ing. This was afterwards republished as a separate volume, entitled "The Fruit, Flower, and Kitchen Garden." This appeared in 1840, the publishers being A. and C. Black, of Edinburgh. A copy of it is before me as I write. Mr. Neill's colleague, Mr. Smith, was, it appears from the preface, the rector of Bathgate Academy, and afterwards the minister of Ecclesmachan. He was the son of Mr. John Smith, of Hopetoun House, a celebrated gardener in his day.

S. ARNOTT.

Forsythias are bright flowered shrubs at this time, the shoots being wreathed with golden bloom. They withstand very rough treatment.

FERNS.

FERN SPORE SOWING.

RAISING Ferns from spores is just one of those nice operations which would suit your lady readers as well as the Fern lover generally, since in all the first stages it can be managed within the limited compass of a small Wardian case, within which can be concentrated infinitely more interest than if it were merely filled with a few purchased plants. Assuming such accommodation as a 30-inch case affords and a location for it in an unshaded north window, we will give the *modus operandi in extenso* based precisely upon the lines I habitually follow myself. Obviously the first essential is good spores of good varieties, and as we have in view an unbeaten case and hardy Ferns, we suggest the purchase of a packet of good spores from one or the other of the known hardy British Fern nurseries, or in the late summer the acquisition of a few fertile fronds from any available source. Personally we greatly prefer to sow from the frond, as we start then on a securer basis, knowing fairly well what to expect. On the other hand, the packet system has its advantages, especially if the material come from reliable hands, as the harvest is fairly sure to be in the nature of a lottery, the prizes or blanks predominating according to the conscientiousness of the supplying source. Fern spores are borne in variously shaped patches, usually on the backs of the fronds, and are generally ripe when the patches become brown, *i.e.*, in July and August. The fronds should then be cut and laid spore side downward on white glazed paper, when in a few hours in a dry room the paper will be illustrated by a faint brown picture of the frond, the picture being formed by the shed spores scattered from the burst capsules. Our raw material is now ready for sowing. We now take small shallow red-ware pans or small flower-pots (2½-inch) and half fill these with crocks or broken pieces of pots by way of drainage; on this we spread a thin layer of dry moss, and then fill the pots or pans with a little Fern compost of loam, silver sand and leaf-mould or peat-mould in about equal proportions, rubbed fairly fine, topping this with a few small nodules of loam sprinkled evenly all over it. Our pots and pans are now ready for sowing save one very essential thing—that soil is already full of spores of mosses and fungi, and probably eggs of insects, worms, and other things which will eventually enter into a struggle for existence with the young generation of Ferns to which we want to give every possible advantage. We therefore, prior to sowing, place a small piece of paper on the soil in each pot to prevent washing up, and then carefully pour boiling water out of a small kettle on to this paper until the effluent water is scalding hot also. This is very important. With a mere single drenching the water will run out almost cold, chilled by the cold soil, and hence any Fern foes at the bottom of the pots are left unharmed. We now remove the paper and let the pots cool, and turn our attention to the spores. That brown picture above described represents quite probably two or three millions of spores, while our little pots and pans can only accommodate a few hundreds, and even the most ardent fernist will hardly want more. It is therefore wise to sow extremely thinly. A tiny pinch on the top of a penknife is ample for a pan, and this should be distributed as evenly as possible by a series of gentle taps. If one is systematic, one will now put in a small wooden label with the name of the Fern or a reference number—the latter preferably—and our sowing is done. A circular piece of glass, or a tumbler fitting pot or pan, should now be put over the culture, and the various sowings completed, they should be bedded in the Wardian case in fresh cocoa-nut fibre well damped, and the further operations left to Dame Nature. If the case be kept close, no watering will be needed until the young Ferns appear, but if there be any appearance of drought, the pot or pan should be lifted and held in a basin of water until the water is seen to sparkle on the soil surface, then withdrawn and reinstalled.

Watering overhead is a mistake; it tends to disturb the spores and introduces those of the moss and fungoid foes already killed. In the growing season we may expect in about a fortnight to see a sort of green bluish pervading the surface, showing that the spores are germinating, and presently we shall find an immense number of little emerald-green heart-shaped scales, about the size of herring scales, shouldering one another for space.

He or she who goes in for a numerically large crop will now prepare other and larger pans precisely as before, boiling water and all, and prick out tiny pill-sized patches of the scales, inserting these an inch apart in the fresh soil. In a few weeks' time tiny fronds will begin to appear in all directions; and now begins the most interesting stage, as even these first fronds often show signs of that cresting and cutting which is so beautiful in the adult plants. When the second or third frond appears it is high time to part them, and as they have by this time a little set of roots, it is best to lift them in little clumps and immerse their roots in a saucer of water: this softens the soil and enables them to be pulled asunder with little damage. After this it is simply a question of care, repotting and bringing on, and if success has so far attended the culture through its most delicate stages, the presumption is that nothing more will be required than ample space in which to develop the manifold beauties of the crop. As a practical example of what a successful crop means, I may mention that one of my earliest attempts yielded over 800 beautifully crested Hart's-tongues from a sowing in a 2½-inch pot. Hence even a trial on a small scale under a bell-glass instead of a Wardian case is well worth making.

CHAS. T. DREERY, F.L.S., V.M.H.

THE FRUIT GARDEN.

PYRAMID PEARS.

UNDER good management this kind of tree is prolific and produces fruit of excellent quality; it is also ornamental and suitable for planting by the sides of kitchen garden walks.

For this purpose it has in a measure superseded the espalier, and it is well adapted for small gardens where there is a deficiency of wall space. Where practicable it is better to form a plantation than have trees distributed about a garden, as when grown together their wants in the way of protection, insecticides, manures, &c., can be readily and thoroughly attended to, and by devoting a portion of ground to them they are not liable to be robbed or otherwise injured by other crops, as is sometimes the case under other modes of culture. In

SELECTING A SITE FOR A PLANTATION.

aspect and shelter should receive due consideration, for the Pear delights in a warm situation. A gentle slope facing south is most desirable, although any point from south-west to south-east will answer provided it is well sheltered and elevated above the fog line out of reach of late spring frosts. Pears are impatient of cold and wet soils, and succeed best in a deep calcareous loam. In preparing soil for planting, if the soil is not naturally well drained, this must be secured by artificial means, and it should be bastard trenched to a depth of 2 feet. Manure should not be applied until the trees show by their growth and the quality of their fruit that it is needed. Usually upon good soils young trees grow freely, and until it is somewhat exhausted, manure is injurious rather than beneficial. There are plantations here of Apples, Pears, Plums and Cherries which have been planted six years, and yield heavy crops of excellent fruit without assistance from manure further than that with which they were mulched when planted, and, judging from the nature of their growth, manure will not be necessary for some time to come.

STOCKS

have a marked influence upon the Pear, and both the free and the Quince stocks possess special qualities. The former roots deeply and promotes

free growth; it is consequently suitable for large trees and for those planted upon light soils, as owing to its deep-rooting propensity trees worked upon it do not suffer so much from drought as are those upon the Quince. Pyramids worked upon it and planted in deep rich soil, however, produce more wood than fruit unless they are skilfully root-pruned. This has the effect of stopping luxuriant growth and causing the formation of fruit buds. Trees upon the Quince are dwarf in habit, prolific, and fruit early. They form numerous fibrous surface roots and thrive best upon good loamy soils. Owing to being surface-rooters they are, especially upon porous soils, liable to suffer from drought, and are, therefore, benefited by being mulched with short manure. From these remarks it will thus be understood how important it is when planting to obtain trees worked upon stocks suitable to the land they are intended to occupy. The principal object to be kept in view in pruning is to secure a well-balanced tree without crowding its branches.

The following is a list of some of the varieties that do well either as pyramids or bushes, and which will supply a lengthened supply of fruit:

VARIETIES.

Williams' Bon Chrétien, Beurré d'Amanlis, Souvenir du Congrès, Beurré Hardy, Beurré Superfin, Comte de Lamy, Conseiller de la Cour, Emile d'Heyst, Louise Bonne de Jersey, Marie Louise, Beurré Diel, Doyenné du Comice, Duroseau, Thompson's, Beurré Bosc, Beurré d'Anjou, Josephine de Malines, Winter Nelis, Beurré d'Arcberg, Olivier des Serres, Easter Beurré, and Glou Morceau. The two last named are only suitable for pyramids in very warm favourable situations.

THOS. COOMBER.

PLUMS.

THERE is no mistaking the fact that fruits of all descriptions are being increasingly looked upon as necessary additions to our food supplies, and enormous quantities are now used for making jam. In the case of Plums, like Apples and Pears, we rarely find that the best flavoured sorts are the best croppers, yet we cannot complain much of the quality of some of the heaviest bearers. The Victoria Plum stands foremost of them all, as it is a heavy cropper and a great favourite with the public; it is a large, oval, red, juicy Plum with a fairly good flavour. Individual trees in my orchard have during the past season yielded nearly a quarter of a ton of fruit, and as other kinds failed to crop it will be seen that the Victoria is a most useful Plum. During the last few years quite a trade has sprung up in the sale of green unripe Plums. Hundreds of tons are gathered every season and sold at a fair price, last year prices for green Victorias ranging from 1s. to 2s. per stone of 14 lb. There are many advantages in disposing of part of the crop in a green state, one being that it extends their season, which lasts three months, while from other countries we have a regular supply for nine out of the twelve months. I do not advocate selling green Plums unless there is an enormous crop, and then it is best to sell the thinnings. Many jam-makers say the Victoria Plum when ripe is too watery for making into jam. I wrote to two large firms last year offering my crop for sale, but both of them replied that they only bought the green fruit. The Victoria Plum makes a most appetising jam; in fact, if stoned and skimmed and the kernels put into the jam, the colour and flavour nearly approach that of the Apricot. A little isinglass put into the jam will make it set better. No Plum in the market sells with such ease as the Victoria, and, taking all points together, it is the people's favourite. To obtain the best of the crop it is a good plan to manure around the trees when the fruit is half grown, giving the greatest quantity of manure to the heaviest cropping trees. There seem to be two distinct types of Victoria, one large and oval and fairly soft, the other smaller, round and firm.

Another excellent type of the red Plum is Autumn Comète, which ripens two or three weeks later than Victoria. The flavour is good, and it is one of the prettiest Plums grown. There is a

golden tinge about it that makes it look almost like an Apricot. In the nurserymen's lists I find it described as an enormous cropper. My stock of it consists of a few twenty-year-old trees, and they are growing amongst the Victorias. With me its crop is represented by 1 stone to each hundred-weight of Victoria. If it cropped anything like the latter I should have a very high opinion of it indeed. Another gardener's favourite in red Plums is Pond's Seedling, an enormous oval dark red Plum, slightly mottled. This sort ripens even later than Autumn Compoé, in fact quite a month later than Victoria. Pond's Seedling usually crops well, and when all other sorts fail one generally finds a crop of this. One cannot say much for its flavour, but ripening when other Plums are forgotten and being of a pleasing colour, if it had no flavour whatever it would still be a great favourite. The demand for Victoria Plums has temporarily affected the sale of other varieties, and especially those of the black and blue colours.

Plums that ripen before and after Victoria pay handsomely for their cultivation. A very old favourite, and one that is hard to beat to-day, is Rivers' Early Proflie, a small, almost round, dark blue Plum that carries a lot of bloom, and is ready for gathering nearly a month before the general crop. It sells readily, and I have known it make 2s. per cwt., and a good sample of Victoria the same season only 6s. or 8s. per cwt. Mitchelson's is a medium-sized dark blue Plum, a fairly good bearer, and the best of all for preserving. The trees are very upright in habit, and in more than one garden I have seen the crop lost through no one caring to climb its long straight branches. Belle de Louvain is a giant dark blue Plum, early, of good flavour, and well worth growing. Dymond is a heavy-cropping, almost black Plum, a capital market variety that fills the basket quickly. Goliath is a massive dark Plum. Kirke's, a large round dark blue variety, a medium cropper, and one of the best for eating. Monarch, another nearly round dark blue Plum, large and handsome. Prince Engelbert is large, oval, fine flavoured and dark blue. It is a great mistake to neglect the planting of black and blue Plums. Already the public fight shy of the red kinds, and dark ones are sought after more and more with each succeeding year. In yellows the Magnum Bonum stands well to the front; Jefferson's is a rich flavoured oval yellow; Washington, a large Apricot-like yellow, flushed with red, and very large. Coc's Golden Drop is of magnificent flavour, too late in ripening for planting in the northern counties unless protected by a wall. The old Green Gage takes a lot of beating in quality. Many new and improved Gages have made their appearance during late years, some of them of excellent flavour and larger than the original Gage. The Gisborne is a useful market Plum of medium size, yellow, early, which

is a recommendation, and a splendid cropper. In Damsons we have the choice Prune Damson, for which there is always a ready sale, and also the Cluster or Farleigh Damson, which is a wonderful cropper. There are many other excellent sorts of Plums, but all the above varieties I have grown in quantity, or have seen sufficient of them to form a fairly sound opinion as to their merits. Victoria, Pond's Seedling, Dymond, Gisborne, and Cluster Damson are all marvellous croppers. In a single season I have gathered thousands of stone of Plums, and there is nothing like experience to teach one what is most profitable to grow. Plum trees should be pruned a little during the first two or three years after planting; after then let them grow, merely cutting out any cross branches. By this method the tree grows quickly and soon begins to bear fruit. As the Plums grow they weigh down the branches, letting in air and sunlight to the tree.

GEO. HOLMES.

Acomb, York.

ORCHIDS.

DENDROBIUM NOBILE ALBUM.

DURING the past few months white varieties of *D. nobile* have occurred in all directions among imported plants. These have varied somewhat from each other. *D. nobile* Ashworthianum was exhibited by Mr. E. Ashworth and received a first-class certificate on March 22, 1898. This has a distinct shade of primrose on the disc, but otherwise it is pure white. Most of the later flowered varieties differ from Mr. Ashworth's in habit of growth, but possess all the good characteristics of the type. The subject of our illustration was exhibited by Mr. J. Gurney Fowler, The Glebelands, South Woodford, on March 27 last, when it was awarded a first-class certificate. It is the purest white variety we have seen. Particulars of it will be found on p. 251 of last week's GARDEN.

DENDROBIUM CLIO SUPERBUM.

The original plant of *D. Clio* was exhibited on March 10, 1896, from the Barford collection of Sir T. Lawrence, Bart. It is the result of intercrossing *D. splendidissimum grandiflorum* and *D. Wardianum*. On April 7 of the same year, *D. C.* Tyntesfield variety was shown by Mr. F. Hardy and received a first-class certificate. On April 18, 1899, Mr. Warburton showed *D. C.* Vine House var., and received an award of merit. The subject



DENDROBIUM CLIO SUPERBUM.

of the accompanying illustration, *D. C. superbum*, was exhibited by Sir Trevor Lawrence, Bart., and is by far the largest and most brilliant of all. It is fully described on p. 251 of THE GARDEN.

H. J. CHAPMAN.

LAW.

ENGINES INJURING FLOWERS.

MESSRS. CULL & ROOK, nurserymen, of Tottenham, brought an action against the Great Eastern Railway Company to recover damages for injury to their business caused by passing trains.

The case was tried by Mr. Justice Grantham and a special jury. In 1898 the railway company constructed a large number of sidings near Tottenham, and on these, the plaintiffs alleged, engines were constantly waiting, and the drivers took the opportunity to clean their boiler tubes, a process known as blasting. Black and greasy smoke, steam and soot, Messrs. Cull declared, pervaded their greenhouses, quite blocking the light. With the smoke quantities of sulphur were emitted, which mingled with the atmosphere to make a kind of sulphurous acid. This got into the greenhouses and damaged the plants.

Defendants submitted that they had acted solely within their statutory rights. But the jury found for the plaintiffs, damages £400.

A stay of execution was granted by the judge, pending an appeal.

FORTHCOMING EVENTS.

- April 10. Royal Horticultural Society. Show and meeting of committees. 12, Drill Hall, James Street, Westminster.
- .. 10 and 12. Manchester and North of England Orchid Society. Meeting.
- .. 10 and 11. Manchester Royal Botanic Society. Spring show.
- .. 11. Royal Botanic Society. Spring show at Regent's Park.
- .. 11. Royal Horticultural Society of Ireland. Exhibition.
- .. 17. Paris Universal Exhibition. First horticultural display opens.

CATALOGUES RECEIVED.

- Garden and Conservatory Plants. — *W. Gibban and Son, Altricham.*
- Plants. — *V. Loumine et Fils, 131, Rue du Montet, Nancy, France.*
- Plants. — *F. R. Pierson & Co., Garrytown-on-Hudson, New York, U.S.A.*
- Dahlias. — *J. Cheal & Sons, Crawley, Sussex.*
- Garden Appliances and Aluminium Labels. — *F. Knoll, Leipzig-Lindenu.*



DENDROBIUM NOBILE ALBUM.

THE GARDEN.

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[APRIL 14, 1900.

LESSONS FROM THE SHOWS.

THERE is always much to admire, and often a great deal to learn, from the plants and flowers shown at the fortnightly meetings of the Royal Horticultural Society, and no place within a small limit is so fruitful of objects for comparative criticism. Among those exhibited on Tuesday, March 27, two object-lessons stood out clearly. One was the beauty of some of the hardy shrubs for slight forcing, while the other was the most pointed lesson in the use and abuse of the Persian Cyclamen.

The Plum tribe shows its readiness to force early in the charming full-bloomed bushes of double-flowered Peach in varieties of pure white, pink, and rosy colourings, and only less beautiful were *Pyrus Malus floribunda* and *Prunus triloba*. *Staphylea colchica*, always a good forcing shrub, fully sustained its reputation: *Forsythia suspensa* showed up well under the same treatment, while *Viburnum Tinus lucidum*, in well-shaped small bushes, was handsomely set with its large white bloom.

The sight of these lovely flowering shrubs reminds one how much the cold greenhouse is neglected, where these delightful things and many small early-blooming plants, just too tender for outdoor use, would do well and make us glad in the biting days of March.

Among the plants shown the same day was a superb batch of Persian Cyclamens, and by their side a large number of examples of a new development with fringed flowers and leaves with more or less heavily crested edges.

We cannot feel that these deserve commendation. We think that, at any rate as far as the crested leaf goes, this novelty is distinctly pernicious. It is undoubtedly curious, and it is quite natural that it should tickle the eye of the beholder for the first time of seeing as something that is strange and amusing; but beautiful it is not. Some of the fringed blooms that are of good shape have a certain prettiness. One especially that had a moderate fringing on a well-shaped flower with leaves of the smooth-edged type was quite a pretty thing in a way: but when the eye, after being momentarily tickled by the somewhat pretty new form of the thing, passed back a yard to the right to a splendid smooth, white flower of nobler type, there could be no doubt to a truth-seeking horticultural conscience as to which was the right kind of Cyclamen.

The whole nature of the Cyclamen is to be a

smooth thing, and the fussing and cresting is only a distortion and perversion of its best capabilities. Hitherto the improvements in Cyclamens have been all in the right direction, tending to a reasonable increase in size of strength of stem to support the flower, and above all of colour.

Far be it from us to offer any words of discouragement to raisers of new plants, but when we see effort misdirected, it is no less than our duty to speak out, as we shall always do, without fear or favour. Therefore, we cannot do otherwise than condemn the heavy crested of the leaves of the Cyclamen, which distorts them from their true form and makes them look as if they were attacked by some sap-disturbing gall, or scalded by boiling water.

It is a pleasure, at the same time, to be able to give unstinted praise where it is due, and the same firm had among its smooth plants, justly placed in a central position of honour, a Cyclamen of a colour hitherto rare, but of incomparable beauty—a softly-shaded salmon-pink, a colour new to the race.

The original colours of the Cyclamen, the dull pink tending to a rank quality, and the white, tipped with an unpleasant magenta-crimson, offered a wide field for improvement—a field that good raisers have laboured in with the utmost success, as is shown by the splendid whites and blood-reds and good intermediate colours, and now in this excellent break of delicate salmon-rose. The legitimate field open for leaf-improvement is not in these bewildering distortions, but in the bettering of the marbling which is so conspicuously beautiful in the south European kinds, and is the weak point of the tender Persians.

WHEN TO PLANT LILIES.

REFERRING to the note on page 232, a correspondent points out that it speaks of "dealers," as if our only supplies of Lilies were those that are imported from Japan, America, or Holland, and retailed by our bulb merchants. Those who wish to grow the best of Lilies in the best condition should remember that there are firms of the highest repute who grow all the foreign Lilies at home and have them in the best condition for planting at the right time.

We think that the good firms who grow Lilies at home and issue carefully compiled catalogues would greatly assist amateurs, and at the same time further the interests of their own trade, if they would add a page in which appeared the name of the Lily, and against it a short statement of its wants as to soil, situation, &c. We should be glad to give assistance in the compiling of such a list, and

to publish it first in THE GARDEN, and to give any home growers of bulbs the opportunity of quoting it in its entirety in their catalogues. Amateurs often buy Lilies and lose them for want of such directions, and though such losses are by some described as "good for trade," yet we believe that this assumption is unworthy not only as a statement, but it is also inaccurate as a fact. We believe that the best growers of good plants are more benefited by their customers' successes than by their failures.

Moreover, it has come to our knowledge that amateurs have often been deterred from buying Lilies from the lack of encouragement and help that such a list would give.

NOTES OF THE WEEK.

Mr. Hartland and the Shamrock.

—We received a few days ago a boxful of the Shamrock from the well-known Daffodil grower of Cork, Mr. Baylor Hartland, who has generously given a thousand packets of seed to be sown on the graves of those brave Irish soldiers who have fallen in the war. It is interesting to know that His Royal Highness the Duke of Connaught called upon Mr. Hartland personally to thank him for his gift.

Saxifraga sancta. This Saxifrage is very charming at this time in the rock garden at Kew. It is attractive at all times owing to its soft mat of deep green foliage, but in the early spring this is relieved by many bright yellow flowers on stems about 1½ inches high. It makes when in full bloom a mass of green and yellow, and the growth spreads about in such a way as to form a dense carpet. It is quite one of the brightest and most interesting plants for the rock garden at this season of the year.

Cineraria kewensis.—At the present time the greenhouse at Kew is gay with groups of this hybrid *Cineraria*, created by crossing the species *C. cruenta* with the garden forms familiar to everyone who knows anything of flowers. This hybrid is an immense gain, as it combines all the richness of colour seen in the ordinary forms with the free, somewhat graceful growth of the species. Several plants at Kew are a model of rich colouring and neat habit, the flowers being produced in broad-spreading ample heads, and presenting a rich picture of varied colour, from quite pale forms to those of intense purple. We enjoy these hybrids for their wonderful freedom and effectiveness, and they are doubtless the most popular greenhouse flowers of the future. They are not in the least degree more difficult to grow than the ordinary *Cinerarias*.

A beautiful Heracleum.—I send a couple of roots of a charming type of *Heracleum* which, so far as could be ascertained, was imported from India in some friendly packet of wild seeds sent to relatives in London, whence it found its way to some waste ground in the West-end, and was secured by Mr. Salter. It has very richly cut foliage with fine arching habit; the stems are purple, covered with whitish hairs, and the entire plant has a dignity of carriage corresponding to the more

beautiful detailed portions. The chief difference from our old friend *giganteum* is that it is of a lower growth and much longer lived. The seed lies a good time dormant in the ground, and for one season it does not rise into flower, as the seedlings, being mostly self-sown, come up late in the summer, and remain as small plants through the winter, but they start growing quite early, and by April are fine handsome plants over a foot across, after which the foliage is developed in quite an *Acanthus*-like style for several months. When inflorescence takes place it still remains in beauty, not falling into an unsightly skeleton, as with *giganteum*. It should be in universal demand for public parks and also for London forecourts, where other *Heracliums* often run wild or semi-wild year after year with manifest satisfaction to householders. —A. DAWSON.

Paris Exhibition, 1900.—We are informed by the secretary to the Royal Commission for the Paris Exhibition that an arboricultural and pomological congress will be held in Paris on September 13 and 14. Any further particulars may be had by applying to the organising secretary, M. Nomelot, à Bourg-la-Reine (Seine).

Chionodoxas at Kew.—On an early April day one of the pleasantest sights at Kew is the *Chionodoxa*, planted everywhere almost, at the foot of trees, in beds of shrubby plants, in the rock garden, and in the grass. It is the prettiest blue flower of the early spring and seems to increase freely, becoming where the soil and position are favourable a positive weed, if one may call a flower so dainty by such a name. The variety used most liberally at Kew is *C. Lucilia gigantea*, and it is freer and bolder, as the name suggests, than other forms. The flowers of the type, *C. Lucilia*, are more starchy in form, with more white in them, and the colour is a brighter blue. For richness, *C. L. sardensis* is without a rival, the flowers an intense self colour, which is effective when the bulbs are planted thickly together. *Chionodoxas* give much pleasure in the early year wherever placed, but we enjoy them most perhaps in the thin grass near woodlands or at the bottom of some slope, where they make a succession to the purple *Crocuses* of early March.

Sprekelia formosissima.—This showy bulbous plant is more generally met with in gardens under the name of *Amaryllis* than that of *Sprekelia*. While the finest hybrid forms of *Amaryllis* or *Hippeastrum* produce flowers almost circular in outline, and with segments so broad that they overlap one another, they are in this *Sprekelia* widely separated, especially between the upper and lower portion of the flower. The most striking feature of this *Sprekelia* is the intense blood-crimson of the blossoms, a tint represented among few flowering plants. Known as the *Jacobaea Lily*, it is much grown by some of the Dutch cultivators, and can be purchased cheaply in the autumn when dormant. It is said to have been introduced from Mexico in 1658, and is now acclimatised in many tropical and fairly temperate countries. Few plants lend themselves to such different modes of culture as this *Sprekelia*, for, brought on in a brisk heat, it will flower quite early in the year; then treated as a greenhouse plant it blooms in late spring and early summer, while planted out in a narrow border in front of a hothouse, as *Amaryllis Belladonna* is usually treated, the *Sprekelia* will often do well. H. P.

Linaria pallida. I note with some surprise that in a recent issue of *THE GARDEN* this "rover" is included in a list of plants recommended for cultivation. I have a lively recollection of the endless trouble it occasioned me some years since, when, in complete ignorance of its expansive habit, I introduced it to a select company of dwarf plants upon a mound. For a brief period it appeared content with a modest share of the surface. But appearances are deceptive, and no very long interval had elapsed before its subterranean activity became manifest, and eventually it threatened to take possession of the entire mound. So completely had its roots permeated the sandy soil, that partial attempts to limit its growth proved quite useless, and in the

end it was found necessary to remove all the other plants and almost level the mound before this insidious pest could be eradicated. I think, therefore, my experience of this cacophyte, if I may coin a word, warrants me in saying to those who may be tempted to plant it, in the now well-worn utterance of our National Jester, "Don't!" —W. T., Ipswich.

The Wistaria forced.—One of the prettiest plants in the greenhouse at Kew just now is the *Wistaria* forced gently into bloom. There are little standards and bushes wreathed in delicate bloom. So many charming shrubs force readily, that one need not be without a variety of flowers in the greenhouse at this time.

The Auricula. we hear, is becoming more popular than it has been of late years, and this is good news. From a note that has just reached us we learn that the midland section of the National Auricula Society will hold its first exhibition in the Edghaston Gardens on April 25, at the same time as the Midland Daffodil Society is to hold its exhibition. The show of the southern section of the National Auricula Society will take place on April 24 at Westminster. These are definite fixtures, and we hope good displays will be the result of this renewed interest in a charming spring flower.

A trade protection society.—It is interesting to know that the society recently formed under the name of "The Traders in Poisons or Poisonous Compounds for Technical or Trade Purposes Protection Society" is gaining ground. We hope it will succeed in defeating the object of the Pharmaceutical Society to monopolise the sale of insecticides which are used now so largely in horticultural and agricultural work. As we have already mentioned in *THE GARDEN*, the society has been formed to secure the amendment of the Pharmacy Act of 1868, whereby it may be made legal for traders other than pharmacists to sell poisons and poisonous compounds for technical or trade purposes. All those trades who are in any way affected by the existing Pharmacy Act, and who would be benefited by an amendment of the said Act to enable them to retail poisons or poisonous compounds for any technical or trade purpose, in original sealed packages, as received from the wholesale dealer or manufacturer, are invited to co-operate. Since it is desirable to make the movement popular, the minimum subscription for membership has been made 5s. per annum, or a donation of 10s. 6d. Cheques and post office orders should be made payable to the order of G. H. Richards, hon. sec. *pro tem.*, and crossed "London and County Bank, Lambeth Branch," and forwarded to him at the temporary offices, 128, Southwark Street, London, S.E.

The Midland Daffodil Society.—The date of this exhibition at the Edghaston Botanic Gardens will be Wednesday and Thursday, April 25 and 26, as originally arranged. Miss Willmott, the Rev. S. E. Bourne, and Mr. F. W. Burbidge, M.A., have kindly consented to act as judges. Notice of entry for competitive exhibits must be received at Tenby Street, Birmingham, not later than Monday, April 23 (as Rule 2), but where entries can be made the previous week it will help very much. The committee hope to hold a kind of conference on the morning of the second day of the show, and would like to meet as many members as possible, when any suggestions could be brought forward and discussed. The prize money amounts in all to over £100. Exhibitors are reminded that all flowers, bouquets, &c., not required to be taken away for special use become the property of the committee for the benefit of the local hospitals; the selling of the flowers is strictly prohibited; any infraction of this rule will lead to the forfeiting of the awards. Each exhibitor will be required to give the secretaries a list of the prizes won on the first day of the exhibition, in order that it may be checked with the books. A slip provided for the purpose will be given to each exhibitor, and the prizes paid on the second day of the show at 4 p.m. Any further particulars will be given on applying to Mr. Robert Sydenham, Tenby Street, Birmingham, or to Messrs. Joseph Jacob and Herbert Smith, the

secretaries. The National Auricula Society (midland section) will hold its first annual exhibition in connection with the above on the first day only.

Special meeting of the Royal Horticultural Society.—We have received the following for publication: "Notice is hereby given that a general meeting of the society will be held at 117, Victoria Street, Westminster, on Wednesday, April 25, at 2 p.m.: (i.) To consider, and sanction if approved (either with or without addition, omission, or alteration), certain new bye-laws rendered necessary by the supplemental charter lately granted to the society. (ii.) To consider and adopt, if approved, the following resolutions, viz.: (a) That in accordance with the recommendation adopted unanimously at the annual general meeting to celebrate the centenary of the society by removing the gardens from Chiswick, this meeting adopts the proposal of the council to purchase a freehold site in the parish of Limsfield, in Surrey, and authorises the council to take the necessary steps for acquiring the said site, and for developing new gardens thereon. (b) That this meeting authorises the council to enter into negotiations with and to obtain the co-operation of the Board of Agriculture and Horticulture, the University of London, and the County Councils, with a view to the establishment in connection with or in affiliation to the society, of a representative school of practical and scientific horticulture; the scheme to be duly submitted to the Fellows for approval. N.B.—The supplemental charter and the new bye-laws will be printed in full in the next number of the society's Journal, vol. xxxiii., part 3. Fellows requiring an advance proof of the bye-laws can obtain it on personal application at the society's office.—By order of council, W. WILKS, Secretary."

[With this we also received a copy of the bye-laws drawn up by the council, and to be submitted to this general meeting.—EDS.]

THE EDITOR'S TABLE.

CARNATION H. J. JONES.

A SPRAY of flowers of this Carnation comes to us from Mr. H. J. Jones, Ryecroft Nurseries, Hither Green, Lewisham. Carnations increase and multiply, but we always welcome a beautiful introduction such as this deep Clove-coloured, free and vigorous kind, sweetly scented, and displaying the finer attributes of the best of its race. We hope to illustrate this novelty.

LENT HELLEBORES FROM DEVONSHIRE.

MR. ARCHER-HIND sends from his Devonshire garden a beautiful picking of Lent Hellebore blooms from his own seedling plants; they are rich in colour and spotted marking, good to see in this unusually cold spring, when all round London the harsh days and severely frosty nights are keeping back the early spring flowers and giving a miserable look to those that have already ventured into bloom.

BLUE PRIMROSES FROM WISLEY.

MR. WILSON sends us a representative picking of his blue Primroses, which shows a marked advance in some of the colourings. Of these the most noticeable is a splendid violet-blue, which so nearly matches the type colour of *Iris reticulata*, that were it not for the impossibility of an actual match on account of difference of texture, in which the softer surface of the Primrose is necessarily the loser, one might say that the colour was identical. The other most remarkable colouring is a pale blue that also nearly matches the lighter blue colour of the variety of *Iris reticulata* raised by the late Rev. J. G. Nelson. The greater number of Mr. Wilson's blue Primroses show their unwillingness to part with the red-purple colouring through which they arrived at the blue, by a retention of reddish colour on the backs of the petals and outsides of the tubes, and by a ring of red colour more or less wide and distinct between the yellow eye and the main body of the petal. In the later and better developments this red ring has nearly disappeared—we think much to the advantage of the flower.

PERSIAN CYCLAMEN CULTURE.

THE Cyclamen is one of our most useful flowering plants. Few, however, of the many who attempt to grow them are rewarded with anything like success. It is only by very careful attention that the plants can be thoroughly grown. It is important to secure the best strain possible, and in the first week in August seed should be sown thinly in well-drained shallow pans in a compost of loam, leaf-mould, and sand. Place the pans close to the glass in a temperature ranging from 60° to 65°, and the greatest care should be taken that the surface is kept moist. When the plants have made the second leaf, pot off into 2½-inch pots. Care should also be taken not to injure the roots, as the Cyclamen is very tender-rooted. Place the plants in the same temperature upon a shelf close to the glass, a compost as advised being suitable for this potting. Keep the plants well syringed and shade from bright sun at all stages of growth. The third week in February the plants will be ready for another shift into 2½-inch pots, and they should be kept in the same temperature, but be very careful not to give too much water at this stage. About

the most interesting in the country. As the accompanying illustration of Persian Cyclamen shows, these flowers are remarkably well grown by the gardener (Mr. Galt), and the account sent to us by the foreman will doubtless interest those who wish to grow these plants to the same perfection. Mr. Strange kindly sent us the photograph, and in a note to us he mentioned that the sweet-scented Cyclamen should receive consideration. Twenty years ago most of the flowers in Mr. Strange's collection were sweet-scented, though the flowers of that time were not fit to be compared with the productions of the present day. Our correspondent finds that it is more difficult to impart fragrance to seedlings than other characteristics, such as colour and habit of growth.—Eps.]

SOME OF THE RARER CLIMBING AND TRAILING PLANTS FOR WALLS AND PERGOLAS.

IN the growth of many of the rarer and most distinct and beautiful of climbing shrubs one must in the main be guided by the natural surroundings of soil and shelter, or by climatic conditions. In the

after year. But, apart from mild climates, aspect has an enormous effect on many climbing shrubs, and especially on light dry soils. *Lapageria*, for example, prefers a northern exposure, and the same is true of *Berberidopsis* and in the case of the familiar *Fatsia* (*Aralia*) *japonica*. Many climbers and trailers, again, are hardy on north or north-western walls that are ruined by bright sunshine after frost, which is often experienced on south, and especially south-western, exposures. Even when climbers like *Wistaria*, *Jasminum multiflorum*, *Ceanothus*, *Cydonia*, and many others are perfectly hardy on sunny walls it is often a great advantage to train a few branches over the top of the wall to the shady side, as in these cases there is a week or ten days or more difference in the time of blooming, and so an agreeable succession is obtained.

In planting both walls and pergolas there is danger in planting too thickly, and in planting too hurriedly or without sufficient preparation. We all must perforce often do the best we can rather than the best we know. Large-growing, permanent shrubs, such as *Cydonia japonica*, *Wistaria* and *Magnolias*, which may remain in the same spot for twenty years or more, often fail through starvation, and in any case never attain their full luxuriance and beauty if cramped and stunted during the first few years after planting. Again, it must be remembered that both wall and pergola creepers often suffer a lack of moisture during the summer and autumn months, and provision should be made for necessary mulching and watering.

There is one important point that must be attended to in the planting of anything of which the general hardiness is not fully assured, and that is, never plant late in autumn. The golden rule with all half-hardy things is to plant well in April or May, after all danger from severe frost, &c., is over, so as to allow the plants a long summer and autumn season of root and top-growth before the stress and strain of winter weather come upon them. In this way many plants will succeed perfectly in establishing themselves that would at once die off if planted out in October or November. This advice to experienced gardeners will appear to be on my part "a keen perception of the obvious"; but I am also writing for many who probably do not know, and I would spare them the disappointments I and others have already gone through.

Walls we have always had with us, but the pergola from Italy and south of France is a more modern introduction to English and Irish gardens. Its origin in Italy was in part due to the climate, where shade is a grateful boon at mid-day, and thrifty economy also played a part in its evolution, since by its use both shade beneath and a crop of Grapes overhead were obtainable at the same time.

When flowering shrubs, such as *Roses* and *Clematis*, are grown over pergolas, the flowers, instead of hanging down like Grapes, often cover the leafy roof of the structure, and so are unseen except from points of vantage like upper windows. For this reason arches at intervals down a walk or garden path possess a certain advantage at times, a pergola when allowed to become overgrown becoming "a flower-bed on stilts," as I was once informed by a young lady of five or so! But there are pergolas and pergolas; you can have the massive brick or stone piers, as in Italy, or a simple structure of Pine stems or of iron supports with cross-pieces and sides of stout bamboo, or of Fir or Larch stems, whichever you will.

I have sometimes thought that a simple pergola covered with annual climbing plants might be convenient and pretty where one's tenancy was limited as to time. In a cottage garden I once saw a very pretty one covered entirely with *Scarlet* and *Painted Lady* Runner Beans, the owner, whose land was limited, having gone back to the thrifty *contadini's* notion of shade and economy, *i.e.*, shade and produce as well. A light pergola or gazebo might indeed be very charmingly covered with *Tropaeolums* of sorts, *Scarlet* and *yellow*, including *Canary Creeper*; *Sweet Peas* here and there on the sunny side, and *Coloas* and *Japanese Hop* on the other. A rough pergola or gazebo could be very handsomely covered with various kinds of



PERSIAN CYCLAMEN HOUSE IN THE GARDENS OF ALDERMASTON COURT.

the second week in April remove them to a frame on a nice moist bottom close to the glass. The first week in May the pots will be found full of roots and ready for another shift into 5-inch or 6-inch pots, but it entirely depends upon the strength and condition of the plants. Good fibrous loam (hand-picked), leaf-mould, and sand, with a sprinkling of one of the well-known fertilisers, form a good compost for this potting. Cease syringing the plants in the middle of September, and at the beginning of October remove them to the house in which they are to flower. An application of artificial manure is very beneficial to them. Be careful not to water over the top of the bulb, or damping will follow. With careful watering, syringing, and shading, a wealth of flowers will be the result. W. Cox.

The Gardens, Aldermaston Court.

[The gardens of Aldermaston Court, Reading, the residence of Mr. C. E. Keyser, are amongst

cold midland and northern districts of England I have seen common Laurels and many *Roses* killed to the ground during severe winters, and it would be sheer folly to try to grow many, if not most, of the plants hereafter to be mentioned in this paper.

In Hampshire, Devon, and Cornwall, and in many other isolated and sheltered nooks near the sea in England south of the Thames, many so-called cool greenhouse plants often grow and thrive luxuriantly in the open air. This is also true of many localities in the south and west of Ireland, such as Fota, Cork, Bantry, and Tralee, where New Zealand, Japanese, Californian, and many Chilean shrubs are quite happy in the open air. Nearly all visitors to Glengarriff notice the luxuriance of the *Fuchsias*, which, not being cut down there every winter by severe frosts, assume more or less of a tree-like aspect, and are literally one mass of brilliant coral-red flowers during summer and autumn. But to me it is even more wonderful to see there growing up the front of the hotels and elsewhere such plants as *Maurandya*, *Lophospermum*, *Mikania*, and *Cape Pelargonium*; year

edible and ornamental gourds. These plants crawl and scramble in all sorts of graceful ways over Larch or Spruce branches tied to rough posts, and in late summer and autumn they take on the most beautiful colours and markings. Apart from more practical or culinary uses, the quaint fruits of the best ornamental gourds are very pretty ornaments indoors during winter. But as a fact there is scarcely any limit to the methods and materials for making and covering these structures, and most gardeners can best strike out a plan to suit their own desires and surroundings; and to aid the choice of those who wish to try some of the less common things, I have, at the request of a friend, drawn up the subjoined list, which though necessarily an incomplete one, may none the less be a slight help to some of the readers of THE GARDEN.

It would prove helpful if any reader of THE GARDEN who lives on the south coast of England, or on the mild west coast lines of either Scotland or Ireland, would kindly tell us under what circumstances and conditions any other of the more rare and beautiful wall shrubs and climbing plants thrive in their gardens. In order to render such information as instructive as possible it would be desirable to indicate the locality clearly, and also to give some notion as to existing shelter, whether natural or artificial.

Abelia floribunda.—This is a Mexican plant, and Nicholson says it is "the best and freest-flowering evergreen species." I have seen it very handsomely in flower on a low wall at Mount Usher, County Wicklow. Its pendent flowers in axillary clusters are of a rich purple-red, and remind one of some Fuchsias.

A. rugastris, a Chinese plant, is very pretty, as also is *A. triflora* from N. India. *A. serrata* I have not seen, but all the others do well in mild localities, either as isolated bushes on grass or border or as trained to walls.

Abutilon vitifolium.—Several kinds of this genus are sufficiently hardy to thrive on walls or in borders near to heated plant-houses, and I have seen *A. striatum*, *A. vexillarium*, and *A. vitifolium* grow and bloom for years outside. The last-named forms a spreading bush 10 feet to 13 feet high in south, west, and eastern Ireland. It has hoary leaves somewhat resembling those of the Grape Vine, and clusters of pale lilac, mauve, or lavender-tinted flowers that remind one of those of *Mecynopsis Wallichi* in shape, size, and colour. *A. vitifolium* comes from Chili, and enjoys shelter and ample root moisture, being apt to suffer from drought near walls, otherwise it grows well thereon.

Akiba quinata. A most distinct Japanese creeper with five-lobed leaves and twining stems; although generally grown in a greenhouse, where it flowers in January or February, it is quite hardy in mild sea-shore places, and bears its monococious flowers in April or May. The rich wine-purple flowers are borne in axillary grape-like clusters, and their translucent petals are very beautiful as seen between the eye and the light. It likes a rich, deep, loamy soil, and is increased by suckers or layers. Although introduced to our gardens from Chusan in 1845 it has never become very abundant, but it deserves a place for its distinctive character.

Aristolochia Nipho. This is decidedly one of the best of leafy climbers for a shady wall or pergola. In deep, rich soils it grows 20 feet to 30 feet high, producing great heart-shaped leaves often 9 inches or 10 inches in diameter, with a shagreen-like or corrugated surface not unlike those of the Japanese Vine (*Vitis Coccinifera*), but they die off yellow and never attain to the rich buff-red and crimson tints assumed by those of the Vine. A plant of this fine *Aristolochia* has grown in the area of Sir Dominic Corrigan's old house in Merrion Square, Dublin, for the past forty or fifty years. Introduced from North America in 1763.

Bouthonia fragifera. Now known as *Cornus capitata*, but in gardens its old name will long be retained. In Devon, Cornwall, and in Wicklow, Cork and Kerry and elsewhere in Ireland this fine shrub flowers and fruits luxuriantly as a bush on the border or lawn, but in less favoured places it

needs the warmth and shelter of a wall. It is a native of Nepal, and is readily increased from home-grown seeds, and the plant, like all its allies, is a rapid grower in any deep, rich, loamy soil. Quite small bushes of this plant and the common *Arbutus Unedo* are often very handsome as seen laden with fruit in south and western Ireland.

Berberidopsis cordilina.—The finest specimen of this beautiful and distinct evergreen climber I ever saw was on the stable wall at Lakelands, Cork, when that noble place was in the hands of the late Mr. Wm. Crawford, a great lover of garden vegetation. It is a native of the Chilean Andes, introduced in 1862. It likes a deep peaty soil or loam and leaf-mould on a moist bottom, and, like the *Lapageria* and its dwarf cousin *Philesia*, it enjoys a northern or shaded aspect, rarely thriving for long together in full sunshine. Its flowers resemble those of the *Berberis*, but are much larger, have pendent stalks, and are of the brightest coral-red or blood colour. It grows and flowers here in a shaded corner under an Ivy-topped wall.

Billardiera longiflora.—This is the Apple Berry of Tasmania, and is of elegant twining habit, its greenish-yellow flowers, which are not very showy, being succeeded by handsome blue berries that are very ornamental, and are similar in shape and size to *Fuchsia* fruits. The plant is closely related to the *Pittosporums* of New Zealand and grows 2 feet or 3 feet in height. There are two or three other kinds, but none prettier than *B. longiflora*. It grows best in moist peat and sandstone, at the foot of a half-shaded wall. F. W. B.

(To be continued.)

THE FLOWER GARDEN.

SELECTION OF TUFTED PANSIES FOR SPRING PLANTING.

GARDENERS who have neither the time nor inclination to follow the advances made with these plants may like a selection of some of the newer kinds. The undermentioned varieties embrace a few which are regarded with considerable favour by those qualified to express an opinion upon their merits.

YELLOW SORTS.

Melanopus. This is one of the very best sorts introduced last season, being a deep yellow self, rayless, and of medium to large size. The habit of the plant is perfect, developing numerous blossoms on stout footstalks, and marking a distinct advance in those suitable for bedding.

Pembroke. This is two or three seasons old now, but is a very fine, bright yellow, rayless flower, and wonderfully profuse. The blossoms are also fragrant. Although the habit cannot be compared with that first mentioned, it may be regarded with favour.

WHITE SORTS.

White Beauty. A wonderfully distinct plant, giving blossoms of the purest white, with yellow eye. The character of the growth is quite unique, being of a crawling habit, and the foliage is of a singularly bright shade of green.

Masterpiece. This is a plant little known, but throughout the flowering season it presents quite a cluster of blossoms of the purest white and of the most refined character.

SORTS OF OTHER COLOURS.

Deroushire Cream is unequalled as a bedding plant, developing numberless medium-sized blossoms of the richest cream colour, with a deep yellow eye.

Vergilins. In this plant we have one of the newer shades of colour, very pale blush-lilac, almost white, and rayless. It is a most profuse flowering plant, presenting one mass of blossoms all through the summer, and possesses a capital habit.

King of the Blues. This is one of Dr. Stuart's raising, and for its deep blue colour is unsurpassed. The rayless flowers are not large, but they are beautifully refined and telling, the rich yellow

eye setting off the flower very much. This plant is little known, but it should be in all gardens. It is not quite so robust as one could wish.

Councillor W. Waters.—Although this plant has been in commerce for some three to four years, its merits have not yet been so fully recognised as they deserve to be. It is a most robust plant with a good habit; it is also free-flowering, the colour of its blossoms being a distinct shade of crimson-purple.

Tottie McNeill.—This is a variety that we noticed at the trial of Pansies at Regent's Park a year or two ago. Excellent use is now made of it and others in a serpentine raised bed at Regent's Park, where its lavender blossoms, freely produced, and its splendid dwarf habit of growth are greatly admired.

Magie.—Of the rose-coloured varieties this is one of the best, developing large, handsome flowers of a deep rose colour, getting paler with the advance of warmer weather. Its habit is fairly dwarf and compact. D. B. CRANE.

THE GLADIOLUS AS A GARDEN FLOWER.

THERE are several sections of this autumn-flowering corn, but only two that have been extensively used for garden decoration. The first is that known by the name of *gaulavensis*, which is supposed to have originated at Ghent in the admixture of *psittacinus*, *byzantinus*, and *oppositiflorus*. It is to this strain that we owe the magnificent flowers which are now yearly exhibited in London by nurserymen; and yet, notwithstanding all kinds of inducements which have been put forward to try and obtain exhibitors amongst private growers, the attempt has signally failed. The other section is that which has been raised by M. Lemoine, of Nancy, and is called *hardy*. But this term must be used only in a comparative sense, as Lemoine himself says that they are hardy at Nancy with a slight protection of ashes or cocoa-nut fibre.

A large number of varieties of the first section we owe to the late M. Souchet, of Fontainebleau, formerly head gardener at the Chateau, from which post he retired after many years' service, but continued the culture of his favourite flower both at Fontainebleau and, to a still larger extent, at Montreux. His corns passed every year into the hands of Messrs. Vilmorin-Andrieux & Co., by whom they were sent to all parts of the world. Mr. Kelway, who has lately passed away, was our largest raiser in England, and I have seen at Langport some 20 acres under cultivation. I do not think the soil peculiarly favourable, but he raised a large number of very beautiful flowers. Of late years Messrs. Burrell & Co., of Cambridge, have raised a number of seedlings which have quite equalled those of the best French raisers, and I think that both in size and substance have surpassed them; and yet, strange to say, the only English-raised variety that one sees grown in any quantity was not raised by either of these growers; it was raised by a Mr. Hooker, of Brechley, in Kent, and is called *brechleyensis*. As many of the very choice varieties are now to be had for a few pence, I should like to put in a plea for their more extended cultivation. They are beautiful and stately autumn flowers, and continue a considerable time; they are also admirable flowers for home decoration. The lower blooms on the spike open first, and as these fade others succeed them, until the whole spike is expanded. Like all those flowers which the hybridiser has taken in hand, they show a very marked improvement. My knowledge of them dates back for forty years or more. At first we had three or four small blooms open at a time, but so great has been the improvement, that I have frequently seen sixteen or eighteen flowers open on a spike at once, and in some few cases even twenty. They are most varied in colour—pure white, cream colour, rose, rich scarlet, and crimson. No one, I think, can see a collection of these beautiful flowers such as is exhibited each year at the Drill Hall by Messrs. Kelway & Son, or at the Aquarium by Messrs. Burrell & Co., without being anxious to have them in his garden. Why, then, are they not more cultivated? It is not because of

their costliness or trouble in cultivation, though it is necessary to take them up in the autumn and to dry them; but the same thing is done with many bulbs, and people do not complain of that trouble with the Tulip or the Ranunculus. There is one awkward thing connected with them; they are subject to a disease from which many of them perish, which is ascribed to various causes, such as exhaustion, the presence of too much humus in the soil, or general weakness, and there is no doubt it is a very provoking thing to find a new and valuable variety perishing without any apparent cause. As I am not writing for those who wish to exhibit this beautiful flower, but simply for those who wish to grow it as a garden flower, I would suggest that they should be grown in clumps of either five or seven, each of these clumps comprising only one variety. Planted thus, those fine flowers Grande Rouge, Dr. Bailey, Rajah, Toison d'Or, Hellé Rose des Haies, Ontario, Dalila, Osmanlie, Lily, Adolphe Brongniart, Gerbe de Feu, and others would make a grand appearance in the garden. These are not expensive and all of them are strong growers, and as they grow from 4 feet to 5 feet high they should be planted about the middle of the border; and of course they will require staking, or the spike will be blown about and greatly damaged.

It is never labour thrown away to take care in planting our combs, and it is well, having selected the place where the clump is to be planted, that the soil should be taken out to the depth of 6 inches or 8 inches and the space filled in with a mixture of loam, well-rotted cow manure, thoroughly decomposed leaf-mould, and a little sand. A little rough coarse white sand and some powdered charcoal should be placed under and around the combs, which should be planted about 6 inches apart and about 3 inches deep, and there is no better time for this operation than the present. I have always planted my Gladioli from the middle to the end of March, and have been tolerably successful with them, as I have been for many years an exhibitor, though now I have discontinued the practice. I have mostly grown mine in beds, but what I have said above refers not to the beds, but to the borders.

I have grown for some years some of the Lemoinei section, which are derived from purpureo-auratus, but I have treated them very differently to the gandavensis section, and they are certainly not so showy for garden decoration, the colours not being so brilliant nor the flowers so open, but I have been enabled to grow them without taking up the combs, and have left them in the ground all the year. They make offsets very readily, and consequently the clumps soon increase in size. I have not disturbed some of mine for six or eight years, and as we have had during that time some very sharp winters, they are evidently able to continue in our climate, provided they have a little protection of cocoa-nut fibre given to them. I am not at all sure that the gandavensis hybrids would not prove equally hardy under the same treatment, for I recollect that one of my beds contained for two or three years some small combs which had been rubbed off the older ones, and these not only grew, but flowered, and that without any protection, so that I should be inclined to think that, except in very severe winters, one might hope that they would stand the trial successfully, though one does hear of persons who have tried it paying for their temerity by the loss of their combs.

I differ from some writers as to the use of the Gladiolus for indoor decoration when they recommend mixing it with other flowers. I think it is quite unsuitable for this, and only its own foliage or fronds of Ferns or Asparagus should be used. The spikes should be cut long, and I think there is nothing better to place them in than one of those wide-mouthed Japanese vases which we so constantly see now offered for sale; and then as the lower flowers of the spike decay, they should be removed and the rest of the spike left to open. By selecting varieties which will bloom in succession, the flowering season may be continued for three or four months. In Mons. de Vilmorin's catalogue the various sorts are marked to indicate their time of flowering, which does not depend, as some appear to think, on the size of the combs, but on the variety itself. Thus, such a variety as Shakespeare (no

matter what the size of the comb) will always flower at the end of July, and Matador not before the end of September.

H. H. D.

GARDEN DESTROYERS.

THE ROSE GALL-FLY.

(RHODITES ROSÆ.)

MOST of the true gall-flies (I allude to the insects that belong to the family Cynipidae) attack Oak trees, some the leaves, others the shoots, roots or buds, but a few species form their galls on other plants, among them the Rose gall-fly, which causes the strange moss-like balls or tufts on the shoots or leaves which are so

of them had. The female gall-fly lays her eggs beneath the skin of the shoot or leaf, and this pricking of the tissues of the plant in many places close together causes an unusual supply of sap to flow to that part. This is increased as soon as the grubs are hatched, as they at once begin to feed, which no doubt further excites the flow of the juices, and the consequent abnormal growth of the plant at that point. A gradually hardening gall is formed surrounding the grubs, which each lie in a little cell. Unlike so many of the Oak galls that are comparatively smooth outside, this is thickly covered with long branched hairs. These at first are of a pale green colour, but later on are tinged with red, and form extremely pretty objects. It is not difficult to understand the formation of a smooth gall on a smooth leaf or stem, as it would appear natural



1, BEDEGUAR ON ROSE STEM AND ON LEAVES. 2, HAIRS FROM THE GALL (MAGNIFIED).
3, GRUB. 4, TAIL OF GRUB (MAGNIFIED). 5, HEAD OF GRUB (MAGNIFIED).

often seen; they are more frequent, however, on Briers than on cultivated varieties of Roses, and probably do but little injury, as they do not occur in large numbers on the same plant. These galls are commonly known as "bedeguars," a name derived from a Persian or Arabic word meaning "wind brought." They were, like many other strange and frequently repulsive substances, in old times used in medicine, but what effect it was supposed to have as a drug I do not know; probably it was so mixed up with a number of other drugs that it was impossible to say what effect any

of the outer skin of the gall to partake of the nature of that of the leaf or stem on which it grew, but on the smooth stem of the Rose (not taking the thorns into account) it seems most extraordinary that a gall with such a hairy covering should be produced, and I have never seen any explanation of the fact. These galls vary very much in size, from the small ones formed on the leaves, which as a rule contain only one grub, to one considerably larger than that shown growing on the stem, and they have been found as much as 3 inches in diameter. The remedy for destroying this insect

is a very simple one, namely, picking off the galls wherever they can be found. It is always well to do this, for though the insect at present is comparatively harmless owing to its never being in great abundance, it is as well to remember the case of the marble galls on the Oak, which are now so common as to be quite a pest at times, but which were very rare some forty years ago. If the Rose gall-fly were to increase in the same rapid manner, there would soon be a loud outcry from Rose growers. Should anyone try to rear the flies from these galls they must not be surprised if two very different insects make their appearance, for there are parasites that lay their eggs in the galls, and the grubs that are hatched from these live upon the gall-fly grubs, and are a great check to the too rapid increase of the gall-flies. These parasitic flies are easily known from the gall-flies by their bright metallic colouring, while the latter are dull in colour, the fore body and the head being black and the body and legs reddish yellow. They are about $\frac{1}{4}$ inch in length and measure $\frac{1}{2}$ inch across the open wings. The grubs are about 1-10th of an inch in length; they are white, smooth and shining, but the joints of the body are very clearly defined; the mouth is armed with a pair of small but strong and sharp-pointed jaws.

G. S. S.

AMERICAN NOTES.

THE BOSTON FERN.

(*NEPHROLEPIS EXALATA BOSTONIENSIS*.)

THE usefulness of this remarkably handsome Fern can hardly be over-estimated, it adapts itself so readily to its surroundings, however incongenial they may be at times, thus making it one of the most desirable plants, whatever its size, both for window gardening and greenhouse. Yet it responds so readily to a few special requirements that one is almost amazed at its capabilities. The accompanying photograph, taken in the greenhouses of Mrs. Chas. F. Berwind, Wynnewood, Pa., illustrates what those few requirements will accomplish. Two years ago this particular plant was in a 6-inch pot and has served the greater part of the past two summers as a porch decorative plant, and at the last November exhibition of the Pennsylvania Horticultural Society won the first prize for the best Boston Fern in the

class "open to all," and still remains an excellent example ready to continue its useful services.

The special attention necessary to accomplish these results can be given, and the plant will retain its usefulness. For example, after a fair spring growth, I am convinced the exposure that naturally ensues from using it as a decorative porch plant tends to give it a more vigorous constitution and repays by a more vigorous and rapid growth when removed to the more congenial quarters in the greenhouse. Plenty of room to spread and an elevated position so that its fronds may assume their natural character, a light shade, being very careful to avoid its becoming too dense, an abundance of water, and, when the pot or pan becomes filled with roots, plenty of food will give success. An application of cow manure water twice a week will add greatly to its luxuriance, and by placing 1 pound of soot in a muslin bag in the manure tank the foliage will become a deep, shining green. The soil most suitable is a good fibrous loam, with a liberal addition of cow manure and leaf-mould.

FRANCIS CANNING, in *American Gardening*.

[The photograph shows an extremely vigorous and graceful Fern. Eds., GARDEN.]

A NEW VIOLET PEST.

THE following particulars will interest Violet growers in this country. The United States Department of Agriculture, in bulletin No. 22 of the new series, gives the following data upon the authority of D. W. Coquillett:—

In Europe, two different species of *Cecidomyia* attack cultivated and wild Violets—the one, *Cecidomyia viola* of Franz Low, dwarfing the entire plant and causing it to assume the form of a rosette through the working of the larvæ at the bases of the short sessile leaves; the second species, the *Cecidomyia affinis* of Kieffer, folds and distorts the young leaves and unopened blossoms. It is somewhat curious that, although sweet Violets have been somewhat extensively cultivated in this country for many years past, yet up to the year 1896 no complaint had been made of any *Cecidomyia* attacking either these or any of the many wild species of Violets which occur in almost every locality in this country.

Mr. Davison, who sent specimens of this insect to us for identification, states that his experience with this maggot convinces him that it is the worst

enemy the Violet grower has to contend with, owing to the extreme difficulty experienced in its destruction without injury to the plant. He says—

"It secretes itself in the crown of the plant; the leaves as they come up are tightly curled, and when unfolded there will be found six to eight small white maggots. On some plants you can pick off the young leaves until the crown is bare. Loosing the crown will cause the side crowns and runners to start; the latter must be taken off. The maggot seldom appears on the side crowns, giving them a chance to make good plants. The flowers will not be as large as crown flowers. I find when the maggot leaves the plant it goes into the ground. As proof of this, I placed forty or fifty of the leaves containing maggots on a pot filled with soil, covering the soil with glass, expecting in this way to see the maggot in the chrysalis state. At the end of two weeks, wanting to send some specimens to the Division of Entomology at Washington, I removed the glass, but the maggots were gone. I turned the soil out of the pot and found maggots all through the soil in the same state in which they left the leaves."

He also expressed the belief that the fly was introduced with manure purchased from a person who collected garbage, as no flies were seen in his greenhouse previous to the introduction of this manure, and the maggots were observed only where it was used. Further experience is necessary to confirm this opinion.

The subject of the so-called gall-flies which affect Violets has also received mention by Mr. B. T. Galloway in his recently published handbook on Violet culture, under the heading "Gall-fly Maggots." The nature of the injury is there described and remedies suggested.

This insect, although belonging to the same family as the two species already referred to as also attacking Violets in Europe, pertains to a different genus; and while its work is very similar to that produced by the *Cecidomyia affinis*, yet a comparison of the adult gall gnats with the description of the last-mentioned species reveals the fact that the two are distinct, not only in the venation, but also in the structure of the antennæ.

The remedy generally employed against this pest consists in picking off and destroying the infested leaves. It is also amenable to the hydrocyanic acid gas remedy, as detailed in Circular No. 37, second series, of this division, and undoubtedly also to the bulch insect powder, recommended as a specific against gall-flies on Roses. Tobacco, however, cannot be safely used to any great extent on Violets grown under glass.—*American Florist*.

AN ENGLISH GARDEN AT ALGIERS.

AFTER three days of sirocco with the thermometer up to 72 in the shade, which has brought out the spring flowers with a rush, we are now passing through a cold spell accentuated by hailstorms, with the Djurdjura Mountains on our southern horizon white with snow, and a minimum of 30° last night—a record for the season 1899-1900. We Algerians have learnt by the experience of years to expect about the end of February some such Parthian shaft from the quiver of departing winter, but this year it comes both sharp and late; very good for us, no doubt lest we forget. And we will not forget, in our hurry to welcome the many new fair-weather friends in our garden beds, the few staunch ones who have seen us through our hard time. One good friend that it should be impossible to forget in this garden is the *Bougainvillea brasiliensis*, which from the first week in December till the end of April—and then only to begin afresh—completely covers the south end of this house with a thick mantle of rich terra-cotta-red. At the moment I write it is putting on a heavy purple fringe lent by a *Hardenbergia pentaphylla*, which seems never happy till it is atop



WHITE IRIS *STAYLONIA* L., THE REV. EDWIN ARKWRIGHT'S GARDEN AT ALGIERS.

of everything else, and I see a neighbouring *Oxera pulchella* preparing series of garlands of its milk-white pendent clusters to fling across the whole mass of red and purple.

To the *Linnæa trigynum* also we owe a debt of gratitude. All through December, January, and February we have had this about us in bushes of perpetual sunshine, whatever the weather might be. Judging from the surprise and pleasure with which its masses of bright yellow blooms, each as large as a Periwinkle, seem to strike the ordinary visitor from England, I should say this plant cannot be sufficiently well known in English conservatories, and yet wherever the *Datura* and *Poinsettia* are grown it ought to be quite at home.

Another invaluable feature of our winter garden is the white *Iris stylosa* (syn. *unguicularis*), which I had the supreme and never-to-be-forgotten good fortune of finding in its wild state among the *Cistus*, dwarf Oak, and Myrtle of the Algerian Sahel, and introducing to the world of flower-lovers. How that world ever got on without it I cannot now imagine! Its sweet and graceful blossoms, pure white (except for a streak of gold in their throat), form the staple of all our winter decorations, being sometimes the only available flower to be had at critical moments during the comparatively blank months of January and February; and in addition to their beauty the blooms come in such incredible profusion, that one would say they made it a point of honour to fill up their ranks with fresh candidates as fast as they are picked off. Some of this praise may fairly be claimed by their consins, the wild lavender-coloured *Iris stylosa*, but you would hardly expect me to love them as I do the white one.

At all seasons there are blossoms to be found on the grand creeper *Phadranthus*, so long known as *Bignonia Cherere*, which drapes the whole eastern front of this house for 80 yards. It does not profess to be in full bloom till May and June, when its innumerable deep crimson trumpets fairly overpower the dark green of the leaves. Then there is a double *Datura*, which I do not remember to have seen without flowers since December, but the single kind is at present in its undress stage, having put on its best in company with the gorgeous *Poinsettia* to welcome visitors who came out as early as October. Alas, for all the gardens of Algeria! We have lost all these beautiful trees, some of mine being at the time forty years old at least, in the unique frost of 1888. The *Daturas* were cut down to the ground, and have since sprung up from their roots, but the *Poinsettias* were destroyed root and branch. All that we have now are from cuttings hastily saved on that occasion from the tips of the ruined boughs.

Another very ornamental winter shrub whose long, wavy wands have just lost their leaves is the *Holmskioldia sanguinea*. I find a difficulty in describing its colour, which, like the *Bougainvillea*, is displayed not in the flower, but in the leafy bract. This changes from a bright red in its youth, through terra-cotta, to copper and bronze in its old age, but is remarkable to the very end.

I wish it were possible to convey any idea of the wonder of the colour of these two last. It is so baffling to the photographer, that he cannot even define the form of the sprays, and the same is unfortunately the case with the *Bignonia venusta*, which is just now rampant with its deep orange-coloured wreaths over scores of yards of wall and hedge and wire railing, for nothing comes amiss to it, here smothering a yellow-blossomed *Acaëa* in its embrace, and then swarming up the rugged stem of a Palm

tree and straggling out to the very extremities of its fronds.

Our *Philodendron pertusum* has made many new blossoms this winter; I see at least sixty fruits in different stages of advancement. They are said to take eighteen months to ripen, but I cannot say that I have ever been able to earmark one for my own information. It has a curious flower, a thick ivory-white-shell-like exaggeration of the Lords-and-Ladies of the English hedgerows. When this has fallen, the fruit appears sticking up like a Cucumber on a long thick stalk, the surface of the skin being a compact mass of green hexagonal scales somewhat larger than the capsules of a honey-comb. These drop off one by one as fast as the delicious morsel ripens which it covers. This plant, as its name denotes, lives by preference on the decayed trunks of trees. I feed mine with an occasional supply of dead logs thrown on to the rockery which it has annexed, but it has also taken the precaution on its own account of sending down a huge air-root in the direction of an open water-tank about 10 feet below it, and has now its own water supply laid on.

Mustapha, Algiers.

(To be continued.)

WALL GARDENS.

THE subject of wall gardening is very full of interest for me, and I am always pleased to see any fresh phase of it so well set forth as the recent examples in THE GARDEN for February 10. It is not, however, in every garden or locality possible to imitate the blocks that constitute the wall in the instance referred to, nor is it likely that such are from every point of view the best, were they procurable. What I mean to convey is that by employing smaller material, producing a more rugged surface, quite a different result is secured, and a much greater variety of smaller plants may be inserted or grown therein. From this point of view I would like to offer a few remarks dealing with a more simple kind of wall well suited to British gardens. I offer not the least objection to the more majestic rock and the much bolder effect such rocks produce, yet I certainly incline to a surface less finished and faced than the one on page 99 for example. It will, of course, not be overlooked that the bolder rock formations offer facilities for larger subjects that smaller rocks do not possess, but then we hardly wish to see our bold perennials relegated to the wall garden, for the latter, if not constructed to grow such things well, would only dwarf them.

Many years ago I was gardener to the late Mr. Latimer Clark, of Sydenham Hill, who had a great fondness for rocky slopes, rock walls, and the like. The collection of alpine hardy perennials



DOUBLE DATURA (BRUGMANSIA) IN THE REV. EDWYN ARKWRIGHT'S GARDEN AT ALGIERS.

and bulbs there was among the very finest I have seen in any private garden, while of rock walls there must have been several hundred yards. Much of this was built and planted during the time I was in charge. For choice and convenience—for they were certainly not cheap—Mr. Clark favoured clinkered burrs, these being obtainable in large or small blocks, and usually presenting a rough surface. The garden was on a steep slope, as may be gathered when I say that between the upper and lower exits there was a fall of 85 feet. We had a perfect view from this Sydenham garden of the Houses of Parliament, and the scene nearer home, with the Dulwich Wood at one's feet, made it one of the most picturesque spots so near to London. These facts are mentioned that it may be clear to the reader that we have no ordinary flat surface to deal with. The outline of this great slope was a variety of retaining walls in all directions, and these—or at least that part of the upper portion not required for strength and retaining purposes—were put to excellent use in growing many alpine plants. In those instances where the walls could be built erect, the centre was left hollow and afterwards charged with soil. Then by a sort of pocket arrangement on the top the plants were planted, and had the opportunity of sending their roots into good soil below. In this way masses of *Aubrietias* in considerable variety were planted, also the most distinct of the alpine *Phloxes*, that not only included *P. subulata*, *P. Nelsoni*, &c., but also *P. amena*, *P. divaricata*, *P. verna*, and others. A feature was also made of a large variety of alpine *Pinks*, which were exceedingly pretty among other things. Then with such as *Erinus*, *Silenes*, *Saponaria*, *Cheiranthus alpinus*, the dwarf *Columbines*, *Snapdragon*, and the like, a considerable variety of good things were introduced. In not a few

I tried planting at various seasons and in different ways, but the only real success in *Primulas* was *P. marginata*. In a bolder piece of rock, where great masses of rock were conspicuous, some of the finest examples were huge pieces of *Helleborus trifolius*, masses of red *Valerian*—always better coloured here than in the border, though of the same stock—*Daphne Cneorum*, and sweeping masses of *Saponaria ocymoides*. Other good plants were *Epimediums*, white *Arabis*, *Alyssum*, and the golden creeping *Lysimachia*, while in a central position *Eryngium pandanifolium* succeeded for a while. We also tried *E. Serra*, but this was less hardy, though giving a grand rosette of leaves. The foregoing will give some idea of the variety that may be grown thus when various styles and positions are available. I may also add that in a great degree I favoured planting the face of the walls in early autumn, so that with the moist atmosphere a better opportunity would be afforded for getting plants established. Of many things quite small bits freely inserted answered better than larger pieces singly. Of such tap-rooted things as *Columbines*, small seedlings were the rule, while not a few things were successfully established by seeds alone. They were placed in a bit of moist rather stiff soil and inserted in a cavity. I know of no more interesting phase of gardening than this, or one that adds more liberally to one's knowledge of the requirements of a large number of plants.

Hampton Hill. E. H. JENKINS.

[We think that Mr. Jenkins is not quite correct in assuming that good-sized border plants are necessarily dwarfed by being grown in a wall. We had lately in an upright rock wall some self-sown plants of *Verbasum philomoides* quite 8 feet in height, and with a foliage development that was not surpassed by any other examples in the same garden; moreover, the soil their roots must have been in at the back of the wall was not specially prepared, but was very poor and sandy; but this may be found to be different in individual gardens. Eds.]

of the walls we had the good fortune of having two sides at our disposal as well as the summit, the value of which will at a glance be apparent to anyone interested in this particular phase of gardening. In our own

case both sun and shade were obtainable, so that we were able to grow a greater variety of plants than would otherwise have been possible. One leaning wall was shaded by fruit trees planted on a great bank of treacherous sliding clay 12 feet high. Here, again, some of the upper portion was purposely constructed with wide joints and bad mortar, but things for a time were not a success, though I regarded it as a piece of the best of our walls as regards position. The fault of it dawned upon me one day, and I had the clay removed the width of a spade, and the hole refilled with old mortar and drainage, with some old potting and leaf soil next to the wall. From a very complete collection of *Sedums*, *Saxifrages* and *Sempervivums* almost every course in this wall was supplied, and planted even with such *Saxifrages* as *squarrosa*, *hypnoides*, *Burseriana*, and the rare *S. Vandelli*, that I cannot get now. *Thymus lanuginosus* was charming, and great rosettes of *Saxifraga longifolia* and *S. pyramidalis* were very fine. These last, with *Ranuncula*, were specially inserted as good-sized plants, which was not our usual practice. I also established *Lewisia rediviva* and *Oursia coccinea*, the latter small and in a rather shady place. The great failure was to get any *Primula intermedia* to grow.

AN ARTIST'S NOTE-BOOK.

JAPANESE MAPLES.

ACER PALMATUM AND *A. JAPONICUM*.

QUITE an extensive exportation of living plants from Japan to this country has been developed in recent years. Lilies, Bamboos, and the numerous forms of Japanese Maples constitute probably the chief items. Of the *Acers* (as well as of the others) large importations are frequently being sold by auction in the London sale-rooms. The way in which these two Maples, but especially *A. palmatum*, have varied in the hands of the Japanese cultivators is remarkable. At the present day, among hardy, or nearly hardy, deciduous trees and shrubs there is no species that equals them in the beauty of the lobing and cutting of the leaves, or in their varied and exquisite colouring.

ACER PALMATUM (POLYMORPHUM).

The old typical *Acer palmatum* was introduced from Japan about eighty years ago. It is a small, round-headed tree in this country, rarely over 20 feet in height. In Japan, Professor Sargent gives its maximum height as 50 feet. The leaves are palmate, and consist of five (sometimes six or seven) pointed, toothed lobes. In this typical form the leaves and twigs are green; differing from it only in the red-purple colour of the leaves and young wood is the variety *sanguineum*. These two are probably the hardiest forms of *Acer palmatum*, thriving well, and making low, bushy-headed trees in sheltered positions. *Sanguineum* is the more frequently grown, and where it succeeds is one of the best coloured-leaved of hardy trees. Besides this, however, there are numerous other forms, whose leaves are either exquisitely cut or coloured with various shades of red, yellow, purple, green and white. Unfortunately, they are much less hardy, and the majority are better fitted for cool conservatory decoration than for planting permanently outside in all but the most favoured parts of the kingdom. At this time of year, plants that have been forced gently in pots are charming in the various shapes and tender green or rosy hues of their expanding leaves. It would be tedious to attempt to enumerate all the named varieties, but of the coloured ones, *roseo-marginatum* (red and white), *versicolor* (red, white and green), *atropurpureum* (deep purple), and *reticulatum* (various shades of green) may be mentioned. Of the cut-leaved ones, *dissectum*, *d. ornatum*, *d. atropurpureum*, *scelopendri-folium*, and *septemlobum elegans* are noteworthy. Some varieties combine the beauties of shape and colour, and many die off in rich red or yellow shades in autumn.

ACER JAPONICUM.

The forms of this tree have been much confused with those of *A. palmatum*, and varieties of both species occur promiscuously in imported lots. The typical *A. japonicum* (introduced in 1863) is, like *A. palmatum*, a small Japanese tree, but differs in the more numerous primary lobes of the leaf. As regards its autumn colouring, it is, perhaps, superior. In its typical form it resembles the American *A. circinatum*. The branch that Mr. Moon has drawn is of the handsome variety known as *filicifolium*. In this there are about nine or eleven deep lobes, each of which is further sub-divided. Brought on in gentle heat, the leaves are of a pale and exquisitely tender

SPRAY OF THE JEW'S MALLOW (*KERLIA JAPONICA*).

(From a drawing made at Kew by H. G. Moon.)

green. Another variety, called *aureum*, is comparatively shallow-lobed, and, except for the green veins, the leaf is bright yellow.

Arboetum, Kew. W. J. BEAN.

KERRIA JAPONICA.

KERRIA JAPONICA, of which three forms are now in cultivation, is a Japanese shrub (the only one in the genus) named in honour of William Kerr, who, when a young gardener at Kew in 1803, was sent to collect plants in China. The species had, however, been in cultivation long before Kerr's time. The present year is, in fact, the bi-centenary of its first introduction to Europe, that event having occurred in 1700. The variety then introduced from Japan was the double-flowered one (*flore-pleno*), which is still, perhaps, the commonest and best known of the three. The transformation of the stamens and pistils into petals prevented botanists from correctly ascertaining the affinities of this original plant, and they could, in consequence, only guess at its position

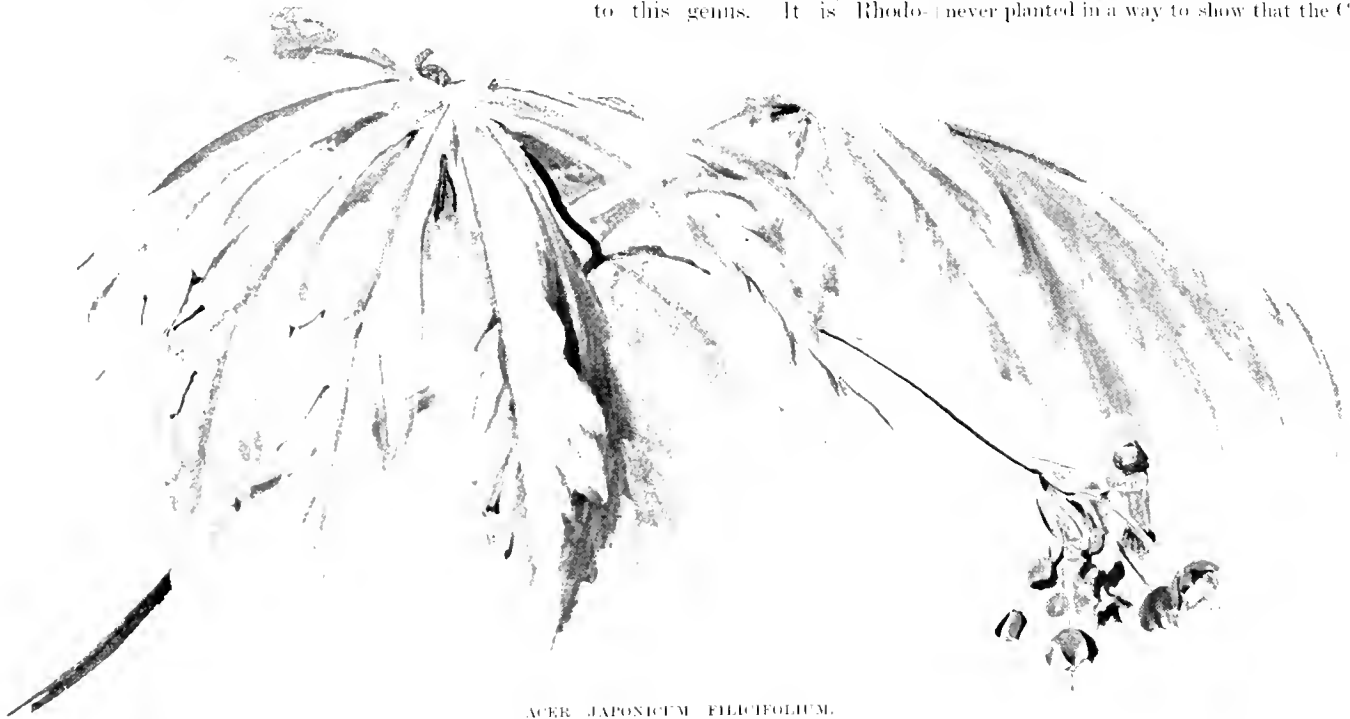
For growing in the open, the single-flowered plant—the "type"—is a much better shrub. It is neater and more compact in growth; if its flowers are not so large, they are much more abundant, and it is hardier. So far as the London district is concerned, it may indeed be termed perfectly hardy. The winter of 1894-5 was a good test of the hardiness of any plant, for it crippled such things as our native Gorse, yet the single *Kerria japonica* was not injured in the least. Its flowers are about 1 inch across. Its introduction from Japan in 1835 (nearly a century and a-half after the double variety) enabled botanists to ascertain the true affinities of the so-called *Corehorus*.

The variegated form is also single-flowered, but is scarcely so robust a plant as the green-leaved one; still it flowers very freely as a rule. Both these single-flowered *Kerrias* are apt to become choked up with old stems and twigs. An occasional thinning out, therefore, is desirable. The propagation of all of them can be effected by cuttings or by division.

What is known sometimes as the white *Kerria* does not really belong to this genus. It is *Rhodo-*

form of the individual bloom, others for its effect and fragrance in the garden. Mr. Weguelin has endeavoured to instruct both sections, and he truthfully declares in the preface that "a new work concerning the *Carnation* needs no apology. Manuals have been written in the past about the same beautiful flower, but during recent years many varieties have been raised and new groups formed to give interest to the family of which the pretty *Dianthus Caryophyllus*, happy in its crevices of the Lichen-stained castle wall, is the ancestor." The book is dedicated to the Duchess of Portland, of whom a portrait is given, and many illustrations are given of groups and individual varieties. There are sixteen chapters dealing with the various groups into which the *Carnation* and *Picotee* are divided, and the *Pink*, too, has a chapter to itself. It was a happy notion to associate the two flowers, as the *Pink* is as precious almost in its great variety as the *Carnation* and *Picotee*. The following extract about the "*Carnation as a Garden Flower*" will show the character of the book:—

"It is only within recent years that the value of the *Carnation* as a garden flower has been seriously considered. The old English garden grew its *Pinks* and *Columbines*, the fragrant, crimson *Clove* spreading into groups in the mixed border, but never planted in a way to show that the *Carnation*



ACER JAPONICUM FILICIFOLIUM.
(Drawn at Kew by H. G. Moon.)

in the vegetable kingdom. It was placed in the genus *Corehorus*, a little-known group of plants allied to the *Limes* (*Tilia*), and one sees even now in some belated catalogues the name *Corehorus japonicus* still clinging to it. *Kerria* belongs to the *Rose* family, and among its near allies are the *Spiræas* and *Brambles*. It is a spineless, deciduous shrub, from 2 feet to 5 feet high, bearing rich yellow flowers in April and May.

The variety *flore-pleno* had doubtless been cultivated by the Japanese long before its appearance in Europe, for in its general aspect and constitution it differs considerably from the single-flowered type or the form with variegated leaves. It grows taller (especially on a wall), is less bushy and twiggy, and its stems are thicker and more succulent. It is not so hardy as either the single-flowered or variegated forms, and is most happy when planted against a wall. As a shrub for early forcing it is valued for the bright yellow of its large, perfectly double, rosette-like blossoms.

typus *kerrioides*, a charming white-flowered shrub, also Japanese, and related to the true *Kerria*.
W. J. BEAN.

BOOKS.

Carnations and Picotees.* We are not surprised that a new book should appear upon the two fashionable flowers of the day, the *Carnation* and *Picotee*, and those who know anything of the flowers for exhibition will read the information set forth in these pages by Mr. Weguelin with interest. It is a book written by one who is what the world calls a "specialist," and in this case the specialist is an enthusiast, who regards the *Carnation* as a flower for the garden as well as the exhibition. There is a distinction between the two, many growers simply regarding the flower as something to be shown on a table to reveal the perfect

is as entitled to an honoured position in the garden as the *Rose* itself. Gardeners of a former age were wrapped up in the *Carnation* for pots, or to give blooms to put into paper collars and pat down upon a green box at the exhibition. Old works upon gardening show the narrow view taken of a flower which, properly used, creates beautiful effects in the garden and is fragrant too. Whilst the thoughts of raisers were centred upon the bizarres and flakes, and the self-coloured kinds were discarded, there was little hope of the *Carnation* being placed amongst the most handsome of hardy plants. It is not the florists' varieties that are the most effective in the garden. Rich flakes and stripes lose their boldness viewed from afar, and the result is a muddled, unsatisfactory, and inartistic picture—the same effect that would be got from a bed of striped *Roses* or *Hyblemen Tulips*.

I wish to impress upon my readers that it is important always to think, when planting *Carnations* in the flower beds, of the effect they will make when in flower. For this purpose, of course, no section is so handsome as that known as the self-coloured, the varieties of which are of one decided colour, or shades of it, the petals broad,

* "*Carnations and Picotees for Garden and Exhibition.*" By H. W. Weguelin. London: George Newnes, Limited. Price 3s. 6d.

stout, and held well within a strong calyx. Vigour of constitution is also essential, not yellow-looking, weakly growths that spoil the flower bed throughout the year. There are at the present time, thanks to modern raisers, an abundance of good self kinds, welcome in colour, although sometimes disfigured by a faulty calyx. Flowers that burst their bonds are not always beautiful, no matter how rich and handsome their colouring. Rains and winds sweep over the garden, even in July, and bedraggle the flowers. Flower gardeners, as a rule, little understand the value of Carnations for beds and borders. One of the chief reasons why this should be so is doubtless because of the scarcity until now of really good self or effective colours, and there is quite an erroneous idea that the plant is tender.

Let me at once say that the Carnation is quite hardy, and observations made in all parts of the British Isles prove the power of the plants to resist hard frosts. Frequently in my wanderings I have seen cottage gardens in which Carnations have been freely used, and grown into bold clumps with age. They are never so fine as when in some garden near the sea. Even exposure to the salt-laden wind does not harm the silvery tufts, as one may notice in many a fishing village along the northern coasts. The sand of the shore is used liberally in the soil in which the Carnations are planted—heavy, badly drained ground being fatal to healthy growth.

Whilst gardeners coddle Carnations in pots and pans, the plants will remain susceptible to frosts. There is no reason whatever for treating layers as if tender. Grow them entirely out-of-doors from the first, and adopt the plan of the cottager, who frequently possesses the finest Carnations in the village, and has no greenhouse or frame in which to put the plants if he wished to do so. I am not writing now of choice seedlings or some rare named kind, nor of the varieties to be grown in pots for conservatory or greenhouse, but of those to live an entirely open-air life in the future. The position the plants are to occupy must be well prepared, and I think that hurried and careless preparation of the ground is responsible for more failures than insects or fungus. Beware of importing the first spit of pasture into the Carnation ground, unless one ascertains by close scrutiny that a hidden foe—the terrible wireworm—is not conveyed also. This pest runs riot in this soil.

The Carnation may be associated with the Tea Rose, when this fragrant flower is grown in groups, the plants sufficiently wide apart to permit the Carnation tufts between, and this meeting of Rose and Carnation, two of the finest flowers to grace the garden, is indeed happy. A light-coloured Tea Rose, such as Marie van Houtte, Edith Gifford, or Mme. Hoste, against a fine red self Carnation is an effective and artistic combination. Though dainty in colouring oft-times and beautiful individually, the striped kinds scarcely possess sufficient force to tell effectively. Bold groups alone display the characteristic beauty of the kind, and we know this to be true by the spreading mass of crimson and white Clove Carnations in many a cottage garden, where, without annual layering, the plants have increased in proportion and effect with age.

As there are so many good Carnations, it is not easy to make a selection, nor do I propose to do so here, as the subject has been treated elsewhere in the book. It is the self Carnation of strong constitution that gives those rich colour-pictures one desires in the summer garden.

I have seen the Carnation used in vases even, the glaucous stems hanging over the edge and creating a new and pleasant departure—a relief from the perpetual, almost wearisome repetition of a set plant, the Ivy-leaved Pelargonium for example.

A delightful phase of Carnation growing is raising seedlings, which should always be practised where the plant is to take a great part in the garden. There is much joy in getting new kinds of value for their effect. If the seed is good very few single varieties will be found, and these should be at once removed, and in the weeding-out of inferior kinds, maturing the selected seedlings, and sowing again to maintain a constant flowering of tried kinds, the amateur gardener will find delightful recreation.

On the Eve of the War.*—This interesting book, a narrative of impressions during a journey in Cape Colony, the Free State, the Transvaal, Natal, and Rhodesia, scarcely comes within the scope of this journal for review, but we were pleased to read many passages about the flowers and scenery of the Cape. Several illustrations are given, some reproduced from sketches by the author's wife, the Hon. Mrs. Evelyn Cecil, who accompanied him in his travels, and others from photographs. We do not intend to discuss the political aspect of the book, but the following extract from the chapter upon the Cape flora will interest our readers:—

FLOWERS AND ANIMALS OF THE CAPE AND LIFE OF AN OLD COLONIST.

"To have landed in Cape Town only a month before the war, to have been in the Transvaal after the last British despatch had been received, to have been in Ladysmith on the day war was declared, and in Natal for three weeks after the colony had been invaded, and afterwards to have visited Beira and Rhodesia before returning home by Madagascar and Zanzibar are experiences which do not occur twice in a lifetime, but even to narratives of war there is a peaceful side, in which all can make an effort to unite with a sense of relief and friendship.

If fortunate enough to arrive at the Cape in the beginning of spring (the middle of September), one of the traveller's most memorable impressions will be the exquisite delight with the Cape flora, which blossoms then in its finest perfection just after the rainy season at the Cape comes to an end. The Cape peninsula becomes a perpetual garden of greenhouse flowers, Heaths, bulbous plants, succulents in endless variety and marvellous beauty. On the famous Victoria drive the shapes of the mountains and headlands jutting into the deep blue sea vie with the wonderful vegetation in being much more beautiful than the Italian Corniche. . . . In the woods near Cape Town the large white Arums, the familiar charms of an English hothouse, are really a weed. The Silver trees of Table Mountain, the Acaecias, Pines, weird Proteas, and fresh green Oaks, originally brought from Europe by the Dutch, complete a very pretty picture with the broken outline of the Hottentot Holland Mountains across the bay.

Travelling upwards through these mountains, the train passes here and there a typical old Dutch farm with white walls and rounded gables and a thatched roof, a centre for sheep grazing and fruit growing; and for fruit growing there is still in this neighbourhood a good opening for intending emigrants. Further on the vast plateau of the Karoo is reached, and now and then an ostrich farm is to be spied out. Throughout this region and right up into the Free State and Transvaal the farms are far away from each other, isolated by distances much more easily measured by miles than by yards. The farms are little oases in the arid plain. Each has its well or spring ('fontein'), and near it are usually planted a few Eucalyptus trees, which grow rapidly in the climate and give the needed shade. The farmhouse itself has often but a single story, with two or three additions or outbuildings or rain tanks of corrugated iron, the universal material in South Africa. All round stretches out the wide expanse of 'veldt,' dotted with low hills or 'kopjes' as far as the horizon, and covered with scrubby Acaecias and Wait-a-bit thorns and short brown grass which seems strangely to provide sufficient pasture for the cattle. Of these plenty are kept to 'trek' when required on the long journeys to a market town, and they are 'inspanned' in teams varying from twelve to eighteen and even twenty oxen. Springbok antelopes are common in many parts of the veldt, and we enjoyed a real jolting drive across it with mules to see them. It is difficult to approach them nearer than about 100 yards, and they spring away characteristically, bending their backs in their peculiar fashion so as to turn their brown coats into white as they leap along. At the proper season of the year they afford an interesting day's

* On the Eve of the War. By Evelyn Cecil, M.P., with map and illustrations. John Murray, Albemarle Street. Price 3s. 6d.

rifle shooting, in which many a Dutch farmer delights with his Mauser rifle, although the game has somewhat diminished, not only by shooting, but owing to the terrible scourge of rinderpest in 1895. On more than one occasion we came in for a flight of locusts. Every year there are destructive swarms. The sky was thick with them in a long line as far as we could see, and in places they settled on the ground, making it look quite brown, and flew up in a cloud on our disturbing them.

Other more agreeable inhabitants of the veldt which we saw were hares very much like the European species, African partridges, guinea-fowl, steinbok antelopes, and engaging little meercats (*Ryzaena suricata*), the latter sitting up on their haunches in a row of four or five together about a hundred yards away, and eyeing us with a curiosity equal to our own. We also noticed the holes of ant-bears, animals which come out at night, scratch with their adamantine claws into the hard enormous ant heaps, and then put out their extremely sticky tongues to glue a tit-bit of ants upon them. . . . Pretoria itself is in a basin surrounded by hills, several of which are crested with forts. Johannesburg, guarded by a single fort with underground external communication, stands in rather more level veldt.

Side by side with a farm on the veldt may be deserved the residence of an old colonist on the hot coast of Natal, hotter, of course, because it is nearer the level of the sea. His square house, with only a ground floor, and a low pyramid roof stretching down over the iron-pillared verandah, overlooks a wild tropical garden. Inside the house or under the verandah the walls are adorned with all kinds of varieties of African horns, many of them shot in early days by the owner, the rare specimens among which might even be the envy of the Natural History Museum in London. Outside, the garden is quite informal, with sandy hillside covered with Mango trees, Avocado Pears, Pine and Custard Apples, Bananas, Lemons and Indian Papaws. These last are a very digestible fruit, about the size of a Melon, growing in clusters round the stems of the plants, which shoot up from 12 feet to 20 feet high. The flavour of the fruit is very nondescript, and not at all easy to recollect five minutes after tasting.

GARDENING OF THE WEEK.

INDOOR GARDEN.

SEED SOWING.

SEEDS of many annuals and other plants which do so much to brighten the greenhouse will now need sowing. These will include Primulas, among which place should be found for a big batch of the very useful *P. stellata*, *Celosias*, Balsams, and early *Cinerarias*. Other very useful Primulas add to those of the Chinese section are *P. obconica*, *P. floribunda*, and *P. verticillata*, the latter being one of the very best when well grown for flowering in its natural season, which is during April and May. All the above, with the exception of the *Celosias*, are best raised in a moderate rather than a high temperature, for though some of them come up quickly in heat, they are enervated by it, and the foundation of weakly growth is laid. Almost all seeds should be sown thinly enough to allow the plants sufficient room to grow without crowding each other until they are well into the rough leaf stage, as then they are more easy to handle when pricking off.

SALVIA SPLENDENS.

From the frequency with which one meets with this plant raised from cuttings, it does not appear to be sufficiently well known that better results may be had from seedlings, these being equally fine in their shapes of flowers, with much better foliage and more shapely plants. It should not be forgotten that there are two types of this plant, and both may be raised from seed with equal freedom, that known as *S. s. grandiflora* being infinitely better than the older type, for it carries its

brilliantly coloured bracts many weeks after the flowers have fallen, and during the whole time the plants remain almost, if not quite, as decorative as when in full flower. Seeds sown now in heat and given generous treatment will make grand plants for flowering in October and November, and the bracts will keep them gay till Christmas or even later.

TECOMA SMITHII

is a very useful and attractive plant, though it is not often seen. Seeds of this should be sown without delay and the young plants grown on much in the same way as the ordinary run of tender bedding plants until June, by which time they should occupy 5-inch pots. The plants should then be stood outdoors in full sun and with the pots half plunged in ashes, where they may remain through the summer. It is this exposure which induces the plants to flower, which they cannot be induced to do if grown entirely under glass.

THEUNBERGIA ACANTHIFOLIA

and its varieties are excellent plants for basket work in a moist and shady hothouse. Here the plants grow quickly and produce hundreds of their attractive flowers without being pestered with red spider, the bane of the species when grown under dry conditions or in a sunny house. Sow the seeds now thinly in 5-inch pots, thin out to from four to six plants, and transfer them bodily when well rooted to the baskets in which they are to flower, using rich and light soil. Still another useful thing for sowing now is the

CHIMNEY CAMPANULA (C. PYRAMIDALIS).

This is magnificent for cool corridors and conservatories. Those who have lofty buildings to cater for should grow the blue and white varieties of the ordinary type, while those who need plants for less lofty structures should obtain seed of the now fairly well-known Syon House strain, the only difference in which is that it is dwarfer and the spikes more compact. This Campanula is readily raised in gentle heat with other seeds, but great care is necessary to prevent, by moving to cooler quarters, the damping off to which it is liable in its young state. J. C. TALLER.

Shipley Hall Gardens, Derby.

ORCHIDS.

CALANTHES.

THE deciduous Calanthes will now be growing and need immediate attention. Turn the plants carefully out of the pots, remove all the old potting compost, cut away any dead or decaying matter, and remove the old pseudo-bulb, leaving only the last one made. Examine the plants carefully to see if they are affected with scale or other insects which accumulate around the base sometimes during the resting season, and where any trace of insect life is found remove with diluted soft soap water. This is most important, for any neglect in cleansing at this season is liable to become a source of annoyance when the plants are in full growth, and they are then most difficult to deal with. The potting compost should consist of one-third fibrous loam, one-third peat, and the remaining portion of chopped sphagnum moss, dried cow manure, and a liberal sprinkling of rough sand or finely broken crocks to assist in retaining an open and porous condition of the material. The pots used should be thoroughly clean and drained to one-third their depth with broken crocks. The size of the pots must be governed by the strength of the bulbs and the number of the same to be placed in each pot. There is no doubt that dealing with them singly is the most satisfactory method. Some growers like to start their plants in small pots and pot on as soon as the roots are near the edges, but this is quite unnecessary, for unless great care is taken the tender roots get damaged in repotting and rarely recover. In repotting the bulbs place them in such a position that they are just below the rim of the pots. Slightly build up the compost towards the centre so that it just covers the base of the new growths in such a manner that the new roots may get hold of the compost immediately they are emitted. If the compost is in a fairly moist con-

dition no water need be given, but if at all dry give a thorough watering with chilled water, using a moderately coarse rose on the water-can. Place the plants in a good light position near the glass. A shelf in the plant stove or hothouse suits their requirements generally. They may be placed close together at first, but as the season advances and the growths become vigorous more room must be afforded. Care should be observed in watering at first, but as soon as the roots become thoroughly established in the compost, and with favourable outside conditions, they require a plentiful supply of moisture at the roots and in the atmosphere. Only sufficient shading should be afforded to prevent scorching of the foliage. The evergreen section of

DENDROBIUMS.

such as *D. Farmeri*, *D. densiflorum*, *D. thyrsiflorum*, *D. chrysotoxum* and others, are now pushing their flower-spikes, and will need every encouragement to induce them to properly mature and expand their flower racemes. Where a house is set apart for the culture of Dendrobiums, the usual requirements afforded to the deciduous section will suffice also for the evergreen varieties. In bright weather the plants may be liberally syringed overhead and the atmosphere saturated with moisture reducing the same as evening approaches. Where the plants have to be cultivated in an ordinary stove, place them in a good light position and give every encouragement to obtain satisfactory results.

PHALENOPSIS.

The majority of the winter-flowering varieties of this genus will be at rest, but in the course of a week or two will commence to make new roots. As soon as the roots make their appearance, any potting or re-mossing required should be done. In the meantime it is advisable, if possible, to have the plants carefully cleaned with a soft sponge and clean water so that they may be ready for re-mossing. Give the plants only sufficient moisture at the roots to retain the leaves in a plump condition, but retain a liberal amount of moisture in the atmosphere at all times. The night temperature for this and all other departments may now be gradually increased. H. J. CHAPMAN.

KITCHEN GARDEN.

POTATOES.

THERE should be no delay in getting the main-crop Potatoes planted during the next fortnight. In the southern parts of the country it is well to plant at this date, as the growths then mature early, and in seasons of drought early planting is a great gain in forwarding growth. It is now quite safe to plant all kinds of the seed tubers, and if not too far advanced as regards sprouting, they will when through the soil be free from frost, and should a wet autumn follow, disease will be less prevalent than when late planting is practised. In many gardens, owing to the space being limited, only early varieties can be planted, and these usually occupy a warm border. I would advise a well-drained soil, and tilling this in heavy land the crop may be much assisted by a free use of lighter materials either in the drills or for covering. For early supplies Ninetyfold is a valuable variety, and the value of the Ashleaf section for the first crop is well known. In heavy land I have with main-crop and late varieties found it advantageous to dig and plant at the same time, as planting in such soil with a dibber is not advisable. Wherever the land is poor or there is a want of animal manure, it is advisable to use prepared foods. Many amateur gardeners ask if it is well to cut Potato sets. I only advise it with large seed, and when this is done it should be some days in advance of planting, so as to allow the cut portion to heal over.

POTATOES IN FRAMES.

The present is a critical period of growth with frame Potatoes, as if forced too hard the top growth will be in advance of the roots, and the tubers will be poor in consequence. Ample ventilation in fine weather is necessary, and there should be no lack of moisture. Frame Potatoes

are often given a check through dryness at the root, and with growth well advanced occasional supplies of liquid manure will be well repaid, but this is best given in a tepid state and not strong. Plants in unheated frames need less moisture, and should be protected from cold draughts or rain.

VEGETABLE MARROWS.

For some years I have grown an early lot of Marrows to plant out in frames, as this crop needs but little heat at the roots, and may often be planted in frames just relieved of Potatoes, and as the fruits mature, the frames or sashes may be removed. One seed or two at the most sown in a 4-inch pot is preferable to sowing in pans, as the dividing and potting up greatly check growth. The seeds may be placed in heat at the start, but when well above the soil a warm frame is most suitable. For general crops, that is for planting out in the middle or latter part of May, sowing is best deferred for two or three weeks, as the seedlings soon get drawn and weakly if sown too early. Penny-hyd, Moore's Cream, and Long White are good early kinds.

TOMATOES—MAIN CROP.

The present is a good time to sow the seed of crops for use from July to the end of the year, and at this date plants are raised more readily than earlier in the year. Crowding the seedlings is a great evil, as the dividing is so injurious, that the plants need a long time to recover. Success is best obtained from plants not given too much heat and allowed ample room. The aim of the cultivator should be to get a strong plant by the middle of May, hard and able to battle against our variable climate when placed in its permanent quarters. Earlier sown plants for sheltered walls or house work should be potted on, and at this shift a little heavier compost may be employed, but not manures of any kind. After the potting, water sparingly till new root growth is made, and grow as near the glass as possible. G. WYTHES.

Syon House Gardens, Brentford.

FRUIT GARDEN.

CHERRY TREES.

THE forcing of these gives good results when carried out judiciously, but they should not be started unduly early or too quickly. The month of January is the time to start forcing in order to have ripe fruit by May. Artificial heat should be applied with moderation throughout, merely sufficient to maintain a sweet buoyant atmosphere with ventilation, so that the flowers, and later in the season the foliage, have the appearance they have outdoors. If grown in a house with Peaches and Nectarines they should occupy the coolest end of the house. Those on which the fruit is stoning may be subjected to temperatures ranging from 50° to 55° at night and 55° to 60° in the daytime in dull weather, and it is better to be satisfied with the lowest named when the weather is cold. Afford water liberally as often as the soil in which they are growing shows signs of dryness, occasionally adding manure to the water.

Syringing is beneficial, except when the trees are in flower and when the fruit is colouring, for keeping the foliage healthy and red-spider in check. Other insects they are subject to are green and black aphides. Whenever these appear, except while in flower and when the fruit is colouring, fumigating with XL All vapouriser should be resorted to. Caterpillars attack them indoors as well as outside, their whereabouts being detected by the leaves being rolled up. To keep them in check the trees should be gone over frequently, and the rolled part of the leaves squeezed between finger and thumb. In order to form spurs and to clothe the trees with foliage without crowding, the young shoots, except where required to lay in to form the frame of tree, should be pinched back, leaving about 2 inches of its length.

PLUM TREES.

The requirements of Plums are much the same as those of Cherries, and they are subject to the same insects. As with Cherries, forcing should be carried on slowly. The time elapsing from starting

to the ripening of Plums is from one to two months longer, according to variety. Trees started at the same time as Cherries will now have their fruit set, and when grown to the size of nuts may be thinned to a fair crop by leaving the largest distributed as evenly as possible over the trees, and as far as possible on the side where the sun is likely to reach them. The number for a crop must be regulated according to the size the fruit attains when ripe. Plums, like Cherries, are produced on spurs, so that young growths should be stopped in the same way.

Pot trees require the same treatment as trees planted in borders, but very strict attention must be paid to watering. Neglect in this but for a short time would cause entire failure for the season. Throughout the season they must be attended to at least once a day, and frequently twice, while on very drying days three times will not be too many.

Figs.

Where these are trained to a trellis, go over them as often as required for the purpose of tying in the young growth, take out the worst placed so as not to overcrowd, and pinch off the points of the strongest shoots. Afford water liberally to trees in an advanced stage, with manure added occasionally. Maintain a growing atmosphere by syringing when the weather is fine, and at other times by damping bare surfaces. Much as they like moisture, this may be afforded too liberally, and it is better to syringe thoroughly once a day than twice only partially, too frequent syringing causing swelling fruit to rot and to fall before it reaches the ripening stage.

G. NORWAY.

Hatfield House Gardens.

WATER LILIES.

THE VICTORIA REGIA.

THE great Water Lily of the Amazons was introduced into English gardens and flowered at Kew exactly fifty years ago, and it has been a great summer attraction there every year since. The history of its introduction was recorded by Mr. John Smith, curator of Kew at that period, from which it appears that seeds of *Victoria* were first received from Bolivia in 1846, but, although they germinated and the seedlings "formed leaves the size of half a crown," they soon afterwards perished. Seeds were again successfully obtained, this time from Demerara, in 1849, and of the six seedlings raised one was given to the Duke of Devonshire and was flowered at Chatsworth by Mr. (Sir Joseph) Paxton, another to the Duke of Northumberland, which flowered at Syon House, Brentford, and a third was planted at Kew, but it did not attain to flowering size until November, when the dull weather (London fog) prevented the flower-buds from developing. A second was therefore planted in April, 1850, and this produced its first flower on June 20, between which date and November 15 it developed sixty-five flowers. The treatment the plant receives now is briefly as follows: The seeds are sown in February in water kept at 80 to 85°. By the end of April the plant is ready to be placed in the large tank, its leaves being at that time about 8 inches across. By the middle of June the leaves are 6 feet across, with a turned-up rim 3 inches to 5 inches deep. From now onwards until the end of October the plant produces three, rarely four, flowers per week, a new leaf being developed with each flower. It will be seen from these particulars that the rate of growth is very rapid. A rough computation of the weight of the whole plant as grown from seeds between February and November gives the extraordinary result of about 7 cwt., viz.: Fifty leaves, each weighing 12 lb., 600 lb.;

fifty flowers, each (with stalk) weighing 3 lb., 150 lb.; stem, roots, and leaves produced before flowering period was reached, 50 lb.; total, 800 lb. It is questionable if any other annual accomplishes so much as this.

W. W.

A HARDIER VARIETY RAISED.

THE blue Water Lilies, such as *Nymphaea stellata*, have now been grown and flowered successfully in several different places in the open air. It therefore seems that some attempt might be made to do the same with the *Victoria Regia* with good prospects of success. If a tank of moderate size were made in a position where hot-water pipes could be introduced without much trouble and the water were then maintained at a considerable temperature, the *Victoria Regia* would probably flourish as well in the open air as in a Lily house during such summers as we have experienced recently. I do not think that this giant of the *Nymphaeas* would flower in the open air in water not artificially warmed, nor would it probably even grow at all under such conditions.

Experiments of this kind have been made in North America, and the warmer sun that prevails there in summer brings the *Victoria Regia* to perfection out of doors, even without any warming of the water beside that received from sun-heat. The young plants would be raised in heat in the first instance, being planted out later. A variety has been raised in North America, called *Trickeri*, which has been found to be hardier than the *Victoria* itself, and consequently more useful for this purpose. It would be interesting to know what results have followed from any trial that has been made of this variety at home.

If one or two varieties still harder than *N. Victoria Trickeri* can be raised, we may be within measurable distance of the time when the huge leaves of the *Victoria* shall float on our English lakes and ponds. We look forward to a hardy *Victoria*, hardy blue *Nymphaeas*, and hardy *Nelumbus*. One of the first steps towards the realisation of this dream would seem to be an extensive trial of *N. Victoria Trickeri* in the open air in different parts of this country both with and without the assistance of artificially-heated water, and it is to be hoped that this will be undertaken during the summer of 1900, and that the results will be made public before the expiration of the year.

PLANTS SUITABLE FOR EDGINGS.

MANY are engaged at this season in the interesting work of lifting and replanting herbaceous and other hardy plants, and it not infrequently happens that those so employed are at a loss to know what to use for forming suitable edgings to the beds and borders. This

surely must proceed from the want of knowing the use to which many of our oldest plants may be put, which, though fully recognised by gardeners fifty or more years ago, appears in a great measure to have been lost sight of by their successors. I was forcibly reminded of this the other evening when walking round an old-fashioned garden. The gardener in charge is over eighty years of age, and though doubtless absolutely ignorant as to the culture of an Orchid or the advanced style of gardening generally, he is a thorough gardener still as regards the work he was trained to, viz., the cultivation of vegetables, fruit and hardy plants, on which he is no mean authority. The kitchen garden under his charge is a model of neatness, and as regards earliness of crops, he is well ahead of many a younger hand at the present time.

On entering the garden one is struck by its neatness and order. What was taken at first glance as well-kept *Cerastium* proved to be nothing else but the common white Pink. As a bordering I never remember having seen anything more pleasing or neat, and it certainly looked better



THE VICTORIA REGIA AT KEW.

than the sombre Box or formal red tiles. In a few weeks there will be long lines of white sweet-scented flowers useful for cutting, and at the same time making the vegetable garden interesting. The compact habit of growth and the lines are very true is maintained by clipping once or twice during the year. Having seen such a favourite answering a double purpose, I can recommend it to others who would like an edging of this description. The present is a good time to lift the old plants, pull them to pieces, and transplant the divisions. If it is intended to form an edge, plant thinly, keep the sets well down so as to bury the stems, and make the soil firm about them. Unless the latter is done, the "grass" will probably wither under the action of sun and wind, roots will be slow in forming, and many of the pieces will die, thus causing gaps.

The Pink, however, is only one of the many plants formerly used for this purpose. Thrift was a great favourite, the transplanting of which I remember as a boy being usual spring work. It is

of neat and compact growth, and therefore suitable for the purpose of forming edgings. I once had charge of a large terrace garden, and even when the beds were furnished with various plants, none of them caused greater interest than the margins, all of which were of golden Thyme. This was always maintained square in outline and trim, and in early summer the golden hue was pleasing as well as the scent of the foliage. Numerous other plants could be mentioned which are seldom seen now in any quantity or employed as formerly for margins, with the exception of the Cerastiaceae. Among these are Aubrietia, Ajuga, Alyssum variegatum, Arabis, Daisy (double forms), Farfugium, Gentiana, Heuchera, Polemonium, Saxifrage in variety, especially umbrosa (London Pride), Sedum (Stonecrop), Sempervivum (House-leek), and many others. All are hardy and possess an interest of their own. Some should meet the tastes of those seeking plants for edging purposes, and that do not require to be raised from seeds or cuttings annually. A chat with an old practitioner such as I have referred to does much to awaken a new interest in old-fashioned plants, and recalls the foremost place all of them had in the garden years ago. SINGLE-HANDED.

NEW AND RARE PLANTS.

SOPHRO-LÆLIA MARRIOTTIANA.

A MOST distinct bigeneric hybrid Orchid is this plant, raised in the collection of Sir William Marriott, The Down House, Blandford, from the intercrossing of *Sophranthis grandiflora* and *Lælia flava*. The distinct and charming characteristics of its parents are most apparent both in the habit of growth, in structure, and also in the colouring of the flowers. The sepals and petals are each about an inch long, the central area of both segments being orange-scarlet, outside which there is a broad band of yellow. The front lobe of the lip is orange-red, and the side lobes are of the same colour, shading to yellow through the throat. A plant carrying a three-flowered raceme was exhibited at the Drill Hall meeting of the Royal Horticultural Society in January last. It is a most distinct addition, and is worthy of every consideration where this section of hybrids is appreciated.

CALANTHE HAMATODES.

This is a remarkable secondary hybrid, raised in the collection of Sir Trevor Lawrence, Bart., Burford, Dorset, by the intercrossing of *C. hamatodes rosea* and *C. Veitchi*. As might be expected from such a cross, the introduction of a second portion of the hamatodes blood has caused the hybrid to considerably revert towards that species, though no improvement can be claimed from a garden point of view. I have no doubt it will prove a most useful parent in future crosses. The sepals are rose, streaked with white, the petals rose, and the broad lip deep rose with a white disc. A small plant carrying a nine-flowered raceme was exhibited at one of the Drill Hall meetings of the Royal Horticultural Society.

DENDROBIUM NOBILE VIRGINALE.

A form of this beautiful white *Dendrobium nobile* has recently been in flower in the collection of Mr. F. A. Rehder, The Avenue, Gipsy Hill. The sepals and petals are pure white and of good form and substance; the lip is also white, except the disc, which is pale primrose. The flowers were not quite so large as in the typical forms of *D. nobile*, but I have no doubt this may be accounted for to some extent by the fact that it flowered at an early season of the year. It is rather strange that after so many years pure white forms of this popular *Dendrobium* should be making their appearance. Most of us have been accustomed in the past to meet with *D. nobile album*, *D. n. albiflorum*,

D. n. Amesiae, termed as white forms of *D. nobile*, but these have all rich maroon discs on the lip. I believe the first of these to flower was a small plant in the collection of Mr. T. Rochford, Broxbourne, in 1897, among some imported plants procured from one of Messrs. F. Sander & Co.'s importations. It was described and figured by Mr. Rolfe in the *Orchid Review*, vol. v., page 145. In March of the following year Mr. E. Ashworth exhibited a plant at the Royal Horticultural Society's meeting with similar characteristics under the name of *D. n. Ashworthianum*, when it was awarded a first-class certificate. There have since been instances of white varieties flowering in one or two collections. Messrs. Hugh Low & Co. had amongst their group a small plant very similar to Mr. Rehder's variety at one of the Royal Horticultural Society's meetings. H. J. C.

OUR GARDEN FLOWERS AT HOME.

ANEMONE HORTENSIS.

THE charm of this little wildling, called by botanists *Anemone hortensis* var. *stellata*, is shown to perfection in the accompanying illustration, which was taken from a photograph made near Nice. It is a pity that this pretty wild flower should be weighed down by the name "hortensis," for it is not at all a border or garden plant, but one that just wants to be left to itself in a suitable place, where it will repay judicious neglect with high interest. It has a few requirements, the first of which is that it is a lover of calcareous clay, and dislikes peaty sand when at home; it is never so happy as when growing up through tufted grass or some such shelter. Next, it is a true winter bloomer, and resents having its first broad leaves cut off by bitter winds, as is the case in a border. It also prefers a sunny, dry bank with overhead spray that will protect its early leaves and blossoms from severe frosts. There are those who call its stars of rose-lilac by the ugly name of magenta, and I do not deny that magenta "swears" horribly with many another colour; but in winter, and in an English garden, what flowers will you find to "swear" with it! So that I think that objection may fairly be disposed of. Moreover, there are so many shades of colour to be found whenever it has hybridised naturally with the fulgens

and it needs a good dry rest in summer or it will dwindle and die. But on the sunny side of a hedge-bank, under the shelter of trails of bramble or of guarded coppice stumps, it is a plant I would urge on all who love a bright flower that will do its best to smile when the sun gives it a chance.

Just as *Anemone blanda* prefers a little shade, *Anemone h. stellata* demands sunshine, for even in the sunny south you rarely find it in beauty in shade, so I fear it is a plant that will prefer the dry side of our islands in any case. Grown, however, in the grass or on a bank, and protected by bushes, it will defy all our cold winds and add yet another charm to that old-new thing, the wild garden.

E. H. WOODALL.

THE FRUIT GARDEN.

THE OLD GOLDEN PIPPIN APPLE.

IT has been said time after time that this favourite dessert Apple is dying out. This has been predicted of it during the past forty years, but it exists, is occasionally exhibited, and that, too, in fine character. That it is an English variety there is no doubt; where and when it originated is not clearly stated, but its original home is supposed to have been in Sussex. That it is very old in point of time there can be no doubt. I find it in a list of Apples published some seventy years ago, and termed old in that just as we term it old at the present day. Certain varieties are sometimes confounded with it, such as the Yellow Ingestre and the Downton Pippin. The last named was raised by Mr. T. Andrew Knight, of Downton Castle, from seed from some old Apple gossed with the pollen of the Golden Pippin, and probably with a view to establish the latter in better character, for Mr. Knight was a believer in the doctrine that many of the old English Apples were in a state of decay and were dying out, an opinion that was not shared by the late Mr. Thomas Rivers.

I once saw some very fine examples of the old Golden Pippin which had been grown at Bishop's Stortford, in Herts. They were gathered from a tree trained espalier fashion which had been worked on the Paradise stock; it was some twelve years of



ANEMONE STELLATA WILD IN MR. WOODALL'S GROUNDS AT CIMIEZ, NEAR NICE.

section, that an enthusiast will raise some from seed for himself. I know one valley (I will not say where) where they are entirely coral-coloured, and I really thought it to be the loveliest of all wild flowers as it then appeared. In many localities it is pure white, and in not a few places you find white, lilac, crimson, coral, and pale salmon shades all growing together in Nature's kindly mixing.

Of this I am sure it is not a border plant,

age, the soil a rich garden mould on a subsoil of loamy clay, well drained and trenched. The tree was vigorous and clean, quite free from moss or canker. Close pruning was adopted; the spurs were kept very short and the tree bore freely. In hot drying weather the surface of the soil was mulched with well-rotted manure, and at intervals of a few years some root-pruning was done. It was only natural this should be required, seeing that the roots had a free run in rich soil.

Any tendency on the part of trees of this

variety to die out cannot, I think, be attributed to any failing in the variety itself so much as to being on an unsuitable stock, or in improper soil, or in an injurious situation. It appears to do best in the southern counties, in well-drained soil and in an open position.

Some years ago I was at an exhibition of Apples and saw two dishes of the old Golden Pippin side by side, and the contrast was startling. One was represented by scrubby fruit, said to have been gathered from a tree a century old and cultivated under ordinary conditions. The flavour was good, though the Apples were small and ill-conditioned. It was believed this tree was on the Crab stock. The other dish had been gathered from a graft of the old tree worked on the Paradise stock and grown in an orchard house. The fruit was three times the size of the other, the colour the richest, brightest gold, and the flavour all that could be desired. There were no signs of decay here; it was a simple question of different conditions of cultivation which constituted the difference. R. D.

THE STRAIGHT WALK AT INGESTRE.

ONE of the most interesting features in the gardens at Ingestre Hall is the walk represented in the accompanying illustration. It is over—some say much over—300 feet in extent, and laid out in stages, the end of each stage being marked by clipped Yews. A tall specimen forms a kind of support for a quaint

arch, which gives a delightful old-world aspect to the place. Although these glorious trees are, we believe, of great age, they are yet of remarkable vigour, and the walk they dignify is made pleasant by the presence of many hardy flowers, which are charming against the background of shrubs. If Ingestre only possessed this interesting walk it would deserve to be famous. There is fascination in the combination of bright flowers with shrubs, especially when the sombre green of the Yew is the prevailing tone.

CORRESPONDENCE.

NARCISSUS PALLIDUS PRÆCOX.

[TO THE EDITOR OF "THE GARDEN."]'

MR. Mr. Arnott in THE GARDEN (p. 221) asks for the experience of those who have grown *Narcissus pallidus præcox*. I purchased my bulbs of Messrs. Barr some four years back, retaining half of them myself and sending the others to a friend at Penzance, who planted them in an open border with other *Narcissi*. He tells me that they gradually deteriorated, and this year he has no flowers. My own bulbs flowered well the first year; then a change of residence taking place (with

a change of soil from gravel to clay), I altered the treatment and planted the bulbs on a rockery, working in plenty of sand. They are growing on a slope, and are shaded so that the sun does not reach them till late in the day. Under these conditions they are quite happy, and are doubtless increasing, as the clump has several more flowers this year than usual. The seed, however, does not ripen. Sandy soil, good drainage, and rather more than partial shade are, I think, the requirements of this pretty *Narcissus*. Mr. Arnott refers in the same issue to *Narcissus minimus*. I can quite endorse all he says as to the suitability of the dwarf-growing *Narcissi* for the rock garden. I have *N. minimus* in flower at the time of writing, hardly tall enough to raise its little head above some Thyme planted over it, and the following other varieties are just showing their flowers and will soon be in bloom: *Minor*, *nana*, *Corbularia monophyllus*, and other varieties of the Hoop Petticoat, *lobularis*, *triandrus albus*, and *Johnstoni* Queen of Spain, to be followed later on by the smallest yet strongest-scented of the whole family, the Rush-leaved *junceifolius*, and the pretty *cyclaminus*, which alone of the above requires and receives special attention in the shape of an occasional watering to keep the soil and cocoa-nut fibre in which it is growing as moist as possible. All the above are grown in small groups of six bulbs under a carpet of Thyme or one of the mossy *Saxifrages*, or, better still perhaps, *Herniaria glabra*.

One other delightful flower nearly over with me now is *Iris reticulata*. A clump of this *Iris* has



THE YEW ARCHES IN THE GARDENS OF INGESTRE HALL.

still half a dozen blooms, and they scent the whole garden at sunset. I saw some flowers at the Royal Horticultural Society's meeting recently at the Drill Hall, from which I gathered that the variety I have here is not the type, but probably major, as my flowers are nearly double the size of those exhibited and measure 3 inches from the base to the top of the standard.

HERBERT E. MOLYNEUX.

Brentwood, Calverden Road, Balham, S.W.

STERNBERGIA COLCHICIFLORA.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—There are two sub-genera of the genus Sternbergia, viz., Sternbergia proper, distinguished by its long cylindrical perianth-tube, and Oporanthus, by its short funnel-shaped perianth-tube. Dean Herbert kept them up as distinct genera. *S. colchiciflora* belongs to the former, flowers in autumn, and, as Mr Archer-Hind says, much resembles in habit a *Merendera*, from which genus it differs by its inferior ovary. *S. colchica* has never, so far as I am aware, been described, but I suspect it to be identical with *S. Fischeriana* (Roem.), and which belongs to Oporanthus. If Mr. Smith will send me a specimen I will compare it.

Kew.

J. G. BAKER.

HARDY PLANTS IN POTS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—I was much interested in Mr. Elwes' remarks about growing hardy plants in pots, as I have thought for some years past that to get all the true beauty of the late winter and early spring flowers it is essential to protect them from frosts and rain. My cold plant house has been filled with potsful of many familiar things for some weeks past—*Daffodils*, *Saxifraga Bursariana*, and so forth, and I have picked up many hints from Kew. The hardy plant house in the old herbaceous ground is not heated, even with one row of small pipes, but is an absolutely cold structure. Thinking that Mr. Elwes and other correspondents would be interested in knowing what was in flower there on the last day of March, I append the following list. The plants were in good flower or approaching that stage, not with a single bloom here and there. It is pleasurable indeed to see these exquisite flowers thus early under glass, where one can enjoy their beauty without discomfort:—

Androsace Luzzeri.	Narcissus minor.
.. vernalis.	Ornithogalum tenuifolium.
Anemone blanda.	Primula denticulata var.
Chionodoxa Lucilike.	.. alba.
.. L. alba.	.. Forsteri.
.. L. gigantea.	.. marginata var.
.. L. sardensis.	.. cornuea.
Corydalis bulbosa.	.. Palnuri.
Cyclamen comm.	.. pedemontana var.
Dodecatheon ellipticum.	.. rosea.
Draba aizoon.	.. pubescens alba.
.. aizoides.	Saxifraga apiculata.
.. Athoa.	.. Bursariana var
.. carinthiaca.	.. mactanthia.
.. longistrota.	.. ligulata.
.. Mawi.	.. l. var. speciosa.
.. rigida.	.. oppositifolia.
Erythronium Hartwegi.	.. o. alba.
.. Hendersoni.	.. o. major.
.. giganteum.	.. o. minor.
Fritillaria aurea.	.. o. pyrenaica
.. oranensis.	.. maxima.
Hyacinthus azureus.	.. o. rubra.
.. a. var. amphibolus	.. o. splendens.
.. a. var. pygmaea.	.. Salomoni.
Iberis Gibraltarica.	Scilla sibirica.
Iris reticulata var. Krelagei.	.. s. pallida.
Lathyrus vernus.	Shortia galacifolia.
Morisia hypogaea.	Sisyrinchium grandiflorum.
Muscari botryoides.	

V. C. T.

THE CONSTANTINOPLE HAZEL.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—At p. 226 appears an interesting note by "T." on the above, the writer of which may not be aware that there are much finer specimens near the metropolis than those noted from 30 feet to 40 feet high or so. When recently at Syon House, Brentford, I noticed some remarkably fine specimens of *Corylus Colurna*, these being the largest specimens I ever saw, and, fortunately, in two instances the trees were not crowded by others.

They were of upright growth, the heads being beautifully shaped, and at the time of my visit the trees in question were a mass of catkins hanging in profusion from the branches. The catkins are much larger and longer than our common Hazel; the leaves also when fully developed are much larger, which renders it a beautiful lawn tree where shade is needed. Mr. Wythes informs me that the trees rarely develop perfect nuts. They are small and insignificant, mostly double and of no value. I should not omit to inform the readers of THE GARDEN that the trees in question are nearly 60 feet in height, have a straight stem and splendid rugged bark, and cover a large space. VISITOR.

ROSA SIMPLICIFOLIA.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Mr. George Paul may like to know that *Rosa simplicifolia*—or *berberifolia* as it is called—grows with great freedom in this garden. It was given to me at Kew some years ago, and I should think I must have had it here for ten or twelve years. I generally put a glass covering in winter-time over the head of the original plant so as to guard it against excessive frost if it comes, but I think the precaution is quite unnecessary, for the suckers ramble about *ad libitum* on every side, and they do not get any harm from it. I could have filled up a large piece of ground with this Rose if I had wanted to do so. To use Mr. G. Paul's words, it likes "a warm and dry site," and I think it does so well here because it has just what it requires. The odd thing is that *Rosa berberifolia Hardyi* has never come to be at home with me. I have tried it several times. It must be owing to some accidental cause, I should say, for it is always esteemed to be easier to manage than the type.

HENRY EWBANK.

Ryde, I. of Wight.

HELIANTHELLA QUINQUENERVIS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—It may interest some to know that this plant was introduced by Mr. Ware nearly twenty years ago and widely distributed as *Helianthus occidentalis*, which is a very different plant. I think on my remonstrance the name in the catalogue was changed. It is one of those composites which gradually waste away in Edge garden for want of summer sun-heat, but where it does well is showy, flowering in June.

I may observe also that *Lepachys*, not *Lepachis*, is the correct spelling. See Asa Gray, "Flora of N. America," vol. i., part 2, page 263.

C. WOLLEY-DOD.

Edge Hall, Malpas, Cheshire.

TUSSILAGO FARFARA VARIEGATA.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—What is your experience in growing this Coltsfoot? I have failed in two attempts. Early last summer I bought a good plant in a pot, planted it in light soil in a sunny position where it flourished for a time, but dwindled, and on taking it up I found its roots a mass of minute grubs (not wire-worms). I washed the roots and replanted in shade, but to-day there is no trace of it. The "English Flower Garden" says it is perfectly hardy, should be planted in shade, and increases itself as to become a nuisance. On the other hand, I was told yesterday that the plant is not quite hardy, and should be planted in full sun in sandy soil. My *T. fragrans* flourishes amazingly here, and every winter I pluck dozens of bloom. It grows in stiff soil on a bank facing north.

WALTER PRICE.

Richmond, Surrey.

LILIUM GIGANTEUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—In a note on page 247 your contributor says of this plant, "Its perpetuation is entirely dependent upon offsets." This is a mistake, for even in the cold and ungenial soil of my garden seed is ripened every year. It is true that it takes

several years (seven or eight) to flower, but it comes up readily, and I have twice reared small crops to flowering size. Still further, in the made soil of well-drained, deep peat beds made for Lilies, self-sown seedlings occasionally come up, and I have at present several living instances of this in spots where I am sure the bulbs were not planted. Twenty years or more ago the late Mr. Harpur-Crewe told me he knew of two places where *L. giganteum* was plentiful in the shrubberies, coming repeatedly from self-sown seed. One was Merton Hall, in Norfolk, the other Gordon Castle, in Morayshire. The plant seems to prefer a sheltered situation, deep and well-drained soil, and moderate rainfall.

C. WOLLEY-DOD.

Edge Hall, Malpas.

BUTTER BEANS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Will you kindly tell me the best variety of the Butter Bean. I have tried here, in Cheshire, every variety I could obtain, and the result has been failure in every case; the climate appears to be too cold for them. The dried Butter Beans sold in the shops are all imported, and I am told they come from Hungary and from California. There is no question as to their superiority to the ordinary Haricot Bean; in fact, they sell for about double the price; but without some more definite information I should not care to again attempt their cultivation.

THOS. FLETCHER.

Grappenhall, Cheshire.

[We are not surprised that you need further instructions as to the culture of Butter Beans, as they are not much grown, and though they only need ordinary culture, they also require a little care as to the time of sowing and of gathering the crop. In your part of the country Butter Beans should grow well, as we have seen them grown in Staffordshire without any difficulty whatever. We certainly do not think it a question of locality in your case, and as to variety, you may have been unfortunate; but we have never found the least difficulty in this respect, as quite thirty years ago we grew the Mont d'Or, or Golden Butter Bean, a variety largely grown on the Continent, and though an old variety we think it is one which would not fail. On the other hand, if your land is wet or badly drained or the soil very heavy, you will not have such success as with a warmer soil; but this should not deter you from growing this vegetable, as it would pay you to lighten a small plot for the plants by introducing any light, porous materials, such as sand, burnt refuse, road-scrappings, fine old mortar rubble or leaf-soil. A trench taken out 9 inches to 12 inches deep and some lighter material placed in the bottom would give you a good return. You might also adopt another plan, which is to make a hole with a broad dibber, drop some good soil into it, and then sow the Beans. This is less trouble than taking the soil away, but you do not note the kind of soil you have. As to climate, there is not the least doubt that you could grow good Beans from June to September. Sow about the middle of May, not earlier, as the plant is somewhat tender. Our best crops have been obtained from seed sown the third week in May, at which time the soil is sufficiently warm to assist germination. To get earlier supplies than by sowing at the dates we mentioned above, if you have a cold frame you may gain a month by sowing now in small pots, say half a dozen seeds in a pot. Grow near the glass, harden thoroughly, and plant out in the middle of May. It may be necessary to give some shelter, but only for a short time. The variety named as a very free grower is a runner, and, as you are aware, this type of Bean is longer in maturing its pods than the dwarf section. We think you would probably have greater success with the latter, and of late years there have been some splendid additions to this class. A very dwarf Butter Bean is the Miniature Golden Waxpod, a very productive variety, and only 12 inches to 15 inches high. In our opinion this is, as regards quality, the best of all the dwarf Beans, and will grow where others fail. The pods of this variety must be gathered young, and if

cooked whole they are delicious, having scarcely any skin. Another dwarf variety is the Golden Waxpod, a dwarf form of the Mont d'Or. This is also a free grower, and only needs the same treatment as the ordinary Kidney Bean. Both these varieties you may sow early in May and again in June and July, and have a succession well into September, but they need a well-enriched soil and ample moisture in dry, hot weather. We think the dried Haricot Beans you mention are produced from these dwarf kinds. Let us know how you succeed in future.—Eds.]

THE BLUE WOOD ANEMONES.

(A. NEMOROSA VARS.)

[TO THE EDITOR OF "THE GARDEN."]

SIR, As it will soon be the season for Wood Anemones, I should like to ask readers of THE GARDEN who live near woods and copses where they grow to keep a look-out for the blue varieties which are now and then to be found wild. Even amongst the ordinary white and pink or purplish-rose variations there is a considerable range in size and colouring. One large-flowered pure white form is very distinct and beautiful; I first saw it at Munstead, and I think it was there called Dr. Lowe's variety. In general size and stature it resembles the lovely pale or lavender-blue Robinsoni, which may possibly be a form of it, varying mainly in colour. A Robinsoni has a curious history. It was found by Mr. W. Robinson about thirty years ago growing in the Botanic Gardens at Oxford, and on my making inquiries about it long afterwards, the late curator, Mr. Baxter, informed me that it was sent to Oxford for a name by some lady then living in Ireland. It seems very strange that the plant has never been seen wild in Ireland of late years, notwithstanding that the country has been much more thoroughly searched, or botanised, than formerly, and so far as I know, blue-flowered Wood Anemones (*A. nemorosa*) are not alluded to in any of the Irish floras. Blue Wood Anemones have often been reported, but investigation has proved these in nearly every case to have been naturalised escapes of *A. apennina*, a very abundant plant in or near old Irish domains. Some years ago, however, Miss F. W. Currey, of Lismore, Waterford, found a blue form of *A. nemorosa*, but quite different and distinct from *A. Robinsoni*, being more dwarf in habit, with smaller flowers, and these of a darker purplish-blue colour. I believe I am right in saying that Mr. A. D. Webster found a blue *A. nemorosa* in Wales; and on reading a chapter on "The Bishop as a Botanist" in "The Life of Bishop Walsham How," I find at p. 453 the following extract in a letter from Bishop How to Mr. Hanbury, dated May 19, 1885: "I am much exercised about an Anemone we sent from Capel Curig. I had found one plant of it there about twenty years ago, and this time we found two. It is plainly Anemone nemorosa, only as blue as *A. apennina*. Is this variety acknowledged in any book?" We may, as I think, fitly re-echo this question to-day, and I would also like to ask if any blue form or forms of *A. nemorosa* are known to exist on the Continent where the type is very abundant? No matter what, or whence the origin or native habitat of *A. Robinsoni*, there is no question as to the extreme beauty and exquisite soft colouring that stamp it as one of our most welcome spring flowers, and we cannot well have too many of this and other Wood Anemones in our gardens.

F. W. BRIDGER.

Dublin.

GARDEN THOUGHTS.

IN MEMORIAM.

At the time of printing "The Joys of a Garden" (p. 215), by the late Mrs. Lawrenson, we little knew that it was the last piece of her own sending that would ever be printed. Her almost sudden death came as a grievous shock to her many friends, and though they may well

sorrow for their own loss, yet it is a matter of doubt whether such a death, coming to one whose life was not only blameless, but ennobled by wise serviceableness and constant works of kindness, should for her own sake be deplored. For to the slender, fragile body full of well-spent years death would come only as a gracious translation to a better and fuller and more glorious life; a life wherein we trust that she will find the perfect consummation of those joys of a garden whose dimmer earthly presentment had been throughout her life, and more especially in her later years, the ever-flowing source of her own best earthly happiness.—Eds.

Mrs. Lawrenson had the true artist's temperament, and wrote a good deal of poetry of no mean order. Her adoption of the *nom de plume* "St. Brigid," which puzzled so many, was done in order to avoid publicity when she lived near the oratory of St. Brigid at Nurney, Co. Kildare.—F. W. B.

NOTES FROM NURSERY GARDENS.

AMARYLLISES AT CHELSEA.

ONCE again the time of the Amaryllis, or Hippeastrum, to write more correctly, has arrived, and it was our privilege to visit the nurseries of Messrs. J. Veitch & Sons at Chelsea, where a house is filled with a forest of noble spikes, a display of peculiarly attractive colouring from quite pale forms to those of intense crimson and allied shades. Few flowers exhibit more the great success of the hybridist than the Amaryllis. Not many years ago the flowers were poor in form and little better in colour, starchy and uninteresting, utterly unlike the splendour of modern acquisitions. We never visit the Chelsea nurseries in Amaryllis season without recalling the tremendous strides made of recent years in acquiring forms which display a great advance upon those already in existence.

The great colour display at Chelsea is one of the sights of the year. There are upwards of one thousand bulbs in full flower, and a number of hybrids may be chosen which exhibit even an advance upon those we saw last year, when the writer told Mr. Head that the end of variety in form and colour of the flowers had surely arrived. But this is not so. The Hippeastrum increases in distinctness and beauty as the years roll on, and a visit at this time to Chelsea is well repaid.

It is not unusual now-a-days to find that the Hippeastrum is grown in many gardens not renowned for the richness of their floral treasures; indeed, it has become a good garden plant, and as the hybrids increase in freedom and robustness, so will their popularity also.

In looking through the display we noticed a rich series of self-coloured hybrids, some of intense colour, others brighter, and record the following as a guide to those who wish to become acquainted with the finer additions to the list. James H. Veitch is a noble flower, very large, and brilliant vermilion-crimson in colour; Bianor, dark crimson with white rays, a wonderfully effective flower; Marina, bright orange-scarlet, set off by rays of white; Francaisea, a very beautiful flower with white rays relieved by a distinct orange colouring in the other portions of the segments; Amasis, orange-scarlet, very bright, the flower of beautiful form; Nerula, bright maroon; Jodel, self dark crimson, very distinct; and Acaas, bright red. These were a few only of the brilliant flowers of the self colours, a group to which Messrs. Veitch are adding distinct forms every year, and this contrast of self colour and white rays is remarkably effective. There is a bold contrast between the two, and of this through

we must award the palm to James H. Veitch, a flower that will be difficult to eclipse for its colour and superb form, but then with many seedlings yet to flower it is scarcely safe to declare any one kind to be the best.

Of late years much improvement has taken place with regard to the light-coloured hybrids, the object being to acquire a white form. This in time, we think, will be gained, as in one hybrid named Ophis the flowers are almost white and very large—a distinct departure in the desired direction. Cupid has vermilion coloured segments, margined with almost white; Emita is white, prettily marked with crimson; Khaki, a very distinct flower, greenish white ground, marked with a yellowish shade; Polais, white, veined with red; Lady Brassey, a very handsome flower, almost white, marked delicately with red; Adrastus, and Topaz.

We could mention many other hybrids of conspicuous beauty, but refrain from so doing, as a list of names is wearisome when all are so handsome and distinct.

The Hippeastrums are not in the least difficult to grow. The practice is to pot the bulbs in the last week in January, and plunge the plants in spent tan. Gentle bottom-heat is given after a short time, and no water supplied until the spikes are an inch in length. This year they had not developed to this extent until the second week in March.

Those who are interested in the Hippeastrum and have an opportunity of seeing the flowers expanded in their full beauty at Chelsea should do so. They will be rewarded with a feast of colour that no other group of a family could display—colours of varying shades from vermilion to tints of much delicacy and charm.

DENDROBIUM MELPOMENE.



FLOWER OF DENDROBIUM MELPOMENE.

This is a new garden secondary hybrid derived from the intercrossing of *D. signatum* and *D. splendidissimum grandiflorum*. This is one of the most variable of garden hybrids, and was originally raised by Mr. Young in Sir F. Wigan's collection from the crossing of *D. signatum* and *D. nobile*, and named *D. Wiganiae*. The subject of this note resembles somewhat some of the forms of *D. Wiganiae*. This is only natural when it is considered that *D. splendidissimum* is the result of crossing *D. nobile* with *D. aureum*. *D. Melpomene* therefore consists half of *D. signatum* with a quarter of *D. nobile* and the same of *D. aureum*. On close examination it will be found that the disc on the base of the labellum is quite distinct from that of *D. Wiganiae* both in colour and in shape; the flowers also are rounder and almost as large again. It is one of the most desirable additions we have had to the hybrid Dendrobiums for some time, and was raised by Mr. W. H. White in Sir T. Lawrence's collection at Barford. It received a first-class certificate on March 27 last, and further particulars will be found in No. 1480, p. 250.

H. J. CHAPMAN.

THE GARDEN.

No. 1483.—VOL. LVII.]

[APRIL 21, 1900.

BEST APPLES FOR BRITAIN.

WE heartily thank our correspondents for so kindly assisting us to make something like a representative list of Apples for Britain. Of course it is impossible to draw up a list of Apples and declare that it be the only one that should be considered, no matter whether the garden is in Scotland or in Cornwall. Our wish is to guide those intending to embark upon fruit culture in the garden or for profit, and to give expressions of opinion as to the most profitable and best flavoured kinds. It is interesting to read the remarks of our contributors and to see that kinds frequently recommended in books as "indispensable" are condemned—Lady Henniker, the familiar Cellini Pippin, Manks Collin, Striped Beaufin, Dutch Mignonne, Reinette du Canada, Scarlet Nonpareil—and to find that certain kinds seldom written of are highly praised. The late dessert fruit Duke of Devonshire should be added to the list undoubtedly, and American Mother, a mid-season dessert fruit, is much valued by our correspondents.

We feel sure our readers will be interested in the following remarks, and although we do not wish to prolong the subject to undue length, yet hope that those who have experience of fruit growing in gardens or for market will also give their opinions. Certain districts have, as will be seen by letters, varieties of conspicuous merit, but which may fail in other counties. Mr. Pettigrew, the well-known gardener to Lord Bute, Cardiff Castle, recommends a variety rarely heard of—*Gabalva*—as a late Apple, and it is well for intending fruit growers in any district to find out the kinds that succeed locally. In Scotland Blue Pearmain is mentioned as a good kind, but south of the Tweed we doubt if it has a place in any garden. Several new kinds in the original list have been struck out until a more general experience of them has been obtained.

Messrs. Dicksons, of Chester, write: The list of Apples we consider to be an excellent selection, but we would suggest the addition of the following varieties as being very hardy, extra good bearers, and suitable for growing in most districts:—

Early Julien (early kitchen).—This Apple is about the earliest cooking variety in cultivation, of good quality, and a very heavy cropper.

Grenadier and Potts' Seedling (early varieties). These are very good hardy varieties and are very heavy croppers.

Mr. Woodward, the famous fruit grower at Barham Court Estate Gardens, Teston, Maidstone, Kent, says: I hope you will understand these opinions are based upon how the various varieties do with me here.

Irish Peach, a most excellent dessert Apple, fruits principally on the tip of last year's wood. It should be allowed to grow as it likes, only thinning the branches out much in the same way as Black Currants are pruned. I have but one tree now of Cellini, having discarded this, being here a very poor cropper and grower. I much prefer Ecklinville or Stirling Castle, two of the most reliable sorts I have.

Lord Grosvenor I cannot get to make a large tree, being such a heavy cropper and short-jointed, that I have practically discarded it in favour of the two above mentioned.

King of the Pippins is not to be compared to Cackle Pippin, which I think a great deal of.

Margil too small. Ribston much better where it does well.

Lord Derby is a wasteful fruit; it is too corrugated around the eye. Allen's Everlasting is as good in every way, and of much better flavour.

Sandringham does not succeed at all well with me; cannot get even a medium-sized fruit. Wellington is not wanted. Newton Wonder being much better both as a cropper and also in appearance. The most remunerative Apple we grow about here is Worcester Pearmain. Gathered and sent direct from the tree to market there is no waste, and it always realises a good price.

Mr. Buryard, Maidstone, substitutes Devonshire Quarrenden for Mr. Gladstone, the former being far finer, though not so early. Cellini Pippin is a great bearer, but not of such good quality as Potts' Seedling or Grenadier. New Hawthornden when cooked is leathery; Golden Spire is better. King of the Pippins is apt to canker; it is not first-class. Golden Reinette being far finer. Margil is very fine, but too small; Mother Apple is preferable. I prefer Golden Noble or Mère de Ménage to Lady Henniker. Banmann's Red Winter Reinette is only a market kind; substitute Duke of Devonshire. For Dutch Mignonne choose Rosemary Russet. Hornead's Pearmain is more of a cooking Apple, Allen's Everlasting being of much finer quality for the table. Norfolk Beaufin is too small, Belle de Pontoise being larger and good in all ways.

A NOTE FROM DERBY.—A few varieties in the list are not, I think, suited for general culture, and I give below my reasons. I am sorry that you have not yet seen your way clear to include Lamb Abbey Pearmain in the list of late dessert Apples, as I look on it as one of the most desirable.

Cellini Pippin I like very much as a fruit and also as a good cropper, but it is somewhat liable to canker, and will not grow on cold soils; moreover, birds and wasps are so fond of it that it is useless to grow in wooded districts. If the quality of

Worcester Pearmain were at all equal to its appearance, its growth, and its freedom of fruiting, one would look no further for the best early dessert Apple. As it is, however, I consider it a very poor thing, and its only place is on the market for consumers who know nothing of the qualities of a really good Apple.

Allington Pippin.—I reserve my judgment about

this, as it is not yet well enough known to have obtained the status claimed for it.

Barnack Beauty is of very ordinary quality. It is a handsome Apple, and may possibly improve on further acquaintance.

Dutch Mignonne does not come up to my standard of a good dessert Apple. I found it, however, a splendid cropper and a very marketable fruit. To

Fearn's Pippin the same thing must apply. I should exclude it from a very limited list, and especially as a very late kind; still I should not like to be without it, as it is so crisp and sparkling when in season and handsome as well. It might very well change places with Margil, which is really a much later variety and one of the very best.

Scarlet Nonpareil I never had much success with, and though I grew for many years three healthy trees which ought to have been in their prime, fruits would not come in plenty, and we never had a really good crop in ten or more years. Its good quality is undoubted.

Bramley's Seedling is another not really successful late Apple with me, and I think it is only suited to its native soil. It cropped well in Suffolk, but the fruits kept very little longer than those of Warner's King, as they soon became spotted.

Newton Wonder is still on the doubtful list, and the fruits exhibited in the special classes at the Crystal Palace have, with the exception of one or two dishes at the most, been poor and badly spotted, so that I think there is strong reason to want more proof of its value for general planting.

Shipley Hall Gardens. J. C. TALLACK.

Mr. John Watkins writes from Pomona Farm, Hereford: "In my opinion the following alterations should be made in the list of early cooking varieties. Choose Ecklinville Seedling instead of Cellini Pippin, which is liable to canker; Lord Suffield for Manks Collin, which is too small for cooking, and although a great cropper, is seldom planted now. Of mid-season dessert Apples, Cackle Pippin should be amongst the late Apples if retained at all. American Mother is one of the best in flavour after Cox's Orange Pippin. Striped Beaufin should be in the late list; it is one of the best keeping kinds in cultivation. I should add Golden Noble, Cox's Pomona and Beauty of Kent. Of late dessert fruit, Hornead's Pearmain should be amongst cooking Apples. Winter Ribston is the same as Claygate Pearmain, and I should include Lord Hindlip, Court pendu Plat, and Duke of Devonshire (one of the best of the late dessert Apples). Of late cooking kinds, Sandringham is not very late. Include also Striped Beaufin and Northern Greening. If the list is intended for market as well as for the garden, include amongst the early dessert Apples Worcester Pearmain and Beauty of Bath, and leave out Irish Peach and Mr. Gladstone. Of early cooking varieties include Duchess of Oldenburg and Yorkshire Beauty."

Mr. Rivers, of Sawbridgeworth, substitutes the following for the varieties in our list. For Irish Peach the Improved Early Peach, a better variety, which does not bear on the ends of its branches, the great fault of the old kind, otherwise it is very similar; Devonshire Quarrenden for Lady Sudeley. Early Rivers for Keswick Collin (the former is like Lord Suffield, but does not canker), Worcester

Pearmain for New Hawthornden, Benoni for Blenheim Orange, Pittmaston Pine-apple for Cackle Pippin, Mother for Margil, Small's Admirable for Lady Hemiker, Ecklinville for Striped Beaufin, and Beauty of Kent in place of Wellington. Many suggestions are made as to the list of late cooking and dessert varieties. Mannington's Pearmain is substituted for Adam's Pearmain, Scarlet Golden Pippin for Barnack Beauty, Duke of Devonshire for Dutch Aligomme, Brownlee's Russet for Fearn's Pippin, Braddick's Nonpareil for Scarlet Nonpareil, Allen's Everlasting for Sturmer Pippin, and Blenheim Orange for Winter Ribston. Of the late cooking kinds, Baxter's Pearmain gives place to Bramley's Seedling.

MR. JAMES HUDSON, of Gunnersbury Gardens, sends the following list: Early dessert: Irish Peach, Lady Sudeley, Mr. Gladstone or St. Edmund's Pippin.* Cooking: Cellini Pippin, Keswick Codlin, Lord Grosvenor,* Ecklinville,* Frogmore Prolific and Stirling Castle. Midseason dessert: Blenheim Orange,* Cackle Pippin, Cox's Orange Pippin,* King of the Pippins,* Mannington's Pearmain, Margil, Mother (American)* and Ribston Pippin. Cooking: Bismarck,* Lady Hemiker, Mere de Ménage, Tower of Glamis, Waltham Abbey Seedling,* Warner's King and Wellington.* Late dessert: Allington Pippin,* Adam's Pearmain, Barnack Beauty, Claygate Pearmain, Dutch Mignonne, Fearn's Pippin, Hornead's Pearmain, Reimette du Canada, Scarlet Nonpareil,* Sturmer Pippin and Lord Burghley. Cooking: Alfriston,* Bramley's Seedling, Lane's Prince Albert,* Newton Wonder,* Norfolk or Striped Beaufin, Wellington* and Royal Late Cooking.

Mother (American) is an excellent Apple, better in the midseason list than Allington Pippin, which I find is preferable as a late Apple. Worcester Pearmain is not worthy of its place as a select variety: it is only worth consideration as a market fruit. Mannington's Pearmain is infinitely better in quality than Worcester Pearmain. Baumann's Red Winter Reimette is without quality; the fruit is very tough, but colour and cropping are satisfactory. I prefer Frogmore Prolific, a heavy cropping variety, to New Hawthornden. Mere de Ménage is, I consider, a better variety here than Striped Beaufin, which is a later kind. Ecklinville is better than Manks Codlin; the former is a sure cropper and good. Like Lord Grosvenor, it may be used from the tree, though the fruit may only be half its true size. Waltham Abbey Seedling is in every way superior to Lord Derby, which has a tendency to crack at the footstalk, hence decay often ensues. Royal Late Cooking will be found to surpass Sandringham; it keeps in better condition. Lord Burghley is preferable to Winter Ribston for general cultivation.

A NOTE FROM SOUTH WALES. Mr. A. Pettigrew, the well-known gardener at Cardiff Castle, Cardiff, says: "I consider your list of early dessert, early cooking, midseason dessert, midseason cooking, late dessert, and late cooking Apples an excellent one, but I would substitute Lord Suffield (early cooking) for Cellini Pippin and Gabalva (late dessert) for Sturmer Pippin. I would also substitute Gabalva (late cooking) for Norfolk Beaufin. I think the quality of Sturmer Pippin is over-estimated as a late dessert fruit. The smaller fruits of Gabalva are much superior to it in flavour, and keep longer than it in good condition. I also prefer Lord Suffield (early cooking) to Cellini Pippin."

It is not, I know, an easy matter to draw up a list of Apples suited to all soils and climates; all one can do is to mention those generally valuable. So it is with no wish to find fault that I make a few observations on the list furnished a week or two ago. Irish Peach fails in many places. In some the tree is unhealthy, in others the fruit is scoured and cracked. I speak from long experience of this Apple in many different soils and climates.

In my opinion Devonshire Quarrenden is a far

more reliable and therefore valuable variety, a sure and abundant bearer, a very pleasant juicy fruit, while its beautiful colour makes it welcome for dessert. I never find Wellington or Dumelow's Seedling a very good keeping Apple. It never sees April with me, and this year—not a good keeping one—it is all gone at this date (March 26). I fear I shall weary the readers of THE GARDEN if I again say what I have said more than once before, that in this cold climate and heavy clay soil there are no two varieties for keeping like Northern Greening and Hanwell Souring. Both bear most abundantly and regularly, and there seldom comes a year in which I have not got them till early in July. D. K.

Co. Curan, Ireland.

REVISED LIST.

EARLY.

Dessert.

Devonshire Quarrenden. Irish Peach.
Lady Sudeley.

Cooking.

Duchess of Oldenburg. Grenadier.
Ecklinville Seedling. Keswick Codlin.
Golden Spire. Pott's Seedling.

MIDSEASON.

Dessert.

American Mother. Ribston Pippin.
Cox's Orange Pippin. Worcester Pearmain
King of the Pippins. (for market only).

Cooking.

Bismarck (particularly New Hawthornden.
for market). Stirling Castle.
Frogmore Prolific. Waltham Abbey Seed-
ling.
Golden Noble. Warner's King.*

LATE.

Dessert.

Allen's Everlasting. Court pendu Plat.
Blenheim Orange. Duke of Devonshire.
Brownlee's Russet. Mannington's Pear-
main.
Claygate Pearmain. Sturmer Pippin.
Cackle Pippin.

Cooking.

Alfriston. Lane's Prince Albert.
Bramley's Seedling. Newton Wonder.
Dumelow's Seedling. New Northern
(popularly known Greening.
as Wellington). Norfolk Beefing.

[We have received so many contributions to this interesting discussion, that notes from Mr. A. H. Pearson, Lowdham, Notts, Messrs. J. Veitch and Sons, J. Cheal and Sons, Mr. H. Merryweather, and also from many of the best gardeners in England and Scotland are held over until next week.—EDS.]

NOTES OF THE WEEK.

Darwin Tulips for forcing.—The May-flowering Darwin Tulips have hitherto not been tried for forcing to any extent. The quinquennial bull show, held at Haarlem from March 16 to 20, has shown the excellent results which may be obtained by forcing these brilliant late Tulips and the glorious display they are able to produce. A group of about fifty varieties was shown in low pots or pans, each containing ten to twelve bulbs of the same variety. The development of all the blooms in each pot was remarkably regular, and they were almost exactly as large and bold as in the open ground at the usual flowering period. The bulbs were forced in the usual way, almost every pot was faultless, and it proved quite easy to get them in bloom before the opening of the show on March 15. It would have been possible to get them ready many days earlier if wanted. The Darwin Tulips are now being generally appreciated for their dazzling colours and bold grouping effect in May, but it may

interest readers of this paper to learn that these late Tulips may be forced into bloom as early as the first part of March.—E. H. KRELAGE AND SON, Haarlem, Holland.

Iris stylosa speciosa was well shown at the recent meeting of the Royal Horticultural Society by Messrs. Wallace, of Colchester. This kind is rendered very distinct by its soft blue flowers, which are larger and of greater substance than those of the type. It is, perhaps, not sufficiently known that these large-flowered forms are not only dwarfer, but have also the narrowest leaf-blades to the tuft. This, indeed, is so marked, that anyone may select the above at almost any time of the year. Another beautiful member of this race as yet unnamed may well be called violacea, or atro-violacea, so good and distinct it is.—J.

Fritillaria aurea var.—This was also shown by Messrs. Wallace, and may be described

as a red or coppery bronze-coloured form of the species. The plant is certainly distinct, and would, in company with the old form, make a most welcome group. Both are equally hardy, and in peaty nooks in the rock garden such things give much pleasure.

Sisyrinchium grandiflorum album.—This exquisite spring-flowering plant is in bloom with Messrs. Barr and Son. We hesitate to say whether the rich purple or the almost transparent silky white is the better kind, but there is room for both in every garden. In the garden established it is not so frail as may be inferred from exhibited flowers, but is perfectly hardy, and each year it increases in beauty and in stature. Peat and loam in equal parts and a deep, cool root-run suit the plant admirably.

A nemone blanda synthica.—Of the more showy among

hardy spring flowers this will take first rank, for not only is it showy and free, but the blue and white segments, as seen from various aspects, render it quite unique. A form of this plant, or possibly the same plant, was a year ago given an award of merit by the Royal Horticultural Society, under the name of A. Cypriana. As shown, at any rate the latter possessed a deeper blue externally and was more self-coloured, but this may be the result of better cultivation. With regard to season of flowering, however, the plant mentioned is rather with the Apemine Windflower than that recognised as A. blanda.

Androsace carnea is, perhaps, the best of its class for the majority of English gardens: it is less dense and woolly, and is therefore less generally affected by fogs and by damp. In spring, when dotted over with the pale pink flowers, it is very charming. These plants succeed infinitely better if gathered up—quite carefully it must be—and planted firmly in very gritty loam. Often they root very freely from the underside of the stems, and when buried in the soil they do this the more readily, and in the ultimate expanse of the tufts are supported by a much better central root action. I have again and again proved this to be so with many of the dwarfest alpines, and the change has usually brought success.—E. J.



THE SATIN FLOWER
(SISYRINCHIUM GRANDIFLORUM).

Carnation H. J. Jones. Within the last few years considerable improvement has been made in all classes of Carnations. Many varieties, however, with perfectly formed flowers and of rich colour are in need of stout stems, and anything in the way of improvement in this respect will be welcome. In the above-named variety we have all that is wanted in this respect. The growth is short and sturdy, with broad glaucous foliage and still erect flower-stems which stand up well without the aid of sticks. The flowers are of a rich deep crimson, full, and powerfully Clove-scented. In habit it may be compared with Mme. Arthur Waroque, though the affinity to the Malmaison type is even more apparent. The parentage is not definitely known, but I should think one of its parents would be Mme. A. Waroque, for I have found that this variety seeds well, and have raised some seedlings myself, one of which, though not quite distinct enough to name, was certainly an advance on its parent. Unfortunately, circumstances prevented me from making further crosses with this section, but I believe with careful hybridising a most useful section of Carnations might be much

or flat baskets filled with a dozen plants lifted from the borders direct and sent to a show for competition, but certainly not until the first or second week in May. It would not be at all difficult to judge these border Auriculas, because outdoors merit depends on general effect produced, and only flowers of good substance, of some bright colour, and boldly held upon stout erect stems would pass muster. To have variety the dozen plants should consist of not less than six dissimilar, but such a class as this would hardly find favour with the few elect who make up the executive of the National Society. It is a case in which the help of the Royal Horticultural Society is needed, by offering a few prizes at its first Drill Hall meeting in the month of May.—A. D.

Fritillaria imperialis fol. var.—One is not generally fond of the variegated-leaved forms in bulbs, herbaceous or alpine plants; but in this not very common plant, the variegated-leaved Crown Imperial, there is for me a marked exception. In March and April I have no more beautiful object in my garden than the spikes of foliage of this plant, starting boldly from the

All the hardy Water Lilies can be grown most satisfactorily in cement tanks about 18 inches deep, either planted out or in boxes. In the latter case the flowers are not quite so large, but are, I think, produced more abundantly. The essentials are full exposure to sun, no current through the water, shelter from cold winds and rich feeding. Under these circumstances I am at present growing about a dozen kinds, including several forms of *odorata*, in a tank 18 feet by 6 feet supplied from the house main. It has been described in detail in former numbers of THE GARDEN. G. P.

"IN A SMALL WAY."

NOTES FROM AN OBLONG GARDEN.—V.

A VERY trite reflection nearly always obtrudes itself on me when I am casting an eye round my neighbours' gardens, to wit, how little use they make of their opportunities. No matter how charming the situation or how fertile the soil—and I often have reason to envy both—the same few common plants are visible everywhere, and even when someone makes a plunge into something a little varied, only the most every-day and the cheapest variety of each plant is to be seen. Probably this lack of enterprise and interest is to be found on two counts—the dislike of the gardener, if there is one, and more especially of the jobbing gardener, in whom so many lady owners of gardens will persist in feeling implicit confidence, to novelty and the fear of expense. The frugal feminine mind, quite oblivious of the perpetual drain on the purse of that "odd-and-end" shopping, in which it so often finds delight, is generally filled with horror at the mere idea of giving three or four shillings, at the very outside, for a plant, and overlooks the fact that money spent on rare plants is often put out to interest, in that a slip, a cutting, or some seeds may rejoice the hearts of others who have seen and admired them, serve as acceptable presents, and even, being marketable, give return in kind. Many women make money out of their gardens, and though I think personally that it must take away all, or nearly all, the charm of flower gardening to put it on a business basis, yet I should not carp if a good many more, who at present excuse their vapid, half-empty flower borders on the plea of poverty, set to work to make the money necessary for filling them by salad-culture, or the growing of early vegetables and like produce, which, if only they could be got to put up their stock-in-trade neatly and according to market practice, and if they are lucky enough to possess some business ability (wherein is comprised punctuality and despatch), would find a ready sale. The demand for garden produce, especially in country towns, always seems equal to the supply, and when I am compelled by necessity to earn my own living otherwise than at present, I shall certainly engage in horticulture, for without interfering at all with the trade growers there is room for me and a few others. Meanwhile, I have wandered away in the most rambling manner from my text, which partakes of surreptitious self-gratification, in that I usually spend every penny of my pocket-money on the most interesting plants—new to this garden at any rate—which it will compass, and also try to avoid having exactly the same thing as my next-door neighbour. In one particular, however, I am afraid I shall be accused of plagiarism—the new Rose bed. It was made in the autumn, a narrow bed all across the top of the oblong lawn, with a foot of grass between it and the path, and as it is in full sunshine, was very deeply dug and some rare



A HYBRID WATER LILY (*NYMPHÆA MARLIACEA CARNEA*).

improved, and I hope to carry out some experiments myself.—A. HEMSLEY.

Exhibition Auriculas.—We are now within a week of the exhibition of the National Auricula Society at the Drill Hall. This show, allied to the Royal Horticultural Society's ordinary meeting, is always a very full and popular one, and may be said to represent the first incoming of the spring. But, seeing how cold and dull the weather keeps, one naturally wonders how far it may be possible to have Auriculas, with other hardy Primulaceae, in bloom then without having the plants, from now at least, subjected to some degree of artificial heat. It does seem rather absurd to exhibit quite hardy plants under such conditions, especially when we do not see them in their true characters. But there is after all very little connection between Auriculas in pots as grown for exhibition and those Auriculas that do so much to beautify gardens in the spring grown outdoors, for whilst one person may be termed an Auricula fancier and exhibitor, there are a hundred who grow (and love) Auriculas in their gardens as hardy border plants. What a pleasing feature at an Auricula show would be large pans

ground. Tricolor would be a good name for the variety, for the colours, blended at first, but parting later, are green, cream-yellow and red, all in pleasing tones. A couple (out of perhaps fifty) I this year observe are cream-yellow, only red-shaded. I want to see if this beautiful character is persistent. It reminds me of *Nymphaea Chromatella*.—H. S. L.

NYMPHÆA MARLIACEA CARNEA.

AMONGST the many lovely Water Lilies introduced by M. Latour-Marliac there are few to surpass in chaste beauty this and its companion, *N. M. albida*, although many are more gorgeous. Both produce enormous flowers—8 inches or more from tip to tip of the petals. The first-named has the outside of the petal chocolate colour, which comes through to a certain extent, giving a most delicate flesh tint to the white of the interior. In *N. M. albida* the exterior is green and the flower the purest white.

turfy loam turned in; loam of that beautiful yellow, greasy texture which Roses so love, and wherein they can have a deep run. The imitation of next door comes in in the arrangement, but as my bed is distinctly inferior in this respect, perhaps I shall only be thought guilty of the imitation which is flattery. Along the further side of the bed, which is about 3 feet wide, are seven climbers of rampant growth - W. Allen Richardson, Kaiserin Friedrich, l'Idéal, Solfaterre, Gustave Regis, Climbing Souvenir de Malmaison, and Bouquet d'Or. These were chosen, avoiding red Roses like Reine Marie Henriette, partly because there are several red Roses on the walls, and partly because of the very strong sun here in summer, which will, I fear, turn poor William Allen into sad parchment, also partly because we have not got any of them elsewhere. They are supported, and here the inferiority comes in, by some branching Ash poles about 9 feet high, which are by no means equal to next door's nice neat Fir poles, with wire arches between. Perhaps the Roses may make the balance even; their rivals are only two, Gloire de Dijon and a smallish red Rose whose name I am not sure of, and which rather fades in colour in the heat and goes off in a depressing magenta. The Gloire, of course, is, being of old establishment and well cared for, a glory indeed; but I have a prejudice against this Rose's habit of perpetual heavenly aspiration. It fixes all its ideas on the sky, and too often resembles a Highlander with an immense feather bonnet and long bare legs.

I have been unable to get Fir poles. The present excuse, "on account of the war," was not advanced, strange to say, but they have not been cutting the woods about here. Last year I might have had them for the asking, and next year I shall have done without and be so

much the richer. Between each of the climbers, which have had ample room left them to expand, is a bush Hybrid Tea; these are chiefly pink, and at the base of each and 2 feet apart is a miniature or fairy Rose. The extreme outer edge of the bed is planted with yellow Viola Ardwell Gem, and its inner edge with pink Tulips, to be succeeded by *Nemesia strumosa*, now about to be sown in the greenhouse. The Violas, which so resent drought, can run their roots under the edges of the grass, and meanwhile they are greedily over-running the layer of top-dressing given to the Roses, which embraces them. These delightful little plants are a good instance for quotation apropos of the inertia and indifference of many amateurs. They—not the amateurs—have been improved almost out of knowledge within the last few years. And though they are not supposed to like the south of England they do well about here, and last for years if planted out of the hottest sun; yet I hardly ever see any, and where they occur only the commonest blues and dark purples, except in one instance where an enterprising and clever young gardener had bedded out some specimens as nearly black as it is possible for a flower to be. I cannot myself see any charm in these, though they are quaint and uncommon; but the loveliness of a wide spread of lilac, mauve or delicate tones of yellow, more or less denied to me for want of space, seems unpopular with owners of larger gardens. Of all Violas my favourite is William Neil, which catalogues always describe as "rose," whereas it is an exquisite shade of pale mauve or lilac, unapproachable except by one or two Clematises. Next to this I love Devonshire Cream; a bed of these two with a relief of fine rayless whites is a joy of clear delicate colour. I lost most of my new Violas last year through a delay in the

journey which brought them; the lapse of time was too much for them, and though the vendor, who was not in fault at all, generously replaced them in the kind way nurserymen who really take an interest in their clients have, the second lot were late in rooting and then suffered from drought. This year their reserved powers are bubbling up into a perfect frenzy of growth and spread. In the sunny border there is a delightful colony of the big Dog's-tooth Violets, which have been waiting to flower for weeks, with their mauve-pink buds so tightly shut up on the stalk that crouches to escape cold winds, and their charming spotted Arum-like leaves. None of the ordinary *Erythroniums* are even showing yet, the giganteum having here many weeks' start. The *Nymphaeas* have been safely planted, and a cold and splashy job it was. I also regret having referred to them before on account of two mistakes which undue haste led me into, and which several kind, if perhaps slightly contemptuous, friends have hastened to correct. One is that last year's *Laydekeri rosea* costs 15s. It did in last year's catalogue of the firm from whom I bought it; it is now reduced in price, and I am told can be obtained from France and the raiser for 6s.

The other error lay in my expressed determination how to puddle the miniature ponds with clay, a recommendation also out of date, and which I heard to be so before consummating the plan. The Lilies grow through the clay and take the water with them; therefore the better, as the much easier, plan is to leave the bottoms in the tubs used, which I have done. All my hardy *Primulas*, planted in groups over the irregular mounded rockery round the Lily tubs, are coming on fast. *P. denticulata alba* has won the race among about twenty sorts, and is in its snowball glory of round heads. The Abyssinian *Primrose*, with its delicate

scents, so thin and piercing, is out in the greenhouse close by. I think this one of the prettiest of spring flowers, the yellow is so uncommon and the powdered leaves so neat.

M. L. W.

Bathwick Hill, Bath.

OUR GARDEN PLANTS AT HOME.

ASPHODELUS RAMOSUS.

How often it seems that sentiment and stern fact are opposed to each other. There could not be a better instance of this than that afforded us just now in foreign newspapers, apropos of our affairs in South Africa, and of the different points of view taken of this classical flower in its native lands and in English gardens.

We love to see its tall flower-stems starred with milky-white flowers, little thinking that large tracts of land in Corsica, and I think also in Sicily, where this photograph was taken, are by the presence of this plant rendered barren and useless. Its foliage is poisonous to animals even when dry, and its scent is so harmful when in flower, that a Corsican prefect who ordered it to be mown down as an experiment was obliged to give up his benevolent idea, the mowers were all made so ill from its



THE GREAT ASPHODEL AT HOME IN SOUTHERN ITALY.

(From a photograph by Signor Ceppi.)



YOUNG GROWTH OF ASPHODELUS RAMOSUS ON THE COAST OF SICILY.

scent. In English gardens we have nothing of this. Our sun is not sufficiently hot to bring out its poisonous quality, and it does not over-run with its seedlings every inch of ground that is left untilled, so that we can enjoy its beauty, which is none the less real in spite of its offence in the eyes of men who know it at home.

A group of it in early summer is an attraction to any garden where there is room for broadly-growing plants, and it recalls sunny lands to those who have unfortunately suffered from its poisonous odours.

It would, however, be unfair to this striking plant to dwell unduly on its less amiable qualities, for in a great many places around the whole Mediterranean basin it is a thing of striking beauty.

As one example out of many, in the plain around the temples of Paestum few things are fairer than the tall spikes of *Asphodel* rising out of the thick undergrowth of *Julus* Tree scrub that flushes the whole plain with rose colour in April.

Our illustration shows one of its many homes near the sea in Southern Italy. The plants here are so much wind-swept, that they are of inconsiderable height; in sheltered places they are considerably taller.

E. H. WOODALL.

***Hepatica angulosa*.**—Though far from a novelty, an excellent form and full of flower was shown lately by Messrs. Paul & Son. This very satisfying member of the race is none too plentiful, particularly in those good sized clumps that make a real show in the spring garden. Like all the race, this delights in a quiet and shady spot where fairly uniform conditions prevail. J.

SOME OF THE RARER CLIMBING AND TRAILING PLANTS FOR WALLS AND PERGOLAS.

***Cosolpinia japonica*.** A prickly shrub from Japan, having light green pinnate leaves and racemes of pure, clear yellow flowers something like those of *Cassia floribunda*, but smaller and paler in hue. It is a distinct and effective plant even when not in flower, but should not be planted near walks and paths, as its formidable hooked spines or thorns catch at anything passing, and may do serious injury to children or others unawares.

***Ceanothus americanus*.** All the best of the *Ceanothus*s should be grown, as they possess a quiet and distinct character. The best kinds are *C. dentatus*, *C. floribundus*, *C. rigidus*, and *C. Veitchianus*. *C. americanus* is a dwarf kind with white flowers, and *C. Gloire de Versailles* is a very handsome garden seedling of a pale lavender hue. Layered plants are best, and they grow best in good rich loamy soil.

***Cobaea scandens*.** A well-known, quick growing perennial, easily reared from spring-sown seed and treated as an annual. There are three or four kinds, all natives of Mexico, but *C. scandens* and its pale-flowered ally, *C. macrostemma*, are the best, growing 10 feet to 20 feet in a season, and flowering freely until frost cuts them down. The yellowish variegated form of *C. scandens* is increased by cuttings, but is not so effective as the normal green-leaved kinds.

***Desfontainia spinosa*.** This evergreen shrub is singularly like a small-leaved prickly Holly in growth, but its vivid, orange-red, yellow-tipped flowers remind one of the old-fashioned Australian *Correas*, now far too rarely seen. It grows 3 feet to 10 feet in height, and comes from the Andes of Chili and New Grenada (1853). We grow it on a wall, but in Co. Wicklow I have seen bushes 6 feet

to 8 feet high and as much through, a glossy mass of glistening foliage, and thickly set with its pendent flowers during July, August and September every year. As seen at its best, it gives one a distinct impression not readily effaced. Both this plant and the sweet-scented *Osmanthus ilicifolius* might easily be mistaken for Hollies by the uninitiated when not in bloom.

***Fabiana imbricata*.**—This is a pretty and rather uncommon Chilean shrub, so nearly resembling a white-flowered Heath in habit of growth and flower, that few seeing it for the first time would hesitate to call it an *Erica*. It really is more nearly related to the homely Potato (*Solanaceae*). It is a very pretty shrub, and well worth a deep rich border and the shelter of a wall. Cuttings or layers root freely, and the plant grows 4 feet to 6 feet in height.

***Porsythia suspensa*.** This is a favourite plant of mine, and does well in any soil or aspect; topping a wall, its branches toss up against the blue sky in March or April covered with pendent yellow blossoms. A lady who saw it here in full flower, said it reminded her of a swarm of golden bees. It comes into flower just after the Golden Winter Jasmine, and ordinary people often mistake it for that plant. It is so easily increased by layers or cuttings, that it ought to be generally grown over walls, pergolas, and dead trees 10 feet high or so. There are two or three other kinds, such as *F. Fortunei*, *F. intermedia*, and *F. viridissima*, all worth growing, but *F. suspensa* is the most free and graceful of all.

***Hypericum triflorum*.**—This is a large and distinct species, growing 5 feet to 10 feet in height, and bearing its great, solid, golden flowers in clusters of three at the tips of its shoots and branches. The flowers are as large as those of *H. calycinum*, but with the texture of the blooms of *H. oblongifolium*. A compost of turfy loam and leaf-mould suits its wants, and it should be planted

in a sheltered nook or corner. The plant is said to be wild on mountains in Java at 8000 feet to 9000 feet, where *Primula imperialis* is found.

Milicium pecun.—This species and *I. anisatum* are considered sacred by the Japanese, who use the flowers in their temples. The plant is not showy, having pale green, laurel-like leaves and axillary incurved flowers of a pale yellow or ivory colour, with the smell or fragrance of aniseed. The plants are related to the Magnolias, and succeed under conditions favourable to the Winter Sweet, or *Chimonanthus fragrans*.

Lapageria rosea.—This distinct shrubby Lily, sometimes called the Chilean Bell flower, is now and then very handsome on a sheltered north wall. I have seen it in Co. Wicklow, also in Devon and in Cornwall, where it luxuriates and flowers freely even as late as Christmas Day. To begin with, a border of good loam and peat should be prepared on a bed of clinkers or scoriae. Plant in May or June, and protect the crowns from slugs and snails, or they eat off every young shoot as it appears.

Leptospermum scoparium.—This is often called the May Tree of New Zealand. *L. lanigerum* is another kind from Australia, with hoary leaves and white flowers. They both grow well in peaty soil at the foot of a sheltered wall and flower very freely, their Hawthorn-like blossoms being slightly scented.

Magnolia grandiflora.—One of the best and noblest of all evergreen trees for walls and court-yards, no other kind of plant having quite its beauty of leafage in sun or shade. The Exmouth variety, with red tomentum underneath its leaves, is one of the best to grow, as it flowers freely. One of the finest old trees of *M. grandiflora* I have ever seen in Ireland is growing on the walls at Courtown House, Co. Wexford, and in the grounds there is the finest specimen of an old evergreen Oak (*Ilex*) I remember noting anywhere. All the best of the deciduous kinds also should be grown, as they do well south of London. The Rev. Mr. Ewbank has beautiful specimens in his Isle of Wight garden, where I have admired them in April when gorgeously in flower on the walls. Even *M. Campbellii*, which so far has flowered in the open air at Lakelands, Cork, and in Devonshire, might be tried in sheltered places; but as it becomes 30 feet to 50 feet in height, it requires plenty of room.

Mutisia decurrens. This is a beautiful Chilean climbing shrub rather capricious in its likings, but does well in deep rich soil where its rhizomes can run freely. The late Mr. John Ball tells us that the *Mutisias* grow over bushes of *Colletia* in their native wilds, and that might be one way of growing them in our gardens. I first saw the brilliant Marigold-like flowers of this plant at the door of Glendinning's old nursery at Turnham Green, where it grew splendidly amongst the variegated Japan Honeysuckle. Its glaucous winged stems remind one of *Lathyrus*; the great Daisy-like flowers are 4 inches or 5 inches across and of a fiery orange. It is worth any trouble to succeed with this unique plant.

Nuttallia cuneiformis. This is an erect-growing Californian shrub, but not at all of a showy character. Its bright green leafage and spikes of almond scented blossoms are produced very early, often in January, and form a fresh green contrast to the winter Jasmine and the red-blossomed *Cydonias*. Small plants in pots bloom very early, say at Christmas, in a greenhouse or conservatory, where their perfume is very grateful. It is a shrub rarely seen except in old-time gardens.

Plumbago capensis. This exquisite blue-flowered trailing shrub has long been known in our gardens as a greenhouse plant, having been introduced from South America in 1826. Of late years it has been used as a sub-tropical plant in the London and other parks and gardens, being plunged outside in May or June. It is hardy in warm and sheltered seaside localities, and flowers freely during the summer and autumn season. We can never expect the sheets of pure soft azure it yields in Spain and Morocco.

F. W. B.

(To be continued.)

GARDENING OF THE WEEK.

ROSE GARDEN.

PLANTING.

NO one who has the choice will substitute spring for autumn planting of Roses, but as circumstances often hinder the earlier planting, one is obliged to wait until spring-time. At this time Roses may be successfully planted if a few simple rules are observed, the two most important relating to the condition of the soil and the quality of the plants. Whenever practicable the ground should be ridged or trenched some few weeks before planting in order to bring it into a workable condition. In planting carefully spread out the roots, and tread firmly after shaking some soil among the roots. It is most important just now to moisten the roots prior to planting; in fact, I prefer to soak the whole plant in water for an hour or two and then dip the roots in some thin mud. Round each plant leave a saucer-like hollow to facilitate the application of water, which is essential if we should have a spell of dry weather. When the plants appear to have laid hold of the soil, this hollow should be filled up with some fine soil and the ground well hoed or lightly forked over.

The plants should be dormant. Most growers at this time of year have bushes and standards that have been heeled in, and consequently remain longer dormant than those not moved. It is a good practice to prune such plants fairly hard before planting, cutting the shoots back to five or six eyes. In the case of Teas I have transplanted as late as April 20, and they grew and flowered abundantly the same year much later than plants earlier planted, thus prolonging the flowering season.

If any very prominent gaps require filling up, it is best to procure plants in pots. Those known as extra-sized, although they may cost a little more, are well worth it, and if very carefully transplanted they thrive remarkably well, and are soon upon an equality with bushes planted in the autumn. Do not harbour decrepit, unsightly plants, thinking that they will become healthier. One may often observe miserable sticks that pass for standard Roses spoiling the effect of those that are healthy. It is better to have their places vacant than that this should occur.

DWARF STOCKS FOR BEDDING.

this summer may now be planted. As one cannot obtain good Roses without careful preparation of the soil, neither can one expect good, healthy maiden plants if the stocks are planted carelessly. A few rows of Manetti or seedling Briar planted across the kitchen garden, which is generally in a good fertile condition, if budded with one or two leading kinds, such as *Caroline Testout*, *Mrs. John Laing*, *Ulrich Brunner*, *La France*, &c., would provide some fine plants, from which grand blossoms with long stems could be cut for house decoration a week or two later than the permanent Roses.

CUTTINGS.

inserted last September must be looked over at once. Push down those that appear to be raised by the frost and tread the soil up to the cuttings, then give the surface a good hoeing and see that a nice tilth is maintained.

Layers of old-fashioned Roses, rooted cuttings or seedlings of *R. rugosa*, *Sweet Briar*, and others may now be transplanted to their permanent quarters.

BUDDED STOCKS.

must now receive attention. The dwarfs should ere this have had all the "wild" growth cut away above the inserted bud and the ground lightly dug over. Clear the soil away from the bud to expose grubs should there be any.

THE PRUNING OF TEA ROSES.

should now be taken in hand. Where the growths are sound, with white pith, they may be left a good length if a quantity of blossom is desired. If, however, the recent frosts have damaged the wood, cut back hard. Very often a promising growth has a large brown blotch on it, which

betokens injury from frost or other cause, and it is always best to cut past such blemishes. Although I do not advocate hard pruning of Tea Roses as a general rule, I have proved the beneficial effect of severe pruning every three or four years. Many could affirm that they never had such fine Teas as followed a severe cutting back occasioned by a sharp winter.

Suckers upon Rose plants must be removed with a spud as close to the root as possible. If well done now a great deal of future trouble is saved. Hoe the surface of the beds and borders, never allowing a hard, baked condition of the soil.

PHILOMEL.

INDOOR GARDEN.

PROPAGATING.

CUTTINGS of many things which have been put in early, such as *Crotons* and the general run of mixed stove plants, will by this time have been potted off and re-established in small pots, thus relieving the propagating boxes and making room for those things which have to be grown in large batches.

EPITHORRIA JACQUINLEFLORA.

will be one of the first of these to be worked up, and as fast as the new growths reach a length of about 2½ inches they should be cut off close to the old wood and inserted in small pots of peaty soil containing a considerable amount of silver sand. Water well in, plunge at once in bottom-heat, and cover with bell-glasses or hand-lights, which will need keeping close, except for a few minutes daily, until they strike. The method of growing this plant generally adopted is to grow on the cuttings for a while, potting them singly, and then pinching them to induce several shoots to form on each plant. The weaker cuttings, on the other hand, are best grown on without stopping, and in this case it is best to pot up three or more in a pot. The latest cuttings make nice little plants if put in thicker still; these will not run up tall, but will flower with tolerable freedom. The present is a good time to start a batch of *Poinsettias* for early cuttings. I prefer to begin now by putting the cut-back stools into an intermediate temperature rather than to wait till later and then force them on in more heat. Just at first very little water will be needed by these plants; indeed, what they receive from frequent syringing will be quite sufficient to begin with.

BEGONIA GLOIRE DE LORRAINE.

Cuttings of this *Begonia* put in during this month make the very best plants, and are not so liable to become stunted in growth as are those put in earlier. To give them the best possible chance of making headway, all flowers should be picked off as they develop. Keep the cuttings in a humid, close atmosphere, but do not give much water, as an excess of this would be sure to cause damping off. I have seen it stated lately that leaf cuttings of this *Begonia* are the best, and am giving them a trial, but I do not see how it is possible to beat the results obtained from April struck cuttings which are properly treated and not allowed to become infested by thrips.

BOU VARDIAS.

Root cuttings of these are better than stem cuttings, especially when the old plants have been heavily fed with artificial manures last year, for stem cuttings of such plants frequently refuse to grow away well. To obtain the roots for propagation, the old stools should be shaken out, and the thickest of the roots should be cut up into short lengths. These should be inserted in pans of light sandy soil and placed in the propagating box, where they will soon begin to develop new growths.

GENERAL WORK.

By the time these notes appear the weather should have become finer and more genial, so that freer ventilation in each department will be advisable, most plants deriving much benefit from a good circulation of air during the earlier part of the day, followed in the afternoon by fairly heavy syringing at the time the ventilators are closed, and the temperature allowed to run up with sun

heat. Of course it will be necessary to be cautious in ventilating Roses and other subjects liable to mildew through the lower ventilators, or in creating draughts in any way when the air is cold. Keep down insects among young and old stock of all plants, especially with the former, as young plants are so easily crippled if neglected for a few days. With such things as Carnations it is not wise to wait till the insects are seen, as they frequently do their worst work out of sight. J. C. TALLACK.

Shipley Hall Gardens, Derby.

KITCHEN GARDEN.

THE FORCING HOUSE.

For some time there will be a great demand for forced vegetables, the principal thing needed being such things as French Beans, Cucumbers and Tomatoes, and these will require glass protection well into June. The season being a late one, I fear there will be a scarcity of hardy green vegetables. In addition to the things noted above there are various other vegetables that will repay a start under glass, and, of course, in all gardens

CELERY

is an important crop. This plant for early supplies should now be making free growth, and it is a common failing to crowd the seedlings in their early stages. This should be avoided, and if possible prick off the plants as soon as they are large enough to handle. I find it a good plan to prepare a frame with a little warmth from manure, and the seedlings when grown thus near the glass are much sturdier than in hothouses. These plants when placed in their permanent quarters will then give room for Vegetable Marrows, or even a later lot of Celery, as then bottom-heat will not be necessary. It is well to make the trenches for the early Celery at this date in readiness for the plants. There is now no necessity to place Seakale indoors for forcing, as a late supply may be had by covering it in the open, but sufficient cover must be given to thoroughly blanch the growths.

FRENCH BEANS

should be sown for the May supply, larger pots being used, and I would advise frame culture in preference to shelves in fruit houses, as at the time these mature, red spider will be troublesome. I find it a good plan to sow in 8-inch pots, to place in a warm place to germinate, and when 6 inches high transfer to the frames, half plunging the pots in the soil to save watering. If there is convenience to plant out in a warm bed the return is greater, as by feeding, two crops may be obtained from the same plants if, after the first crop is gathered, they are top-dressed, picked over, and kept close and moist for a short time. Canadian Wonder and Progress are excellent for this crop, making strong growth in the spring.

TOMATOES.

I briefly referred to these earlier, and now is an important time, as the plants will need ample attention in such matters as setting and topping, or regulating growth. In warm houses in bright weather, with plants in bloom, it will be well to give air more freely, and should there be any tendency to weakness, a little top ventilation at night will be beneficial. Plants so far have set very badly, but with more sun and light there will be more success. Succession plants should be potted on or planted out, and those who require late supplies will do well to make another sowing for this purpose. It is best to sow in frames, as the sturdier the plants the better they crop, and to do these plants justice they must have ample light and a free circulation of air. Plants being prepared for walls or planting in the open should be treated as advised for those for succession, and these being required to make their growth in a short time should be as strong as possible when planted. It is well, if sown early, to give another shift, as if root-bound they lose colour and become stunted.

MUSHROOMS.

In many gardens there is a demand for these all the year round, and the greatest difficulty is to supply them when they are grown in heated Mushroom houses. For a summer supply beds should now be made in the open, and if manure is plentiful I would advise their being made ridge-shaped and a good width, say 3 feet to 4 feet at the base and half that space at the top. This is a convenient shape, and such beds are more readily protected. Those who have a cool cellar can grow a good crop with little trouble, and here smaller beds may be made if manure is at all scarce.

HERBS.

The herb border should be given attention at this time. Mint and Thyme should be divided, or new beds prepared for Mint. I prefer the latter, taking cuttings when 4 inches to 6 inches' growth is made, and dibbling 6 inches apart in rows 12 inches apart. Sage and other strong growers should be cut down to get a new growth from the base. Sweet Basil or any other herbs grown from seed should be sown in frames. Parsley sown now will be valuable next autumn and winter.

G. WYTHES.

Syon House Gardens, Brentford.



MELON BEAUTY OF SYON GROWN IN A POT.

THE FRUIT GARDEN.

MELONS IN POTS.

ANY persons do not grow Melons on account of previous failures either from non-setting or gross growth. I advise such to try pot culture, as the Melon grown in pots rarely fails if given good culture, as with the roots confined the plants may be fed freely and the growth is less robust, and in my experience every shoot, if allowed, will bear a fruit. Pot Melons can be matured earlier than those planted out; they give less trouble, need less soil, and more plants may be grown in a restricted space. The plant illustrated will show how pot culture tends to fertility and also restricts growth, though the fruits do not attain the weight of those planted

out; but it will often be found when Melons are exhibited that a medium-sized fruit is much superior to a large one. The fruit illustrated is a scarlet-fleshed variety, the Beauty of Syon, and, unless restricted at the root, is a very free grower. Any variety may be grown thus, and I will briefly mention the chief points of culture.

The best season for pot Melons is from April to September. I have grown them much later, but do not advise it, as they are of very uncertain flavour in the winter, even when a good set has been obtained, as without sun-heat, no matter how well grown, Melons have often a poor flavour. Though a fruit may be handsome and well finished, it is not certain that the quality will be equal to its appearance. A great deal depends upon the final ripening of the fruits, as if cut too early they will be of poor flavour, and if left too long in a damp, hot house they are insipid. With pot culture more attention can be paid to these details: water can be withheld and more air given; indeed, I have removed the plants bodily to a dry, warm house if any later fruits in the house needed different treatment. Of course, to do this smaller pots are necessary, but two or three excellent fruits, weighing two to three pounds each, may be grown on a plant in a 14-inch or 16-inch pot.

To get good pot plants in summer, seed may be sown in April, and these plants should mature fruit early in July if grown under favourable conditions; but a hard-and-fast rule cannot be laid down as to time, as so much depends upon the house and temperatures given. As with Cucumbers, the treatment as regards heat and moisture must be generous, though the Melon needs more sun and a freer circulation of air from the flowering stage. I advise sowing the seed in small pots, one or two seeds in each, growing near the glass from the time of germination, and thinning to the strongest plant if more than one seed germinates. At the time of sowing it is well to prepare the fruiting pots, as these will be needed for planting in a short time. As regards the size of the pots, a great deal depends upon the house in which the plants are to be grown, and if the space permits the use of 16-inch or 18-inch pots. I prefer this size for some varieties. I have found the excellent Hero of Lockinge do grandly in even larger pots; but these were plunged, and of course were stationary from the first. Many growers prefer to pot on the seedlings from the seed pots into 5-inch or 6-inch pots before planting out, and it is a good practice, but so much depends how the seedlings are grown. I have adopted both plans, that is, potting on and planting out direct, and I think the latter a saving of time. Whichever course is adopted, if a little bottom-heat can be given the plants, there is no fear of failure. If bottom-heat cannot be given—and it is not a necessity—I prefer to pot on the seedlings so as to obtain strong plants before planting out. For my part, I frequently stand the pots on bricks placed over some return pipes in a forcing house, this keeping the soil just warm without drying it excessively.

The compost used for pot culture may with advantage be richer than that for beds, though it must not be too porous or light. A suitable soil is a heavy loam, with some bone-meal added, and ample drainage, and as growth is made, feeding freely will keep the plants

healthy. Firm potting is necessary, no matter what soil or sized pots are used. It is important to secure the first fruits that show, and not to aim at too many on a plant, in all cases leaving the fruit on the strongest shoots, and not stopping these too close beyond the fruit. From the first tie in healthy shoots at regular distances over the plants, removing weak or useless spray. With the roots in a limited space, much more food may be given in the shape of liquid manure and top-dressing after the fruits are set. The latter may be done by building up rough turf round the sides of the pots and filling in with a rich and finer compost. G. WYTHES.

GAGE PLUMS.

I do not think Gage Plums receive as much attention as formerly, though they are unequalled for dessert, tarts and jam. Of course most varieties require a warm wall or orchard house, but the old Green Gage, Jefferson's Gage, Oullin's Golden Gage, and Bonne Bouche Gage succeed as standards in warm soils and situations.

Unfortunately, birds are so partial to the buds of the old Green Gage that they take all the best of them in winter, and on this account one seldom sees a really good crop of fruit on standard trees. Probably if the trees were syringed a few times during winter with quassia extract, birds would not interfere with them.

I think the two richest flavoured Gages are the old Green Gage and Denniston's Superb. The latter is not so well known as it should be; the fruit is rather small, but all who have tasted it will admit that it is unsurpassed for quality, and the tree bears prodigiously, seldom requiring root pruning. The fruit will hang a long time, and when partly shrivelled becomes a perfect sweetmeat. Bryanston's Gage is indispensable, being a capital cropper and the fruit large, rich, and juicy. McLaughlin's Gage is a grand variety, though seldom met with. Young trees of this variety bear freely, the fruit being large, round, handsomely coloured and freckled, and the flavour wonderfully good. It does well in the midlands. Oullin's Golden Gage should be grown in every garden, whether in the north or south, as it possesses every good quality that may be expected in a Plum, and is an early and abundant

cropper. Transparent Gage, although a fine, richly flavoured Plum, is a very strong and awkward grower, and requires careful culture and a soil free from manure. It forms its fruiting spurs a long way from the wall, and must occasionally be hard pruned, piecemeal, to keep growth within bounds. It often gums badly in strong soils. I consider Early Transparent Gage a more reliable variety and quite as richly flavoured, though not so large. Jefferson's Gage is a general favourite, and deservedly so, as it succeeds admirably under wall culture, even in the north, and as standards and pyramids in warm districts. No fault can be found either with its appearance or flavour. Of Purple Gages, Angelina Burdett and Blue Gage are the best, the latter being handsome and delicious, and one of the best for pot culture. The Gage Plums are so agreeably flavoured, that it is well for those intending to grow this class

of Plum to make a very careful selection of the best. It is to be hoped that this class will be more grown in the future, as it deserves good cultivation over a wide area. For growing in the north it will be necessary to select the hardiest varieties, and to plant the trees in sheltered positions if they are to succeed.

J. CRAWFORD.

AN ARTIST'S NOTE-BOOK.

SMILAX ASPERA.

ALL who have lived or travelled in the region of the Mediterranean basin must be familiar with this graceful climbing plant, for its distribution is wide throughout that region, and its habit is so distinct, that, except for one small Algerian *Aristolochia* which somewhat resembles it, it is hardly likely to be confounded with any other plant.

It climbs mainly by the aid of the prickles on the stems, but the backs and edges of the leaves are also prickly, helping to sustain the plant as it scrambles over rocks and bushy growths. The form of the leaf, though usually that of a broad lance-head, with distinct shoulders, is extremely variable both in size and shape, for though usually of the broad lance-head pattern, it is sometimes like a wild Ivy or *Convolyulus* leaf. We have a drawing from life of one leaf as much as $4\frac{1}{2}$ inches long by 4 inches wide, another where the breadth of 3 inches taken across the wide round shoulders exceeds by 1 inch its length of 2 inches. In this leaf, though the shoulders are so round and wide, the point of the leaf forms a nearly exactly equilateral triangle for the last three-quarters of an inch.

On this point Mr. Daniel Hanbury says in his "Pharmacographia": "The common *Smilax aspera*, L., of Southern Europe is a plant which presents such diversity of foliage, that if, like its congeners of tropical America, it were known only by a few leafy scraps preserved in herbaria, it would assuredly have been referred to several species."

This pretty plant bears an axillary spike of small fragrant whitish flowers which are followed by a bunch of Red Currant-like fruit. The leaves are sometimes marbled or spotted with dull white markings. It is a plant that, though



SMILAX ASPERA, SHOWING
VARIABILITY OF FORM.

(From a drawing by H. G. Moon.)

common, is always interesting and pleasant to see, and we may enjoy it in our home gardens against a warm wall in the southern countries.

Its near relations of the tropical regions of Central America and the West Indian Islands yield the sarsaparilla of medicine.

Smilax aspera, which is a true *Smilax*, is not to be confounded with the plant so-called in flower shops. This is not *Smilax* at all, but *Myrsiphyllum asparagoides*. The popular name *Smilax* for this plant originated in the United States, no doubt on account of some likeness of growth and habit. The name, though misleading and only of recent origin, seems to have become fixed in the language, and is another example, of which a few exist already, of the botanical name of one plant being used as the popular name of another.

CRESTED OR FRINGED CYCLAMENS.

The group of crested or fringed Persian Cyclamens from the St. George's Nursery Company, Hanwell, at the last March meeting of the Royal Horticultural Society was of unusual interest. We have long known of this curious departure from the normal form, and, as we have already expressed in our leader on page 269, can only regard these novel forms with mixed feelings. In many cases the colour is crude and the fringing scarcely pretty, but by careful selection of the more simple variations a new race of much charm will be given to our gardens. In our former remarks we mentioned that "it is a pleasure to be able to give unstinted praise where it is due, and the firm had among its smooth plants, justly placed in a central position of honour, a Cyclamen of a colour hitherto rare, but of incomparable beauty—a soft shade of salmon-pink, a colour new to the race."

The Persian Cyclamens of the St. George's Nursery Company are renowned for their beauty, and it is interesting indeed to see this new break away, not merely in the cresting of the flower, but of the leaf also. We illustrate one of the most simple of the Papilio forms, in which the clear outline of the finer varieties of the older type is preserved, the cresting adding quite a dainty finish. We hope this firm will endeavour to obtain as many varieties of the same kind as represented in our illustration, clear and beautiful in colour, and margined with a pretty fringe.

The Papilio race, which was first sent out by M. Delange, of Brussels, is likely in the near future to compete in popularity with the forms familiar to us in all good greenhouses in the late winter and early spring.

THE ROSE GARDEN.

SAFRANO AS AN INDOOR ROSE.

PROBABLY there is no more useful Rose of its colour than this old favourite. Not even Madame Faleot or Madame Charles can compete with it from the florist's point of view. If grown as a garden bush the flowers of Safrano are pretty, no doubt; they are, however, thin and quickly fall, but seen under glass where the plants are nourished and well cared for one would hardly recognise it as the same kind. Recently I saw some thousands of this variety in a noted florist's establishment. Most of the plants had been in the same pots (12-inch) for four or five years, and they

looked the picture of robust health. When in full growth, the bushes, which were some 4 feet in height, are given cow manure in liquid form about three times a week and a sprinkling of some good quick-acting artificial manure about every three weeks. In order to keep the plants free from mildew a temperature of about 58° should be care-

fully maintained, and the more regular the temperature can be kept, the more successful will be the culture. The plants will require to be looked over every morning and water given to such as need it, and about 10 a.m. the syringe should be used freely. If the day be a bright one, afternoon syringing is necessary, but not otherwise. The blooms should be cut in the evening in a very young state and placed in pots of water in a cupboard. One or more of such cupboards, situated in a cool store-room or adjoining the potting shed, should be found in every good garden. One of our largest florists has his store-room for cut bloom built over a brook, so that under the lattice-work pathway the water of the brook is seen. Ordinary pots, cast without holes for drainage, make excellent receptacles for the cut blooms where they are produced on a very large scale. Flowers, especially Roses, take up a lot of water during the night, and consequently last much longer the next day. They are really better in such cupboards when they have reached a certain stage than they would be upon the plant, and some varieties, notably Madame Hoste, improve in colour and substance under these conditions. When the flowers are cut the shoot is separated within 1 inch of the old wood. This not only gives a good long stem to the flower, but it also conduces to a stronger new growth breaking out to keep up the supply.

AMONG THE ROSES IN APRIL.

APRIL is always a busy month among the Roses, whether in the open or under glass. Only those who are growing quantities, both indoors and out, and in different stages, can realise how much attention Roses require at this season.

IS THE OPEN.

To-day (April 4) we have been planting several hundreds of what trade growers call "cutting maidens," 700 plants budded in 1898, and not of sufficient strength for the private grower's planting during this season. Often enough it is later than this before the trade grower can secure suitable weather for his own planting, and it is

most interesting to note the differences between plants moved late and those lifted in November. I mention this late planting because it is often the case that amateurs fear to shift their plants after the early part of February. Providing one takes due care to avoid the drying effects of wind and sun at this season and prunes the plants back closely, very good results are often obtained from late April plantings. One very important point is to cut back the plants to the lower eyes at

the time of transplanting. This gives them a much better chance, and prevents the wind and sun from drawing the whole of the conserved moisture from the roots to support wood that will soon be cut away. In the meantime the roots start into new growth with remarkable rapidity now that the ground is warmer and all conditions more congenial than during winter.

There are very few of us who have not noticed how quickly a newly-lifted Rose plant makes fresh roots when laid in for a time after being received from the nursery, especially when placed in light soil. Then why not take advantage of this, and afford our late-planted Roses a little prepared soil? There are only a few plants to fill in here and there, and the trouble is well spent. When pruning, and also when laying out new grounds, we often find a few more Roses wanted long after the usual season for planting is past.

By this time all budded stocks should be cut back close to the Rose-bud. I am aware that many do not cut their stocks back close, preferring to leave a few inches of the stock beyond the bud, but if we think a little we find that it is best only to cut once, as there is then only one wound to heal over. Besides this, in the majority of cases the wood beyond the Rose-bud dies. If it does not die it produces suckers, and this necessitates a second wound in removing them.

With standard Roses I always take the trouble to cover the wound with some form of mastic. A



CYCLAMEN PAPILO, OR THE CRESTED CYCLAMENS (LIFE SIZE).

(From a drawing by H. G. Moon from flowers sent by M. Delange, Brussels.)

fully maintained, and the more regular the temperature can be kept, the more successful will be the culture. The plants will require to be looked over every morning and water given to such as need it, and about 10 a.m. the syringe should be used freely. If the day be a bright one, afternoon syringing is necessary, but not otherwise.

The blooms should be cut in the evening in a very young state and placed in pots of water in a cupboard. One or more of such cupboards, situated

capital mastic can be made by warming up half a pound of pitch, a quarter of a pound of tallow, and two ounces each of resin and wax. I have also found that half a pound of pitch and half a pound of cheap "composite" or wax candles answer the purpose admirably. Either can be easily applied with a stiff brush and in a lukewarm condition. Briars, and Roses generally, are affected in some districts by the larvæ of the stem-boring saw-fly, which eats through the pith and often buries itself so low as to kill several inches of the main stem of our standard Roses. The above mastic is used to prevent this enemy, and the labour is well spent. I have never noticed this pest upon the Manetti stock in alarming quantities, but upon the hedge Brier, and especially upon the Hybrid Sweet Briars, it is a terrible nuisance in some localities.

When the stocks have been cut back and Rose plants pruned, we naturally turn towards cleansing and cultivating the ground between them. Do not make the mistake of leaving several small pieces of old prunings and dead wood upon the ground. A considerable number of fungoid diseases, as well as insect pests, are often harboured in such prunings, and it is better to burn them as soon as possible. Mulching can be done to advantage now. I do not care to see too much manure lying upon the surface of my Rose beds. To my mind we lose much of the fertilising properties in the drying atmosphere, and the roots do not benefit nearly so much as when the fertilising juices are washed down to them. While strongly against digging between Roses in the ordinary way, I believe we can do much good by very shallow forking in of the manure without injuring the surface roots. Not only do we preserve the whole food supplied by the manures, but we loosen the soil just sufficiently to help the hoe later on.

Do not allow any long shoots upon dwarfs or standards to sway to and fro in the wind. When a plant sways about, a hole is formed which collects water and is liable to be frozen, to the great detriment of the plant. Swaying also breaks and wrenches off a large number of the most valuable new roots, and a little time spent in staking early in the season will never be regretted.

INDOORS.

Bright sunshine accompanied by keen winds is most trying to Roses under glass. We do not want to lose the influence of the sun, and yet to leave the glass clear necessitates more air and ventilation than can be given with safety during the prevalence of keen winds. Only a very slight shade is needed; in fact, just sufficient to break the burning glare of a bright mid-day sun. The intensely bright days towards the end of March will account for much loss of young foliage, and from several correspondents I hear that their Roses have lost young, half-matured leaves in great quantities. It is the same with ours, and I am certain, from close observation in the past as well as during this season, that the strong sunlight has a great deal to do with their falling. A slight shade allows of more moisture being afforded overhead, while one can regulate the temperature much better. Only a few minutes' sunshine causes so much higher a temperature, that one is tempted to open the ventilators, and as soon as this is done we may look for mildew, while green-fly seems to increase faster than ever. Plenty of moisture in the atmosphere will help growing Roses during such times, and when a slight shade is afforded at the same time I would prefer a temperature of even 80° to the risk of ever so slight a current of cold air from the outside.

Insect pests are numerous, and the different insecticides recommended almost equally so. Having tried a large number, I have come to the conclusion that soft soap and quassia chips are the safest and most effectual. The XL All is excellent for fumigating, but I would by no means depend upon that alone. Syringing and fumigation combined have proved far the most successful here, and when used together there is no necessity for risk from strong solutions, while we kill and cleanse at the same time. There is little good in killing the aphides alone and not washing them off. Nor do I find anything in the way of fumigation thoroughly

effective with red spider and thrips. Our plan is to use both, to use them freely, and to use them weak.

Established plants in pots may well have a bi-weekly watering with liquid manure. I find none better than the drainings from a cow-stall. It puts colour into both flowers and foliage, while the ammonia rising from it is a great help in itself. It is not wise to water with a strong solution, nor to give stimulants to plants while over-dry at the roots. Keep stale leaves picked off and occasionally loosen the surface soil. RIDGEWOOD.

THE KITCHEN GARDEN. CAPSICUMS AND CHILLIES.

THESE are not only extremely useful from a culinary point of view, but when well cultivated are highly attractive, and much appreciated for decorative purposes. During the last few years many new varieties have been introduced which are a distinct improvement on the older kinds. They require generous treatment.

The seed should be sown in heat from the end of February till the first week in April, and immediately the seed leaf has fully developed they should be potted off into 3-inch pots in a light compost, and grown on near the glass on a shelf in the forcing house. After the pots become filled with roots, pot on into well-drained 6-inch pots in a compost of three parts good fibrous loam and one part of finely sifted horse manure, using sufficient coarse silver sand to keep the mixture porous. The soil should be made quite firm about the roots. Continue to grow on in heat near the glass, syringe the growth thoroughly twice daily, and fumigate often to keep down green and black fly, both of which are especially troublesome.

The plants should never suffer for want of water at the roots, and after sufficient fruits are set, manure water should be given at every other watering, and the plants will be much benefited by a surface-dressing of half-decayed cow manure. The plants should be neatly staked, and during the summer months may be removed and grown in a cold pit or frame, but on the approach of cold nights they should again be returned to a warm house, when they will last in great beauty during the greater part of the winter. They make excellent table plants, and prove highly attractive at our autumn and winter exhibitions when presented in good condition and shown as berried plants. Among the best and most distinct kinds to grow are Prince of Wales, Princess of Wales, Golden Dawn, Little Gem, Mammoth Long Red, Red Giant, Long Yellow, Long Red, Coral Red, Black Prince, Piquy and East India Cayenne.

E. BECKETT.

IRIS RETICULATA.

I AM indeed pleased to see that your readers are taking an interest in that lovely hardy bulb *Iris reticulata* and its still handsomer relative the major form. This interest presumes an extended knowledge of them, which shows that they are being more largely grown than has hitherto been the case. But there appears to be some misapprehension as to whether the major form is distinct or not. I purchased *I. r. major* from Herr Max Leichtlin at a high price about six or eight years ago (one dozen bulbs). We have now many thousands, which are an annually recurring delight and surprise. They grow here quite as freely as ordinary Croci, and carry flowers nearly double the size of those of the *Iris reticulata* which we have grown at Langport for very many years. I remember how the late Frank Miles used to admire the type, going down on his knees to take his fill of its early beauty. How this new form would gladden his heart! I think someone questions the fact of its being as sweet as the old smaller kind. It is quite as fragrant; but it, and for the matter of that the

older kind as well, will not waste its sweetness on the frosty air. Pluck it, cherish it, take it into a warm room, and it will repay the attention in a few moments with a flood of fragrance, the sweetest scent, I think, that I know. But one has no impartial eye or nose in cold February or colder March. *Iris reticulata major* is queen in the hardy border at that season of the year, robed, as is fitting, in regal purple and crowned with gold. I do not see why it should not do well in nearly any garden border, given sound bulbs devoid of fungus to begin with. Our soil is fairly heavy, not sandy, and certainly not peaty, as recommended in your columns, yet the bulbs thrive as I have said.

I see that a portion of my letter answers a question of Mr. Engleheart's: "Is there a major variety?" Distinctly, yes; of the same colour and markings as the type, but nearly twice the size. We have them growing in beds side by side, so there is no doubt about the matter.

Langport, Somerset.

J. KELWAY.

It is to be regretted that this *Iris* is not more grown, as no spring-blooming plant in the open more deserves extensive cultivation. Having grown it more or less extensively for more than twenty years, and that in different parts of the country, I can endorse all that Mr. Jenkins says in its favour, and also with regard to its requirements as to soil, &c. Nowhere have I seen it grow more luxuriantly than in the gardens at Diddington Hall, Norfolk. Here the soil is of a light sandy nature, deep, and with a moist bottom. In the borders in the kitchen garden and elsewhere it thrives wonderfully, even the smallest bulbs soon coming to blooming size. So freely do they grow, that the bulbs soon become massed together, and have to be taken up and divided. The large clumps give an abundance of fine flowers for gathering for vases, &c.

Some years ago I obtained bulbs from this garden and planted them in large groups in our hardy plant border, which is well drained and faces south. The only attention they receive consists in clearing off the old foliage in autumn, forking off the top soil, and adding some old potting material. Last month in a clump 2 feet across I counted sixty to seventy blooms either open or opening, and many more to follow. The foliage with us attains a height of 2 feet, and the blooms are strong in proportion. It has often puzzled me why gardeners who need a lot of cut flowers do not grow it considering the amount of lovely blooms to be had from good plants. JOHN CROOK.

Two correspondents draw attention on page 262 to the losses sustained through *Iris reticulata* being attacked by disease. The failure of this charming spring flower is probably more often attributable to fungoid infection than to unsuitability of soil, though an adhesive loam unlightened by any addition of road grit or sand to increase its porosity is not conducive to successful results. Recently a case came under my notice where the disease was imported into a garden in which several hundreds of these *Iris*es were growing in the most robust health by the introduction of a few dozen fresh bulbs. These bulbs evidently brought with them germs of the fungus, as they all died and quickly communicated the disease to the original occupants of the border, which succumbed in like manner. Luckily, as in Mr. Engleheart's case, where the kitchen garden proved beyond the zone of infection, there was in this instance an uncontaminated spot where these *Iris*es were immune from the disease and have remained until the present day the picture of health. This sanctuary was a bed only a couple of yards or so from the ruined border from which it is divided by a gravel path, so that it would appear that the interposition of a barrier of closely-packed stone and gravel between two patches of cultivated ground was sufficient to check the spread of the disease from one to the other. Mr. Engleheart asks if a true major form really exists. Certainly flowers of the form designated major are no larger than those of many bulbs held to be merely typical, but some years ago I grew a batch of bulbs that might, from the small size of their flowers, have well merited

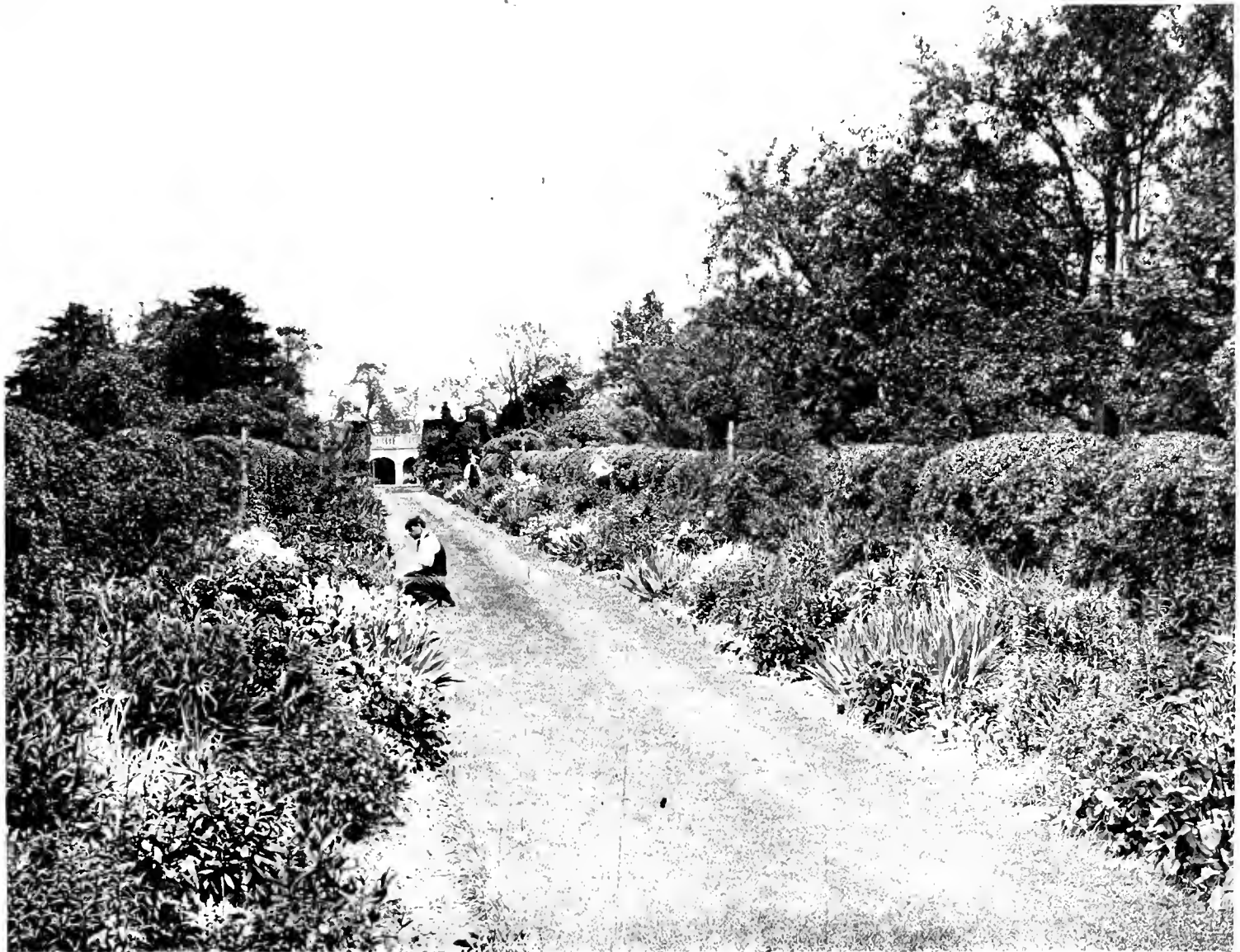
the descriptive appellation of minor, for they were scarcely more than half the size of the ordinary form. After reading the description by "South Hants" (p. 229) of the garden where two bulbs were planted, one of which died, while the other became the progenitor of countless descendants, one can but recognise that had the surviving bulb been possessed of no greater vitality than was the portion of the one that died, the failure of the plants would have been probably attributed to unsuitability of the soil; whereas that this was specially adapted to their culture was subsequently amply proved by the vast army of descendants claiming the surviving bulb as an ancestor, the moral of this being

I came here ten years ago I brought several hundred bulbs in window boxes, and having planted out all I could find in the mould, I threw the latter, as a reminiscence of my old home, on a bed just dug for Daffodils. Irises soon came up, and when five years later I replanted the Daffodils I found 450 Iris bulbs among them. I am certain they come freely from seed, but though the beds will soon be full of seed-pods, I never can find the ripe seed later on. Neither *Histrio*, *cerulea*, nor *Bakeriana* increase, or even thrive. Perhaps *Bakeriana* may in time. *Iris sindjarensis* is now out, very lovely, and alongside (very late) *Iris stylosa*.
Surrey. J. R. D.

TREES AND SHRUBS.

PTEROCARYA CAUCASICA.

ON page 127 Mr. Burrell gives some interesting particulars of the above beautiful tree at Claremont, and though I have never had the pleasure of seeing the specimen referred to, I am sure all tree lovers will thank him for his note on such a splendid specimen. Recently at Syon House, Brentford, I saw some beautiful specimens of this tree, and though,



MIXED BORDER OF HARDY FLOWERS AT BULWICK.

HARDY FLOWERS AT BULWICK.

that it is not by a single, but by repeated experiments that the suitability of soils to the culture of certain bulbs can be assured, since failure may often be due to inherent defects in the bulbs themselves and not to the composition of the soil.

S. W. F.

ABOUT 1870 I bought half a dozen bulbs of *Iris reticulata*, and from these bulbs I have had many thousands, and never once the smallest trace of disease. I have long been able to give to friends all bulbs of presentable size, and only replant the smaller some smaller than peas. To show how fast they increase, last July I took up 350 bulbs planted in 1894, and found 1100 of all sizes. When

The accompanying illustration needs no description. It tells its own tale of the beauty of hardy flowers in the mixed border masses of one kind, not scraps of many things distributed here, there, and everywhere without a thought of their fitness for the position they occupy. The beautiful grass walk adds to the charm of these borders of hardy flowers backed by well-kept hedges. As we have previously mentioned in writing of this place, the charm of the garden results not from having any one spot for the flower garden, but a variety of situations in which flowers are grown.

unfortunately, the largest tree with an immense spread had a year ago been much injured by a huge common Elm backing on to it, it is still a lovely object, and so distinct from all other trees that it is well worth planting for effect alone. At Syon House the tree hangs over the lake at the foot of a bridge, and is certainly at home in such a position, its roots being near the water. It bears splendid catkins and has borne fruit, and its long, deeply-cut leaves are most ornamental. It is a very fast growing tree. A small tree planted ten years ago by Mr. Wytines somewhat near the water, but in an open position, is now 15 feet to 20 feet high, and promises to make a beautiful tree in the future. It is sad to see many choice trees in our gardens

ruined by common things crowding them out, which may have originally been planted for shelter, but are often left to injure the better things.

VISITOR.

THE WHITE MEZEREON.

I do not remember seeing any large plants of the white Mezereon in the London district, or indeed anywhere in the south, and when I have seen plants exhibited at the Drill Hall they have mostly been puny specimens. Consequently it comes as a surprise to me to find it so common in quite large plants as it is in Derbyshire. In the cottage gardens around here it is the rule rather than the exception to find one or more really good specimens, and the red or rose-coloured variety does not seem nearly so common. To day I have seen quite the largest specimen which I ever saw. It must be many years old, as it is at least 5 feet high and as many through quite a model bush, and perfectly smothered with flowers. Specimens about 3 feet high are very plentiful in the district. Of course, it is very late in the year to find the Mezereon in full beauty, but everything is backward this spring here, as elsewhere, and the district is a late one, the soil being of a cold nature. During the past fortnight we have registered 15 of frost, and nightly frosts of from 7 to 10 have been the rule lately. Returning to the Mezereon, I presume that this white form comes true, or nearly so, from seed, as I saw small plants of it last year in plenty in Mr. Barron's nursery at Borrowash, and there was not a coloured form among them.

J. C. TALLACK.

Shipley Hall Gardens, Derby.

THE PRIVETS

THE meanest of all mean shrubs, we think, but popular beyond all others, its weed-like facility of increase making it dear to those to whom something growing with a weed-like rapidity is a treasure. It is not only that Privets are poor in themselves, and, as a rule, without beauty of leaf or flower, but it is the numbers of beautiful shrubs they shut out, millions being annually sold to take the places of better things, and helping to kill the few good ones that are planted near them. The commoner sorts have no charm whatever, and they all have the same vile odour in summer days when they flower. Happy in the possession of the finest hedges and fencing-plants of the northern world—Quick, Holly, Box, Yew, and Sweet Briar—nurserymen and jobbing gardeners make hedges and fences with these wretched Privets, fences which have the one poor quality of rapid growth, but which a man, let alone a beast, could walk through without effort. We even see whole towns like Leicester with miles of these poor hedges, and they are also to be seen in pretentious show places where one would expect people to know what a real fence meant.

Rich in native and other covert plants, we have the Privet recommended by Sir Ralph Payne Gallwey for this purpose, for which it is useless beside the beautiful things we have—Furze, Sloe, Sweet Briar, Juniper, wild Briers, and wild Roses. Above all, we have seen it recommended as a covert plant near water, for which Nature has given us the most fitting of all in the spiny leaved trees of the Willow and Dogwood order, of which there are many kinds. As to beauty, the wildest Briers that vex our legs have far more beauty, whether of leaf, form, flower, or fruit.

The land which has given to us so many good trees and shrubs and flowers, America, has nothing to do with the Privets, which are inhabitants of Asia and Europe, including China and Japan. Some of the species are evergreen, some summer-leaving, and others in our mild climate hang between the two, and keep their leaves, except in very severe winters. They are all too quickly propagated by cuttings, and there are tropical species not hardy in our country. The gain in the rapidity of growth of the Privet is more apparent than real, as it leads to equally quick decay, whether used as a fence plant or in any other way. The true fence plants, when fairly treated and put in open, airy situations

in good condition, as all fence plants should be, are not by any means of slow growth. Holly in good soil will grow 2 feet in a year. Quick is a rapid grower after the first year or two, and neither is the Yew by any means of slow growth, but this is a plant we should never use for a fence where animals could by any chance come, as it has killed thousands of valuable animals.—*Field.*

THE FLOWER GARDEN.

VIOLETS THROUGHOUT THE WINTER.

WHEN different plants, such as Violets, Carnations, or zonal Pelargoniums, are expected to give a succession of bloom throughout the winter and fail to do so, it is generally attributed to the bad weather. Sunless days, fog, damp, and frosts are certainly drawbacks, but when we find that in some gardens, in spite of these unfavourable conditions, there is always an abundance of bloom, then I think the cultural details must have been wrongly carried out by those who are less fortunate. Any plant that is required to flower freely at mid-winter must be properly grown or prepared for the purpose and an early start made, and it is even necessary to see about the young stock of Violets at once. The usual practice, I believe, is to pull the old plants which have occupied the frames during the winter to pieces and merely to dibble in the divisions without further trouble. This is, at least, a quick and easy way of getting through the work, but it does not pay in the end. In the first place, many of the offsets have hard or woody stems, and though they may have a fair amount of roots attached, they do not grow so freely as quite young stock. Our method with both double and single varieties is to dibble in plenty of runners in a shallow frame during September several inches apart. These make capital plants for putting out the following April, and as each is well furnished with roots and lifted with a nice ball, they commence growing away at once, while the old plants which have been so ruthlessly torn to pieces are often withered up by the check of dividing mutilated roots and the action of wind and sun on the leaves. Those who have not a store of autumn raised plants should, however, adopt the next best plan, which is as follows: Look over the old plants still in flower and it will be noticed that there are numerous side shoots, which, though perhaps small and unsuited to planting in the open at once, will nevertheless make better plants by autumn if properly managed than those formed by splitting the old plants up.

Prepare a shallow frame and place several inches of sandy soil in the bottom over a layer of half decayed leaves made firm by treading. Then take off the young runners with a pair of scissors, securing, if possible, a few small roots with each. These should be pricked off 4 inches apart in the frame prepared, watered, kept close for a few days, and shaded at mid day if the leaves flag under the sun. Carefully watered and gradually hardened off, a clean, healthy lot of plants will be ready for placing in their summer quarters by the beginning of May, and the old plants may be destroyed or planted in shrubberies or wood-lands.

During dry summers the plants

are liable to receive serious checks through the attacks of red spider, and to avoid these as far as possible a suitable site should be selected in the garden, such as an east or north border, where it is cool, and where the plants are least likely to suffer from drought. It is also important that a deep rich rootrun be provided, the value of which will be noticed later on by the size and colour of the foliage, a striking contrast to that on plants growing on shallow, poor soil and in the blazing sun. Each plant should be made to form a separate clump by pinching off the runners as they appear. If these were allowed to grow on unchecked it would be difficult to tell in the autumn which were the parent plants, as in all probability they would have become interlaced, and it would be impossible to lift them with a suitable ball. In addition to this, if the plants can be watered overhead after hot days, so much the better. Managed in this way up to September, large single clumps will be the result, and when planted carefully in pits or frames and freely ventilated afterwards, the weather must indeed be bad to prevent the mass of flower-buds already formed round the crown from pushing up and opening freely.

Managed as I have advised, the ever-welcome flowers may be forthcoming in large quantities almost daily throughout the winter. This has been my experience now for many years, and certainly it seems strange to hear others complain of their plants not flowering at that season so freely as they would wish.

The varieties grown are Marie Louise, Lady Hume Campbell, and Neapolitan, all of which are doubles, and Victoria I like best among the single varieties.

SINGLE-HANDED.

SOME TRUMPET DAFFODILS.

FIRST in season and first in their original right to the name of Daffodil, the trumpets demand a certain precedence among their kindred. No doubt Canon Ellacombe is right in saying that the Daffodil of Shakespeare, the Daffodil which



DAFFODILS MINOR AND MINIMUS

anticipates the swallow. I dare not make the hackneyed quotation—is the wild trumpet of our meadows and coppices. This was commoner in Shakespeare's time, when as yet no ruthless bulb-dealers offered it at so much the thousand, and cheaper by the ten thousand. The *doges* of scholar-plantmen, old Carolus Clusius, who visited England in 1571 and again ten years later, records in his graceful Latin the great abundance of the Lent Lily round London, and how in the month of March it was hawked in immense quantities by countrywomen in Cheapside, and decorated every shop window. It is a charming flower, and though outshone by our finer modern kinds, has qualities which should ensure it against contempt. A flower which comes "of itself" six weeks before the swallow is precious, and is no doubt a survival of the fittest in England. We do not yet know which or whether any of its more magnificent brethren will stand the ordeal of the centuries when left to shift for themselves in grass or woodland. An instructive instance of the persistence of its blood even in dilution, so to speak, may be seen in my neighbourhood. Some fifty years ago the half-bare ground under old Lime trees in a park was planted with clumps of the Lent Lily, the old double yellow and one or two large single forms, apparently princeps and major. These last have long since died out, but innumerable seedlings between them, the doubles and the Lent Lilies, have occupied the vacant spaces with every appearance of permanence.

In our modern garden parlance we have come to call any *Narcissus* a Daffodil, but in the days of my childhood the name meant to most of us one of two flowers only, either the Lent Lily or the old double yellow, *Ajax Telamonius* plants, according to the elephantine classical conceit of Haworth seventy years ago. I fear familiarity has blunted our appreciation of this fine plant; it is one of the truly noble double flowers. A mass of its bloom need fear no rival in the rich yellow of its lights and the warm orange of its shadows. The worthy Parkinson says he raised it from seed in the year sixteen hundred and something, but I could never bring myself to believe him. It is one of those flowers which is too good to have been raised by anyone, and, like the white Lily, must have existed "always," especially in Tuscany, where it may be seen semi-wild in almost any vineyard along the Arno. The commonest Italian single trumpet is not so pretty as our Lent Lily, though larger. It is the kind sold as King Umberto, a flower of uniform dullish yellow, with the defect of a darker bar or stripe on each petal. May we not, by the way, in talking of Daffodils, transgress botanical accuracy and use "petal" instead of the cumbersome terms "perianth" and "perianth segment"? That exceedingly free and useful Daffodil princeps, which in London is often palmed off on the inexpert for the superior Horsfieldi, is probably an Italian wild plant. I have seen it in abundance in the north Italian markets, and have been assured it was gathered, *sui monti*, on the hillsides. One March in the great Piazza at Bologna I came upon a stall heaped with a Daffodil strange to me and very beautiful—Tenby-like in symmetry of form, but larger and of a deeper, purer yellow. The *contadina* in charge said it grew wild a few miles away, and undertook to send me bulbs for a consideration. They came in due season; but, alas! flat disappointment followed my keen expectancy; they bloomed, one and all, into the aforesaid undesirable King Umberto.

Self-coloured trumpets of this pure, rich yellow are still much wanted. It is curious that while our garden whites, bicolors, and

lighter yellows such as Emperor are all great improvements on their wild types, *maximus*, a wild Daffodil from the foot of the French Pyrenees, is scarcely surpassed by any garden kind for stateliness of habit and golden refulgence of bloom. The one possible exception is Mr. Kendall's King Alfred, a recent seedling of *maximus*-like aspect, but differing in its colour, a full chrome-yellow. As exhibited this is a magnificent flower, but must run the gauntlet of our gardens before winning its final rank. The next best Daffodil in this class is, perhaps, M. J. Berkeley, one of Backhouse's seedlings from *maximus*, absolutely robust and freer in bloom than its parent, though a little paler in colour. This should be in every garden. Golden Spur is a very fine, high-coloured trumpet, but on many soils is short-lived.

Another wild kind which is still unique in its own colour or range of colour is *pallidus præcox*. A varying combination of the words cream, straw, ivory is, perhaps, the nearest to it that our limited vocabulary can get. To those who would feast their eyes with a quite exquisite association of colours I recommend a handful of *pallidus præcox* and *Iris reticulata*. Daffodils of this same tone, but larger, longer in stem, and more amenable to cultivation, would be a very great gain. To the question lately asked in THE GARDEN how to grow *pallidus præcox*, I can give an answer with confidence and in few words: Grow it from seed. The flowers of hardly any two cultivated bulbs are alike; the bulb-increase is small, but the yield of seed very large. These are indications that its natural mode of reproduction is from seed. The increase by bulb offsets is only Nature's "second string" to ensure enough flowers for a seed crop. This is also true of the lovely little white *moschatini*, of *minimus*, *triandrus*, and other wild Daffodils, of the *Chionodoxas*, and indeed of very many bulbous plants. *Crocus imperati* multiplies fast from the corm, but I have to-day been admiring seedling colonies, self-sown among the stones edging a border, which are vastly stronger and more beautiful than any result of planted corms. The desired race of giant *pallidus præcox* might be obtained by seed selection, for I have once or twice seen imported flowers almost as large as Horsfieldi. Seed should be sown every summer in boxes and left undisturbed for three years, then planted out. The preliminary wait of four or five years is a deterrent to a hurrying generation, but the reward of the annual batches of bloom is proportionately great. The white trumpets, most desirable and most difficult of Daffodils, grow with singular vigour from seed until they have flowered, when they mostly "go back." This would be a small disappointment to the gardener with a thousand fresh blooming bulbs to plant out every year, a matter demanding only a very moderate stock of patience and deal boxes, both of a fairly stout quality.

GEORGE ENGLEHEART.

HYBRID PRIMROSES.

SOME years back at Dorking, where the soil suited Primroses very well, I fancied the idea of getting a pure Primrose bloom with the attractive *Polyanthus* habit of growth. It is noticeable that occasionally the Primrose grown in a garden shows a little of this tendency, but not enough to make any special character. My idea was to use the very heavy-blooming class of light yellow (German, I believe) *Polyanthus* to give habit to the plant. I took the pollen from one of these growing in a neighbouring railway station garden, and struck with it one of the Primroses in my garden. I observed the old rule of using a full-pollened flower



TRUMPET DAFFODIL MAXIMUS.

or "full eye," and for seed I chose a "pin-eyed" Primrose, on which subject very learned and interesting investigations have been made by Darwin. But the object I aimed at must not be confused with scientific work: it was plain horticulture, and nothing more. In a few weeks I was pleased to find a pod or two of seed, which on sowing yielded a dozen plants which varied a good deal in strength, but my great joy was to find that practically all of them had acquired the habit desired and that they yet were real Primroses, with the pure simply modelled flower of Nature; well, not exactly like wild Primroses, but very near. The chief want was in colour. My pollen parent was nearly white, and so my hybrids were a little too pallid. Some were too weak to be worth keeping, but others, two in particular, were so very healthy, that they grow in London suburbs better than the wild ones. My favourite is one that rises high, but has a soft, languid stem just like the wild one and a pure Primrose flower, of which the original seedling plant grew into quite a tree or bush before I broke it up. Another I have a good stock of has a large flat, well-filled, disc-like flower, which keeps ten days in water after being cut. I forward a plant to judge by. I would suggest some work being done in this interesting line now that the season is just coming on.

A. DAWSON.

AN AMERICAN NOTE.

RENEWING THE AMERICAN FORESTS.

It is interesting to read in *American Gardening* that "the treeless States have been quickest to avail themselves of the assistance offered by the Division of Forestry, the number of applications being as follows: Kansas, 38; Oklahoma, 19; Nebraska, 12; North Dakota, 9; Iowa, 6; Indiana, 5; Texas, 5; Minnesota, 4; Colorado, 3; Washington, 3; South Dakota, 2; California, 2; Illinois, 2; New York, 2; Ohio, 1; Missouri, 1; Delaware, 1. The majority of plans are for tracts of 5 acres to 10 acres, intended by prairie farmers to afford wind-breaks and fuel supplies. A few plantings of 1000 acres and 2000 acres are being made as experiments in raising forest crops for market in regions where such material is scarce. After considering these applications in order, the Division of Forestry has sent experts to study the conditions of as many as possible of localities which offered the best opportunities for object-lessons."

CORRESPONDENCE.

(The Editors are not responsible for the opinions expressed by their correspondents.)

POINCIANA GILLIESI.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Mr. Ewbank's description of this Poinciana will make many of us regret that we have not the Isle of Wight climate. Unfortunately, even no further north than London we cannot hope for such results as recorded on page 154, though last autumn this Poinciana flowered on a wall at Kew. As far as my knowledge extends, this was the first time it had flowered there out of doors, and this happy result was doubtless owing to the very hot weather of which we had so large a share. The flowers were at their best during the first half of October, hence they stood almost alone among plants of a shrubby character out of doors. The specimen in question is trained to the front of the museum overlooking the lake and in close proximity to *Mutisia decurrens*, which formed the subject of a recent note in THE GARDEN. H. P.

HELENIUM STRIATUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I also have noticed the change of colour in the striped *Helenium* which Mr. B. D. Webster has commented upon in a recent issue. The flowers of the plants which I bought a year ago were originally a pale washy yellow, with crimson streaks. In my garden they have turned for the most part a dark crimson, with a few yellow streaks. Mr. Webster suggests that the latter colouring is due to poverty of soil. Now my soil is particularly rich and nearly 4 feet deep where the *Heleniums* are. The bed, however, might be described as "a dry bank," as it is situated on a hill and slopes very sharply. Can it be that the variation in colour is due more to the absence of moisture than to the poorness of the soil? R. M.

[The colouring of this plant is extremely variable. We hope other correspondents will give their experience. It is capable of being a very poor flower or a very handsome one. It certainly dislikes drought, and enjoys a good loamy soil. Eds.]

GUMMING ON FRUIT TREES.

[TO THE EDITOR OF "THE GARDEN."]

SIR, In your issue of the 10th ult. there is a most interesting article on "Gumming on Fruit Trees," but could you not mention also some of the best remedies against this terrible disease, which has wrought such havoc among my Plum trees (pyramids)? B. P.

New Bariat.

[It is often difficult to account for the appearance of this disease even with trees growing under one's own notice. You will, therefore, understand how much more so it is to say definitely what has caused gumming to attack your trees and to suggest a remedy from the brief details you send.

There are some soils and localities in which Plums fail to prove satisfactory, and when the growth of the trees is stunted, gumming is as likely to follow as it is with those which produce long shoots annually which never become properly matured.

My remarks on this subject recently in these pages referred chiefly to trained trees against walls, and I endeavoured to explain some of the sources from which the evil originated. In your case it is different. Pyramid trees are not so likely to have the bark or branches bruisèd; therefore, undoubtedly the mischief must arise from the roots being either situated in uncongential soil or too far from the surface. At Peshore, in Worcestershire, hundreds of acres of Plums are grown most satisfactorily, the strong loam appearing to suit the trees admirably, and gumming, I believe, is practically unknown. In other counties it would

be risky to plant Plums so freely, which is a clear proof that soil and situation have to be studied with this fruit more than is the case with Apples or Pears.

If the main stems of your trees are badly affected, I fear you will hardly succeed in bringing them again into a healthy condition, if they ever were so. If the disease, however, is located on the branches, there will be less trouble in combating it. I would advise in the latter case to cut out such branches, but not now. The end of September is the best time, as then the sap is receding and the wound is more likely to heal satisfactorily. At the same time you should attend to the roots, and afford some dressing likely to ensure their healthy action near the surface. Farmyard manure should be avoided and in its place use good sound loam, to which add say one-sixth of old mortar. If the trees are growing on grass land, lift the turf for 5 feet or 6 feet round each, fork out a little of the old soil, and replace this with the fresh compost. If some bone-meal could be added, so much the better. The advantage of removing the old soil is to allow the new to come in proximity with the roots at once, and if the work were done in September, new fibres would probably form the same autumn, and so help to give the trees a good start the following spring. Should your trees be young and too gross, I should recommend lifting the roots next autumn, bringing them nearer the surface (do not cut them off), and surrounding them with the compost advised above. If the ground is porous and hungry, the loam rammed firmly will greatly improve it. On the other hand, if the situation is low and wet, some means should be taken to drain off excess of surface water.

As regards curing the wounds already present, those on fairly large branches might be pared away with a sharp knife until clean wood and under bark are found, and then coated over with a thick pad of clay and cow manure, keeping this moist, and renewing it if required. I have followed this plan most successfully with canker on Apple trees, but the latter will stand the knife better than the Plum. There would be no harm in practising on a few trees first.

Gumming is one of the most serious troubles the fruit grower has to contend with, yet it is one seldom discussed in horticultural papers. The editors of THE GARDEN would, no doubt, be pleased to receive further particulars of your case. If we could get at the cause, it might not be difficult to supply a remedy. RICHARD PARKER.]

YELLOW-FLOWERED ARUMS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, If Mr. Roberts contemplates a further trial of the yellow-flowered Arums, I would suggest that a chance be given to *Richardia Elliottiana*, for it is more robust than *R. Pentlandi*, and will thrive in a somewhat lower temperature. My remarks apply only to plants grown under glass, of which I have handled considerable numbers of late years, but of their behaviour out of doors I have had no experience. It is not to be expected that they will prove so hardy as the common Arum Lily, which grows wild in the ditches and on the margins of streams in Southern Cape Colony, whereas these yellow forms occur much further north, where the climate is much warmer. Moreover, they are not, as is so often said, counterparts except in colour of the common Arum Lily, which is an evergreen, while these latter become totally dormant in the autumn and pass the winter in that state. We winter them in boxes of dry soil in a minimum temperature of 50°. About February the soil is slightly moistened, and as soon as the tubers commence to start they are potted. In a maximum temperature of 65 the plants of *R. Elliottiana* are now developing rapidly, whereas those of *R. Pentlandi*, which have been treated exactly the same, are only just starting. They die down about the same time in the autumn, but when dormant and shaken clear of the soil the difference between the two is considerable, for the tubers of *R. Elliottiana* increase in size during a single season much more than those of *R. Pentlandi*. Both are grown here in a cool greenhouse during the summer. T.

ON THE SO-CALLED ORANGE NYMPHEAS.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—On the faith of a great enthusiasm I procured all the new Lilies advertised as possessing orange or yellow tints, namely, *Seignoureti*, *fulva*, *Robinsoniana*, and *Aurora*. As they opened in succession I watched the process with increasing amazement. Take *fulva* or *Seignoureti* as an instance. These are supposed to be orange, stained or tipped with vermilion. I can only say that I stood before the open flowers, and thus I communed with myself:—

"Allowing for all the influence of disappointments, is it possible for a rational and colour competent being to see any yellow tint at all in these flowers anywhere?"

The answer was, "Not a trace. The tint is one of cold pale brown paper, stained here and there with red."

I met a friend who had gone through precisely the same experience. We agreed that the washed-out pink of crushed strawberry was the true description. But there seems to be little doubt that further south the plants are true to their reputed colour, at any rate in France.

A correspondent noted in your paper that in Scotland the yellow tint was absent. Is this a matter of climate or of age? My plants have not been established very long. It would be interesting to hear the experience of other growers further south, and where there is more sun and warmth than here in Westmoreland, and I hope that something may be said to re-establish the tints in favour.

Still, even at the worst, the plants *fulva* and *Seignoureti* are not to be despised if only as oddities, and *Robinsoniana* has a peculiar beauty of its own. But to compare all these pale washed-out varieties with *gloriosa*, *igneæ*, *fugens*, the true queens of the tribe, is absurd. By washed-out I do not mean the lovely pinks, but such as *Laydekeri purpurea*, &c. Yet this and all have advantages of one sort or another such as earliness, profusion of flower, variety of tint, as in *Laydekeri rosea*, or exquisite delicacy, as in *Laydekeri violacea*.

I am curious to see what Gladston will do this year; so far it looks promising for its reputation.

Amble-side.

H. B.

EAST LOTHIAN STOCKS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I quite agree with all that can be said in favour of this fine strain of Stocks. I do not know the history or date of its origin, but it must be fully thirty years ago that they first came under my notice. They then took the place of those known as Intermediate Stocks, and were supplied in three colours, viz., white, scarlet, and purple, and since then we have the blood-red or crimson, which is, perhaps, the prettiest of all.

It is as pot plants that I have had most experience with them, and for early spring flowering they have no rivals if well cultivated. The few growers who make them a speciality for market work rarely find any difficulty in disposing of them. They are used extensively for window boxes and for early bedding in London and its suburbs; they are also valuable for the conservatory, but as window plants they are a little disappointing, as they like more light and air than is usually obtained in such positions.

In respect to the time of sowing the seed, I have tried various dates, and have always been most successful when sowing the first week in August. I may mention that, being desirous of getting them in earlier in the spring, one season I sowed a month earlier, and this proved most disastrous, for the plants made their flower-spikes prematurely and failed to develop properly. I have also found that late sowings fail through the plants not getting strong enough to go through the winter successfully. The seed should be sown thinly in a frame under a north wall, or some position where they are not exposed to the direct rays of the sun and can get all the light possible. They will be ready for potting into 3 inch pots the second week in September, and as at this period they grow rapidly they must not be neglected. The compost for potting should consist of good loam with a liberal

addition of stable manure. The pots should be quite clean inside, and in potting the soil may be pressed firmly round the stems. After potting, the best position is a shallow frame with a southern aspect, where they may be kept close and shaded for the first few days, but as soon as the roots have taken hold of the new soil the lights should be taken off, and only used in case of heavy rains, or later on in case of frost at night. If they can be properly protected from severe frost they may be grown in unheated frames, though where a little heat can be given in case of severe weather it is an advantage, as there is then no necessity of obscuring any daylight. The plants will be ready for potting into 5-inch pots early in January. Before potting care should be taken that they are in a good condition with regard to moisture, for it will be difficult to turn them out without losing some roots, which are liable to stick to the pots if the soil is dry.

After potting into 5-inch pots they may be returned to the frames, and will not require moving again until far enough advanced to pick out the singles, of which there is sure to be a certain percentage. After removing these the doubles may be thinned out and manure given freely. It is important to give plenty of air on all suitable occasions and to be careful in watering. Mildew is sometimes troublesome, but if dusted over with soot and sulphur during the earlier stages it will keep the mildew from spreading and will benefit the plants.

Stocks cannot be forced into flower; the only thing to advance them is to give all the sunlight and air possible. A little artificial heat with plenty of daylight may advance them a little, but warmth is sure to cause them to run up thin. Later in the spring, when the sun gets more powerful, the flowers will open better under the shade of a north wall. A cool bottom, with plenty of daylight and air, and careful attention to watering are the main points to secure success in the culture of East Lothian Stocks. Over or under-watering is fatal.

A. HEMSLEY.

THUNBERGIA ALATA AND ITS VAGARIES.

[TO THE EDITOR OF "THE GARDEN,"]

SIR.—Mr. B. D. Webster's note (page 219 of THE GARDEN) is most interesting. It will recall to many cultivators certain peculiarities of these weakly, pliable annual climbers, plants whose ways often baffle their growers. For example, few plants are more easily kept clean or free from red spider, thrips, &c., in the shade, while none prove readier victims to the same or other insects in full sunshine. I have grown the different varieties of the species, *alata*, &c., among them being a pure white without the dark eye of the normal *alata aurantiaca*, also others, in the stove, conservatory, and the open air, the latter to a limited extent and chiefly as edgings to vases filled with scarlet Geraniums. They hardly took kindly to the duty of forming a drooping fringe of foliage and flowers in striking contrast of colour and form to the Pelargoniums.

On the other hand, in a cool plant stove the effects of some fine plants of the scarlet Passion Flower (*Passiflora racemosa*) and the more elegant P. Loudoni were greatly enhanced by allowing groups of the annual Thunbergias to scramble up around them and to run freely among the contrasting flowers and fine foliage of the Passion Flower. The site of a fine group of *Gloriosa superba* was also furnished and greatly enriched through the addition of the Thunbergia *alata* scrambling freely over its roots and round the stems. These Thunbergias were also pretty freely used as mixed tangles for hiding pots and forming an irregular covering for the soil. I have been much interested in the anti-tumble demonstrations of these pretty annuals. Hanging baskets were formerly more used in conservatories and corridors than now. Rich collections and large quantities of Achimenes and other striking flowering and foliage plants were grown to large size and great perfection. These were often intermixed with the so-called Strawberry plant and other creepers, with an

occasional basketful of annual Thunbergias. Where the baskets hung pretty close to the Achimenes the latter were sometimes partly invaded by the Thunbergias, but these, being far from the light and the plants raised in stove temperature and stopped several times before basketing, produced numbers of weakly shoots, which were securely fixed with stout hairpins in the way they were expected to go, namely, to droop towards the path. This proved satisfactory, and formed a striking contrast to the Achimenes, while they also invaded the territory of the latter at various points by their vagaries so vividly portrayed by Mr. Webster, ways which add so deep an interest to their adaptability to artistic effects and to the observation of their botanical structure.

These and other Thunbergias used also to be very generally grown on balloons and semi-circular and pyramidal trellises. When skilfully managed and carefully trained, they formed very effective plants for the decoration of the cool plant stove and warm conservatory.

D. T. F.

PEACH LEAF BLISTER.

[TO THE EDITOR OF "THE GARDEN,"]

SIR.—The inferences drawn from the evidences of fungoid life found on leaves and wood of Peach trees in the spring, when blister is prevalent, by your able contributor "G. S. S." are, so far, doubtless correct, but it is but right it should be understood in support of the common theory respecting cold creating the blister that the trouble is rarely seen in Peach houses, even if they be cool ones; hence the natural inference that the chief cause is the exposure of the young tender leafage to very varying temperatures early in the spring. Peach and Nectarine trees produce leaves very early, but because thus early exposed on sunny days to great warmth, and on frosty nights to considerable cold, it has been natural to infer that such varying conditions of temperature tend to cause the bursting of the leaf-cells, and thus open the door as it were to fungoid aggression. Whilst it is advised to spray with the Bordeaux mixture after the fruit has set, yet is there any proof furnished that the trees have been in that way protected from attacks? Indeed, by the time fruits are set the leafage has begun to develop. The gardener's customary method of dealing with the blister, which seems to have always afflicted Peach trees in this country, is to gather the blistered leaves. If this be done the diseased leaves should always be burnt.

A. D.

NYMPHEAS.

[TO THE EDITOR OF "THE GARDEN,"]

SIR.—Your interesting leader on water gardens (p. 253) comes just at the right time. I should like to elicit the experiences of those who have grown these plants in small tanks, with special reference to restricted *versus* unlimited root space. I have seen in many places *Marliacea* hybrids—especially *Chromatella*—which had free root room. They had run all to leaves, which grew above the surface like Cabbages and lost their beautiful marbling, while the flowers were few and far between, though of large size. In my own tank circumstances require the plants to be in boxes. Here with restricted root accommodation they bloom with great freedom, the foliage never being excessive and the blossoms a fair size, though not so large as they come when planted out, a circumstance which is largely discounted by the facility of getting close to them, which is not generally practicable when they are in large ponds. Would some of your readers give their views on this point?

GREENWOOD PIM.

NEW AND RARE PLANTS.

CATTLEYA SCHROEDERÆ (PITT'S VARIETY).

This wonderful variety has recently flowered in a batch of imported plants introduced by Mr. B. A. Tracey. The sepals and petals are of good form and substance and of the same colour as the type. The lip has a bright rose margin, the remaining portion of the front lobe being bright crimson, which becomes deep purple towards the base, the side lobes rose, suffused with orange. The plant carried two racemes

of two flowers each; the flowers are very fragrant and most attractive. From Mr. H. T. Pitt, Rosslyn, Stamford Hill. First-class certificate, Royal Horticultural Society, April 10.

CATTLEYA INTERMEDIA (FOWLER'S VARIETY).

This distinct and pretty variety previously received an award of merit. The plant has improved wonderfully since it was originally exhibited. The sepals and petals are white, slightly tinted with rose towards the base, the broad, fine lip wholly of rich crimson-purple on the front lobe, the side lobes white with some purple through the base, the column bright rose. The plant carried a five-flowered raceme. It resembles to a great extent some of the varieties of *Laelio-Cattleya Schilleriana*, the flowers being equally large and deep in colour. It is the finest variety of this species we have seen. It was exhibited by Mr. J. Gurney Fowler, Glebelands, South Woodford (gardener, Mr. J. Davis), at the Royal Horticultural Society's meeting on April 10 last. Awarded a first-class certificate.

ZYGOPETALUM (BATEMANNIA) BURTI (PITT'S VARIETY).

This was exhibited by Mr. H. T. Pitt, Rosslyn, Stamford Hill (gardener, Mr. Thurgood), at the Royal Horticultural Society's meeting on April 10, and given a first-class certificate. It is a remarkable form for the size, substance, and colouring of the flowers. The broad white area in the centre of the flower is most attractive. The apical portion of the sepals is deep polished brown, becoming mottled with greenish yellow in the centre and white at the base. The petals are similar to the sepals in colour, with the exception that they have each a deep blotch of purple at the base. The lip is deep brown and white, each of the side lobes having about ten prominent bristles encircling the base. The plant carried a single-flowered raceme. This is the third time this species has been certificated: first as *Pescatorea Wallisi*, from Lord Londesborough's collection in 1871, and secondly, as *Batemannia Burti*, exhibited by Mr. Hume in 1873. The variety which forms the subject of this note is far superior to any we have previously seen.

ODONTOGLOSSUM LUTEO-PURPUREUM MOSSI.

This is a desirable variety. The sepals are deep brown, tipped with yellow and having a yellow spotting at the base, the petals brown, tipped and margined with yellow on the apical halves, and mottled with yellow through the centre and base. The broad lip is white, with some brown spotting at the base and a bright yellow crest, the margin fringed and heavily crested in front. The plant carried a three-flowered raceme and came from the collection of Mr. De B. Crawshaw, Rosefield, Sevenoaks, Kent. Award of merit, Royal Horticultural Society meeting, April 10.

CYPRIPEDIUM J. GURNEY FOWLER.

(BARBATUM CROSSI - GODFREYÆ.)

This is a remarkably fine hybrid; the dorsal sepal is white around the margins, and becomes suffused with bright rose, with a small area of green at the base; there are numerous brown and green bands from the base upwards; the petals are rose, suffused with a darker shade and thickly spotted with purple on the upper halves; the lip is rich rose, veined with a darker shade. A most desirable addition. Raised by Mr. J. Seden in the nurseries of Messrs. J. Veitch & Sons, by whom it was exhibited at the Royal Horticultural Society's meeting, April 10, when it received an award of merit.

CATTLEYA ROSALIND SUPERBA.

This is a pretty variety, raised by crossing *Laelio-Cattleya Dominiana* and *C. Trianae*. The sepals are deep lilac, and the petals, 2½ inches across, very similar in colour to the sepals; the lip is 2 inches across, rich crimson-purple on the front lobe, shading to orange-yellow on the disc. The side lobes are rose-purple, mottled with yellow through the base. A plant carrying a single flower came from the nurseries of Messrs. J. Veitch & Sons. It received an award of merit at the Royal Horticultural Society's meeting on April 10 last.

EPIDENDRUM CLARISSA.

(E. ELEGANTULUM - E. WALLISI.)

This is a distinct and pretty secondary hybrid; the sepals and petals are yellow, mottled and suffused with purple; the broad lip violet-purple, margined with white. There is some yellow on the white area at the base. The plant carried a five-flowered raceme. Raised by Mr. Seden in Messrs. J. Veitch & Sons' nurseries, and exhibited by this firm on April 10. Award of merit.

PHALENOPSIS LADY ROTHSCHILD.

This is a desirable addition derived from crossing *P. intermedia Brymeriana* and *P. Sanderiana*. The effect of the last-named especially is most pronounced in the sepals and petals of the offspring; the segments are broader and the rose suffusion is most effective. The lip suggests strongly the parentage. The whole of the front lobe is bright purple, tipped with rose, the side lobes being rose, shading to yellow at the base, on which are numerous bright brown spots. It was raised by Mr. G. Ainson in Messrs. Hugh Low & Co.'s nurseries, by whom it was exhibited at the Royal Horticultural Society's meeting on April 10. Award of merit.

NEW HIPPEASTRUMS.

Two new *Hippeastrums*, or *Amaryllis*, were shown by Messrs. J. Veitch & Sons before the Royal Horticultural Society at the last meeting and each given an award of merit. One was named Titan, a flower of beautiful form, white, veined and shaded with red—a very distinct acquisition. Zephyr is also a flower with a white ground, feathered and veined with red, and of symmetrical form.

RHODODENDRON SHILSONI

This was singled out for an award of merit at the last meeting of the Royal Horticultural Society from amongst the many kinds sent by Mr. D. H. Shilson (gardener, Mr. Gill), of Trenouth, Cornwall. An illustration and description of this was given in THE GARDEN on page 291. It is a noble hybrid, reminding one of R. Thomsoni strongly, and in truth this is one of its parents, with R. barbatum as the other species. This Rhododendron is quite hardy in the south of England and Ireland, but further north requires the protection of a greenhouse or conservatory. A handsome bush of it has been in bloom for some time past in the temperate house at Kew. The flowers are much like those of R. Thomsoni in form and intense crimson in colour.

RHODODENDRON H. ELLIOTT.

WE are pleased to know that so much interest is being taken in the beautiful greenhouse Rhododendrons. This is a hybrid of much charm; the flowers very large, quite 4 inches across, and pure white, with a faint touch of green at the base of the segments, and there is also a sweet fragrance. Award of merit, Royal Horticultural Society, April 10. Exhibited by Mr. Elliott, Hurstpierpoint, Sussex.

NEW VARIETIES OF AZALEA MOLLIS.

At the last meeting of the Royal Horticultural Society two charming new Azaleas were shown by Messrs. R. and G. Cuthbert, of Southgate, and in each case an award of merit was given. One was named Mrs. A. E. Endtz, a variety of the style of Anthony Koster, with rich golden-coloured flowers, large, and promising smothering the shoots. More distinct is Duchess of Wellington, which is remarkably neat, the pretty flowers gathered in clusters, and in colour very soft rose, with conspicuous crimson markings upon the upper petals. This is one of the most distinct kinds we have seen for some time past.

ROSE LINNŌENCE.

A VERY charming Rose, with creamy white flowers and sweetly scented. Award of merit, Royal Horticultural Society, April 10. Shown by Messrs. Paul & Son, Cheshunt.

PRINUS MALUS ANGUSTIFOLIUS

THIS is one of those beautiful flowering trees of which too much cannot be known. The shoots shown were wreathed with large double flowers fully 2½ inches across and soft pink. A tree of this upon the lawn must be of extreme beauty. Award of merit, Royal Horticultural Society, April 10. Exhibited by Messrs. Wm. Paul & Son, Waltham Cross.

POLEMONIUM CONFERTUM MILETUM

THIS is a pretty Polemonium of quite dwarf growth, with distinct pinnate leaves and clusters of primrose-tinted flowers. Award of merit, Royal Horticultural Society, April 10. Shown by Messrs. G. Jackson & Son, Woking.

A FRUIT TREE PROTECTOR.

MUCH has been written in the gardening press both in condemnation and defence of birds. It is not my intention now to describe my experience in order to prove that some birds are very destructive and do far more harm than good. Although much has been said to the contrary, I know practical gardeners generally, especially those who are placed in woodland districts, have had convincing experience of the destruction wrought by some of them, the blackbird, sparrow, bullfinch, and tontit being amongst the worst depredators. In some cases, both in private and market gardens, the injury done to fruit crops alone and the loss thereby sustained is considerable; nevertheless, although an avowed enemy to the above birds, I cannot but sympathise with the student and lover of Nature who deprecates wanton destruction of birds generally.

A mode that has proved perfectly successful in preventing the ravages of birds, and therefore in removing the cause for destroying them, has been adopted here, and it has occurred to me, owing to having had repeated inquiries about it, that its description might be suggestive and interesting to some readers of THE GARDEN. The structure is from 8 feet to 9 feet in height, and consists of a strong framework of galvanised iron, covered with ½-inch galvanised netting. The top is supported by 1½-inch tubing placed 12 feet apart, resting on square plates let into the ground and crowned with caps furnished with four arms, to which bars ½ inch by ½ inch placed on edge are secured. The sides are formed of a series of hurdles 6 feet in width, rivetted together and made of 1½-inch by

½-inch bars. The netting is fastened to the framework with wire, and a margin of about 1 foot is pegged to the surface of the ground in an outward direction, which completely baffles birds, rabbits, and rats in attempting to get inside. Gates formed of similar material are placed opposite the walks of the garden thus protected.

The structure encloses Cherries, Pears, Plums, Raspberries, Currants, and Gooseberries, and we find it very advantageous to be able to keep some of these a much longer time upon the bushes than could be done without protection. It has been often asked if insects are not unusually troublesome owing to the exclusion of birds, and when the covering was erected it was predicted that the trees would be ruined in consequence. It evidently did not occur to the predictors that fruit trees under glass are in this respect placed under identical circumstances, and no difference in this direction has been observed between the trees enclosed and those outside, and as much, or possibly more, benefit is derived in protecting buds in winter as fruit in summer and autumn. If there is one thing more gratifying than another about this protector, it is the exclusion of the blue-headed tontit from Pears. At no time has a fruit of these growing beneath it been damaged by this mischievous little pest or by the wasp either. Conclusive evidence, I think, that the latter does not attack the Pear unless its skin is first broken by a tit or by some other means.

An important point that should be considered in making enclosures of this kind is to ensure adequate strength to resist the weight of snow. So far the one here has not been tested in this respect, for it has so happened that since its erection strong winds have accompanied each heavy fall and prevented judgment.

It will be gathered from the description that in making a structure of this kind the outlay is somewhat heavy, but it is both durable and efficient, and I am not sure but that in the end, even from a pecuniary point of view, it is more economical than ordinary netting, which, in consequence of its perishable nature, has to be often renewed, while there is no comparison with regard to efficiency. In private gardens at any rate, where a lengthened daily supply of choice fruits has to be forthcoming, its utility cannot well be over-estimated. To amateur gardeners, many of whom are enthusiastic and thorough in what they undertake, a protector of this kind would afford much pleasure and satisfaction. Growers for market would not, of course, entertain a thought about going to the expense it incurs, but they have in their own hands the power to lessen the number of birds, and, moreover, they usually gather their fruit as soon as it is ripe.

If one of our enterprising horticultural builders would devise an efficient, durable, and moderately cheap enclosure on the above lines, he would probably find many customers.

THOS. COOMBER.

EXHIBITION OF AGRICULTURAL PACKING AT ROME.

THE exhibition of packing which has been inaugurated during the current week by the Agricultural Society of Rome is an undertaking of a novel and instructive kind, and should present points of special interest to English horticulturists. It is significant that the opening ceremony was attended by a large number of highly influential members of the government and of the railway and navigation companies, all of whom have given their serious and hearty co-operation in furtherance of the aims of the society, who gratefully acknowledged that without such generous and substantial aid the reforms and amendments already in progress could not have been carried out or even attempted. The speeches made on the occasion by the president of the society, the Marchese Cappelli, by the Minister of Agriculture and others all emphasised the great national importance of the art which is practically illustrated by the exhibition.

The show is the outcome of an industrial institution of agricultural packing initiated by the society for the promotion and encouragement of inventions

and improvements in the art, and its aims are twofold. First, by means of the most simple, suitable, and inexpensive packings to bring the producer into direct touch with the consumer; secondly, to provide packing-cases of the best form and material to ensure the safe carriage to a distance of perishable goods, either for export or for home consumption, whether liquid or solid, or in large or small quantities.

A single example will suffice to illustrate the first of these aims. The *contadini* of certain districts in Calabria have been employed on a very large scale to make tasteful, cross-handled covered baskets of two sizes for the sale of fresh fruit. These can be bought wholesale at a very cheap rate, and most conveniently used in railway stations, on street stalls, or in fruit gardens and vineyards by the growers themselves to enhance the attraction of their wares. Everyone knows the convenience of buying fruit that can be easily carried away and the double temptation offered by a handy basket for future use. Postal boxes of all descriptions amongst others a "grease-proof" case for the conveyance of butter, cream cheese, or such like commodities come under the same category, and enable the producer to despatch his goods with ease and confidence to his client.

Through failure comes success. It was in consequence of the deplorable waste of the manifold natural products of Italy, owing in no small measure to imperfect packing, that the imperative necessity of reform was pressed home upon the minds of those who had the national welfare at heart. By slow degrees, old ways, so hard to dislodge, are giving place to better planned and more practical methods, and though much still remains to be done, Italy to-day takes the initiative in calling the attention of European nations to the enormous economic importance of what the president aptly termed the "modest art of packing."

Wood, straw, rush, metal, cork, glass, and cardboard have all been laid under contribution, and the result is a collection of the most admirably designed packing-cases for the conveyance of every description of alimentary and country produce. A large portion of the space is occupied by the *damigiane* of different styles, now largely used to supersede the small and ill-made wine-barrels, so easily tapped during transit from vineyard to wine-shop, and by various devices for the more cleanly and air-proof carriage of olive oil. Another section, important and interesting to those concerned, relates to the transmission of silkworms and silk in a raw state. These are articles of commerce with which we as a nation have nothing to do, and to English horticulturists the boxes, baskets, and crates designed for the carriage of plants and flowers, choice vegetables and fruits would present the main features of interest. These are for the most part simple, cheap, and well adapted to their purpose. A handy basket for the carriage of a large plant, with flaps to close down over the soil, at the humble cost of 6d.; cases filled with light trays for Strawberries, most difficult fruit to pack without crushing, and convenient Grape boxes with ventilating holes were noteworthy among other exhibits.

We have no wish to do away with the middlemen, who are as a class honourable and indispensable members of the community, but there is an increasing number of small growers who wish to turn to the best account the produce of their garden or orchard. To such the middleman, who deals only with large quantities, is of no use; but they can do much to help themselves if simple and cheap means of packing are placed within their reach. It is only those who have tried and failed who know the comfort of finding exactly the right thing at hand when it is wanted. The postal amendments of recent years have opened a wide door to the small grower. Let us hope that both the government and the railway companies, following the good example of Italy, may generously devise more and more help for the larger requirements of the agriculture and the horticulture of the country, for it is undoubtedly the case that a failing interest in the land does not make in the long run for the best welfare and prosperity of any nation.

K. L. D.

THE GARDEN.

No. 1484.—VOL. LVII.]

[APRIL 28, 1900.

THE ROYAL HORTICULTURAL SOCIETY AND ITS POLICY.

IT is evidence of strong life when the movements of a society determined to represent true horticulture in the British Isles stir up controversy and occasion much anxious thought concerning the future at a time a decided advance forward is in contemplation. During the past few weeks much has been written in *THE GARDEN* and other journals as to the wisdom of departing from Chiswick to seek fresh fields for the purpose of carrying out those necessary trials of flowers, fruits, and vegetables which have formed no small part of the society's work during past years.

It is unreasonable to suppose that it is either satisfactory or even fair to the trade and gardeners generally to submit their productions for trial in a smoky suburb. Let there be no sentiment about the matter. Chiswick is not the pretty village it was fifteen years ago, and each year, even each month, some sweet spot disappears, until in the near future not a vestige of its once quiet beauty will exist. The market gardens in the neighbourhood have been pointed to as proving profitable in spite of the far-reaching hand of the speculative builder; but these gardens are disappearing too, until only the Apple or Pear tree in the back gardens of the new estates will mark the place of former fruitful orchards. Probably many of our readers have never visited the Chiswick garden associated with so many noble botanists, travellers, and gardeners, but it is fast becoming a mere oasis in a sea of bricks and mortar. Tall factories rise up in one corner, and it is an open secret that the estate adjoining, once the arboretum of the society, will go the way of many interesting domains in this historic parish. This will mean that the garden will be practically hemmed in by houses and factories.

Under these conditions of course it is needless to remark that serious gardening is impossible, and these trials of new productions must be carefully undertaken if they are to prove of any value. We think the council have displayed a commendable policy in thus earnestly endeavouring to advance the interest of true horticulture in removing their practical work from a London suburb. We know how bitterly the authorities at Kew complain of the development of building near the Royal Gardens and

the way it hampers their good work; but Chiswick is a mere patch in comparison to those noble gardens—and a patch with no river or surrounding open land to mitigate somewhat the effects of a fast growing district, although it will be wise to retain, if possible, the present garden for conferences and meetings until the hall of horticulture becomes an accomplished fact. Trial grounds elsewhere are, however, an immediate necessity.

The council, too, are to be commended for their interesting suggestions for establishing a school of horticulture in these isles, not placing the whole burden of responsibility upon the society, but entering into negotiations with County Councils, Board of Agriculture, and similar organisations. It will be a great day for horticulture when a school conducted upon sound principles is established. There is need for it; and, as we have remarked previously, we look forward to the time when the foundation will be laid, knowing that horticulture, becoming a greater power in the land every year, will by this means receive definite recognition. There are schools of a kind already, muddled-up enterprises of no practical value, fancy gardening schools which have failed to impress one with their importance or usefulness. All this only means that there is some reason for promoting this school by co-operation with other bodies of recognised authority as a means of educating young men in the principles of sound horticulture.

THE MEETING.

As we anticipated, the meeting held on Wednesday last in an upper room of the Drill Hall was fully attended by horticulturists and those who have the welfare of the society at heart, namely, Sir Michael Foster, M.P., Sir W. Thiselton-Dyer, Director of the Royal Gardens, Kew, Mr. H. J. Elwes, Dr. Masters, and many others. The chair was taken by the president, Sir Trevor Lawrence, Bart., supported by Sir John Llewelyn, Bart., J. T. Bennett-Poë, and others, but as *THE GARDEN* now goes to press on Wednesday afternoon, we cannot do more than give a general outline of the proceedings.

The meeting resulted in no really definite decision. It commenced in mild disorder and finished in harmony. Statements were made by one or two speakers deriding the council and declaring its intentions dishonourable, but, as we have previously remarked, we may surely trust the leaders of the society to act, as in the past few years, in the interests of the great organisation under their direction.

They unreservedly placed their opinions in the hands of this meeting, and to attribute to them sinister motives is un-Englishlike and inimical to the welfare of the society to which they have given their loyal and un-biassed support.

The first detail was that of the bye-laws, which, after considerable discussion, it was proposed to consider on a future occasion—a wise proceeding—and it was proposed that a copy should be sent to each member, so that everyone should come equipped with the why and wherefore of the new regulations. The question of bye-laws having been disposed of, the president then dealt with the proposed scheme for celebrating the centenary of the society, remarking in the course of his speech that Chiswick was becoming more and more "built up," to the destruction of all good gardening, and referred also to the hall of horticulture as one way of recording the coming historical event.

Various speakers commenced then a discussion which led to no practical results. Mr. Elwes urged that the recommendations of the council had been vaguely brought forward, and to his knowledge one member had resigned because he was against the proposed site at Limsfield. It was essential not to regard the society as a London organisation, but as a national one, a point upon which we think every horticulturist is agreed. Mr. Elwes, however, mixed up the two schemes, one for transferring the work of the society elsewhere, and for commencing this school of horticulture. Sir Michael Foster regarded a hall of horticulture as a fitting way of celebrating the centenary of the society, considering that the sum of £40,000 might be reduced, but Sir Trevor Lawrence pointed out that Baron Schroeder had gone into the scheme carefully some years ago, when this sum was considered essential to establish a central hall worthy of horticulture in this country. At this juncture, we are afraid, the serious business of the afternoon ceased.

There was much desultory discussion without formulating any policy, and the meeting closed by Sir W. Thiselton-Dyer proposing a vote of thanks to the president for the conciliatory spirit in which he had conducted the business of the afternoon, in which everyone present heartily concurred. The result of the afternoon's debate was the following motion, proposed and seconded:

That this meeting confirms the recommendation of the council made and adopted unanimously

by the annual meeting of the society, that its centenary be celebrated by removing the gardens from Chiswick subject to the council being able to find a new site which commends itself to the majority of the Fellows."

Of the wisdom of removing from Chiswick we have no two opinions. It is essential; but the whole matter remains in the hands of the Fellows. Nothing has been accomplished, and the future will, we feel assured, if a spirit of good feeling is shown on both sides, bring forth good results for the promotion, as Sir Trevor Lawrence said, of pure horticulture in this land.

THE AURICULA SHOW.

THE show of the National Auricula Society is always one of the most enjoyable of the floral year. Though our sympathies may be mainly with the out-door flower garden, we cannot but see how admirably the Auricula, as a florist's flower, meets the need of expression of their love of flower beauty of the large number of dwellers in town and suburb who may have a little frame or two, but who cannot have a garden, and so the tenderly cared-for plants answer to this need of a thing that can be kept in a small space, and grown into what may be held in the hand and brought close to the eye and enjoyed like a lovely jewel. Thus comes about that close comparison giving rise to the florist's standards of excellence that some of us have, perhaps unjustly, thought unworthy of sympathy.

In this flower, as in some others, such as Tulips and Pansies, we have to undoubtedly recognise that there may be two standards, the show and the garden, and we have to point out that the two kinds of practice are the same, and yet different; they are the same in this, in both the motive is the enjoyment of one of the purest forms of human happiness in the beauty of flowers, and they are different in that in one case the plant or flower is to be enjoyed as a thing in the hand, and in the other in the many ways indicated by the needs of the garden.

We think that much of the want of sympathy, when it has occurred between the avowed florist and the free gardener, has arisen from not clearly keeping this fact in view, that there are, and in many cases must be, the two standards. They are not necessarily always distinct, but they very often are.

Thus the florist's gold-laced Polyanthus, so neat and pretty in the hand, has no effect in a flower border, while the larger free-shaped coloured Primrose and Polyanthus, used by the thousand will form splendid garden pictures. The good florist's Tulip is but little better in the open border than a humbler brother of equal size, but less good marking. On the other hand, a bed of garden Pansies is a better thing in a garden than a bed of the stiffer show Pansies, and with the show and garden Dahlias this comparison is still more marked.

We think it desirable that the evident existence of the two standards of excellence should be more noticed by private gardeners, for we cannot but think that they are sometimes misled by the show judgments in that they accept these judgments as final for all cases, not differentiating between the needs of the show table and the needs of the garden.

No one has done more for the show Auricula than the Rev. F. D. Horner. We are happy to be able to give his portrait on page 307, and to publish in his own words an account of his work among the flowers.

A MENACE TO THE BEAUTY OF THE ROYAL GARDENS, KEW.

WE learn with a regret that borders on dismay that the Government Department that has authority over Kew contemplates the erection of the new physical laboratory in a position that will entirely destroy the beauty of one of its most lovely pieces of woodland scenery. Why this spot should have been fixed upon it is impossible to say, for many another near site on Government land might be chosen that would serve the purpose well. Nothing gives more dignity to a garden than the nearness of a piece of quiet wooded land of wild forest-like character, and here is such a tract at Kew—a tract of remarkable woodland beauty, one of the very few (and therefore all the more precious) that are to be found so near London. We earnestly trust that the matter may be reconsidered before it is too late.

The Royal Gardens, the gracious gift of the Queen to her people, are loved and prized as such a place deserves to be. Year by year they increase in beauty as well as in scientific efficiency, and there are many among the number who know how to value the gift who keenly feel that every portion of the beauty of the garden should be jealously preserved and guarded.

The beauty of Kew is a matter of national importance. It is one of the richest treasures, as well as a source of refining education of the highest value. Since it became a garden of beauty as well as a scientific centre it has been the means of widely teaching the receiving of happiness through the beauty of flowers, and hand in hand, as it were, with other sources of instruction that have this aim alone, it has powerfully fostered that love of flowers that seems to be born in the hearts of English people. So out of doors at Kew we see plants carefully and distinctly labelled for the student, and we see the same and other plants pictorially treated, in rock gardens, in shrubbery clumps, many of these carpeted with spring-flowering bulbs. We see rougher, grassy places gemmed and crowded with flowers, and beyond we see the grand growth of forest trees, and, forgetting the nearness of the vast city, we feel the soothing power of the quiet woodland. Throughout is perceived the influence of a wise and thoughtful direction that, after years of labour, has made the Royal Gardens a place that teaches all the best lessons that can be learnt in a garden. Let us hope that it may so remain, and only grow in beauty, unmarred by injudiciously placed erections, or anything that may hinder its good work of teaching one of the best ways of having and holding human happiness.

HIGHLY-GLAZED PRINTING PAPER.

SINCE the beginning of our new issue many complaints have reached us about the discomfort to sight and touch occasioned by the high glaze of the paper. Hitherto the strong glaze has been a mechanical necessity for the satisfactory printing of the illustrations, and the endeavour to print well on the lower glaze has not met with success. But in deference to the wish generally expressed, such attempts have not been relaxed, and we have pleasure in announcing that, beginning with our next issue, a paper with much less glaze will be used, while every effort will be made to keep the printing of the illustrations up to their present level. Eps.

Spring flowers in the London parks. The London parks are gay with Hyacinths and many other bulbs which were supplied by Messrs. Carter and Co., of High Holborn.

NOTES OF THE WEEK.

Anemone Robinsoniana in Ireland. I was at Blarney last week, and found *Anemone Robinsoniana* fairly plentiful by a riverside—possibly a garden escape, but it looked wild. GREENWOOD PEN.

Royal Horticultural Society's last show. We have never seen the Drill Hall more crowded with exhibits and visitors than on Tuesday last. This was partly due to the exhibition of the National Auricula Society held at the same time, but it is evident that the need of some good central hall becomes more necessary every year. We believe that a large number of exhibits were refused simply through the want of space. One almost trampled upon flowers on Tuesday, and of course it is needless to say the effect of many artistic groups was entirely lost.

Narcissus Stella Improved.—As this new *Narcissus* has not yet opened in my garden, I was glad to make its acquaintance in the stand of Messrs. Barr and Sons at the spring show of the Royal Caledonian Horticultural Society in Edinburgh. After seeing it, one does not regret its purchase, and I look forward to its blooming in the open here shortly. It is of great size and substance, and appears to be a good grower and bloomer. Other promising Daffodils, also of the incomparable section, seemed to be coming in the shape of Leeds Bridesmaid, Sans Peur, Minx, and a selection not yet named, but which has a highly coloured cup. S. ARNOTT, N.B.

Spring flowers at Kew.—The Royal Gardens, Kew, are in their spring dress, and at this time they are as well worth a visit as at any season of the year. Daffodils, of course, are a feature, and are planted in beds, one kind in each bed, and in the grass, thousands of flowers perfuming the wind, and making brilliant dashes of colour here, there, and everywhere. The rock garden is full of interesting alpins in bloom and many flowering trees and shrubs in full beauty. Kew increases in interest and charm every year, and, in spite of a cold spring, at this time the whole place seems full of flowers, both in pleasure ground, arboretum, and in the plant houses. The time of the species of Tulip is approaching, and at Kew the noble flowers are planted largely.

Reid's "Scots' Gard'ner" (1683), first edition. Two copies of this have been for sale during the current book season in Edinburgh. Both realised high prices; 2½ guineas the highest. This edition is seldom offered, and while the earliest work on gardening published in Scotland, it is at the same time one of the quaintest of books. It was brought into a shape more conformable to modern ideas in an edition that appeared in 1721, when the book was also enlarged in some of its parts, and "The Florist's Vade Mecum" at the same time was included. The improvements were by "An Eminent Hand," who, judging from internal evidence, was not only eminent, but also an Englishman. A rude engraving of a Gilliflower, which appears in different copies not always in a like position, was also added. A reprint followed in 1766, and is the edition now best known, that of 1721 being rather scarce, but less so than the original one. P. PACO.

The true *Clerodendron splendens*.

It is not always that the true plant is met with under the above name, a comparatively dull kind being frequently substituted for it. This has of course led to *Clerodendron splendens* being by many regarded as an inferior subject, but when the true plant is met with in good condition, as it is now in the T range at Kew, there can be no question that it is entitled to a place among the most select stove climbers of moderate vigour. The flowers, which are borne in good-sized clusters, are of a bright crimson tint, and from their brilliancy are conspicuous for some distance. It is not nearly as vigorous as some of the other climbing *Clerodendrons*, and being a native of Sierra Leone it requires stove treatment at all seasons. It is well suited for training to a rafter, as the growth is not sufficiently dense to injure the plants beneath it. H. P.

Morisia hypogæa.—The pretty prostrate tufts of this Sardinian alpine, smothered for weeks in spring with its golden yellow flowers, find many admirers when seen in flower. At the recent meeting of the Royal Horticultural Society there was quite a display of the plant in Messrs. Jackman's group; the plants are quite flat on the soil, yet studded with golden flowers. The plant is quite at home in a sunny spot in sandy loam, is hardy, and by no means difficult to manage.—J.

Narcissus bicolor Victoria.—One of the valuable points about this fine Daffodil appears to be the freedom with which it increases. It appears to have no fault in this respect, and one can safely look forward to the time when it will be one of the cheapest of the splendid Trumpet Daffodils. Already it seems to be plentiful with growers, and one of them told me that it was only too free in respect to its increase. Not many will agree with his remark.—ALPHA No. 2.

Galanthus Gusmisi—This is practically the latest of all the Snowdrops of spring, and is usually in perfection when most of the others are quite over for the season. It is in good condition with me as this is written (April 10), while the only others in bloom are a few of the plants among Mr. Whittall's giant variety of *G. Elwesi*, a *Galanthus* which gives us flowers in succession for a long time. The last of its flowers are, however, far from being in good condition now, while those of *G. Gusmisi* are perfect. It is a Snowdrop of dwarf habit, and if a little too informal for some tastes, is pretty with its long drooping outer segments, which look unusually long in proportion to those which form the inner portion of the flower. The leaves are broadish, and I believe that it must be considered a variety of *G. caucasicus*. It came from Mr. Allen, who had it first from Herr Gusmus, from whom it was named by the former. It is considerably later than that little late-blooming variety of Mr. Smith's sending out named *G. nivalis festivus*. Of course, this late season must not be taken as forming any criterion for the normal time of the flowering of this Snowdrop. It has, however, proved itself later than any other that I can hear of.—S. ARNOTT.

Scilla bifolia rubra.—The flesh-coloured form of *Scilla bifolia* named *carnea* is sometimes substituted for the true pink form of the same plant. The former is pleasing also, but is not very distinct from the white one when the flowers begin to lose colour. *S. bifolia rubra* is quite distinct, and a nice patch open at present gives one much pleasure. It is singular that it seldom seeds in many gardens, and thus one has few opportunities for improving it by raising seedlings. Mr. James Allen's *Pink Beauty* is one of the few seedlings of merit. It has the advantage of blooming earlier than the original form, and it has also better flowers. Another variety which has a distinct shade of red in it, although I do not think that it is of the same parentage, is *S. bifolia ruberrima*, also raised at Shepton Mallet. It is more vigorous in growth and each stem carries a good number of flowers of a red-purple. It has also the peculiarity of coming with its foliage of a pretty chocolate-brown. After some time the greater portion of the leaf assumes the normal green, but for the greater period of the time of blooming this chocolate colour is retained. It is a very interesting variety, and one which is better liked as time goes on than at first. I have not seen any seedlings close to it, so that I cannot tell whether it reproduces itself true seed. S. ARNOTT, *Carslton, by Dunfriess, N.B.*

Bulbocodium vernal in Edinburgh Botanic Gardens.—The slugs have so much affection for this plant, that I cannot keep them off it without the use of zinc rings, which are not very convenient for a cheap bulbous plant which ought to be planted in quantity. I was, therefore, pleased to see a nice little mass of it in a bed in front of one of the houses at the

Royal Botanic Gardens in Edinburgh. It was very attractive in such a position, and its bright purplish-violet flowers made a fine show when I saw them in the beginning of April. There are some who do not like this particular colour, yet it seems to me that it is not a plant that one would care to be without for any length of time. The precise hue is not exactly described by the term purplish-violet, but it is not easy to give a better rendering of the colour, which is not to be found in any other of our early flowers, although some of the *Erythroniums* closely approach it.—S. A.

Himalayan Rhododendrons—a note from Scotland. At the spring show of the Royal Caledonian Horticultural Society, held in Edinburgh lately, a collection of hybrid seedlings of Himalayan Rhododendrons, which attracted by their beauty and their fragrance not a little attention, were exhibited by Mr. Alexander McMillan, gardener to Mrs. Currie, Trinity Cottage, who for the last thirteen years has been working among these. It was an open secret that the floral



SYMPHYANDRA HOFFMANNI IN AN ENGLISH ALPINE GARDEN.

committee was prepared to recommend first-class certificates to two or three of the varieties, but as the individual trusses were shown without names, it was impossible to mark its approval by anything more definite than an award of merit to the exhibit as a whole. Most of the varieties were pure white, but some were tinted and marked more or less thickly with spots or "honey guides." One series represented the result of crossing *R. Countess of Haddington* and *R. fragrantissimum*, both hybrids. From one seed vessel the varieties included, among other forms, exact reproductions of both parents, a pure white Countess and a form intermediate between the Countess and *R. Falconeri*, one of the parents of the former. Among the other forms, the foliage of *R. Edgworthii* was in evidence, and among these were many with very large blooms. Judging from the seedling plants shown, it may be expected that under careful cultivation there will follow an improvement both in size of bloom and also in the number of flowers in each truss. Young plants from cuttings, it may be said, bloom freely. Last year, it may be added, Mr. McMillan received a first-class certificate for a pure white seedling named Mrs. Currie.

THE FLOWER GARDEN

HYBRIDS OF CALLIOPSIS.

CALLIOPSIS GRANDIFLORA is a most engaging and useful flower, but is a sad disappointment as to habit of growth. Though one grows it well and takes care not to let it over-bear seed, still it practically fails to continue as a perennial, though looking as if it would; but it always fails and dies. It is only a biennial after all. I longed to have it as a perennial. I had roots of *C. lanceolata* and I fancied seeding it from flowers fertilised from *grandiflora*. This I did, but here I was actually outpaced by Nature herself, for in the very warm Surrey soil not only was *lanceolata* a perfect perennial, but it was always yielding chance seedlings in odd places, in the Box edging or walk. Some of these seedlings, from plants which had the *grandiflora* planted near them with a purpose, struck me as they grew with their look of greater style and freedom; one in particular was loose and wild growing like *grandiflora*, but it had definite and distinct *lanceolata* foliage of a large, free style. It survived, and after a year or two I broke it up, and to my joy I found the leggy and unsatisfactory pieces all struck fresh root, and the parent became a big, loose stool of perfect hardiness.

Now about the flowers. They are not so big as those of the pollen parent nor so full in the petals, but they are twice as large as *lanceolata* and of a fine habit for gathering. But in spite of the fact that they yield a large crop of seed, the plant never seems exhausted with flowering. It flowers practically until Christmas. I have a constant supply of wild hybrids now, and as a fact in another year or two both parents will have disappeared from the garden and only natural hybrids remain. What I should now most covet would be to get spots on it from the coloured sorts, but though plentifully mixed they do not seem to strike colour. Perhaps *Drummondii* might impart it; at any rate this hybrid is a very great success, both pretty and useful in a high degree.

A. DAWSON.

SYMPHYANDRA HOFFMANNI

THE genus *Symphyanthra*, established by A. de Candolle by detaching it from *Campanula*, contains not more than eight well-defined species. They are perennial plants with campanulate bloom, mostly rock-loving; the five-lobed flowers are large, long-shaped, hanging bells.

Symphyanthra Wanneri (or *Campanula Wanneri*) is a rock plant familiar to amateurs, while *S. pendula*, *S. Ossetica*, and *S. Hoffmanni*, which are also in cultivation, are not so well known. *S. Ossetica*, *D.C.* (*Campanula Ossetica*, *Bibb.*), is a native of rocky fissures in the Central Caucasus, at an altitude of between 2000 feet and 2500 feet. It is a plant with a thick stem and a fleshy root; the leaves, which form a large rosette, are rough and hard, toothed at the edge and harsh to the touch; the flowers are pale blue, the corolla tubular bell-shaped, and they are arranged one, two or three together on hanging stalks. The whole plant is not more than 6 inches high. It must be grown in rocky fissures in full sun. At the Jardin d'Acclimation we have it in the joints of a wall facing south. It flowers in May and June.

Symphyanthra pendula, *D.C.* (*Campanula pendula*, *Bibb.*), is also a native of the Central Caucasus, where it grows in rocky fissures of the mountainous and sub-alpine regions. The stem and the rhizome are both fleshy, the oval leaves are pointed and coarsely toothed, the yellowish white flowers have campanulate corollas, and are arranged in a crowded thyrsoid panicle, which is very handsome. It blooms from June to September and must be placed in rock, and if possible in a vertical fissure, in a half-sunny aspect.

A FIELD OF IRIS (*I. LEVIGATA* SYN., KEMPFER) IN JAPAN.

Symphymdra Hoffmann, *Pentst.*, which is shown in the illustration from a photograph made by Miss Willmott in her rock garden of an example received from our Jardin d'Acclimatation, is a plant of recent introduction. It was found in the mountains of Bosnia in 1880, and was described in 1881 in a Hungarian botanical bulletin. In 1883 we received some seed from Sarajevo (Bosnia), and very soon obtained a good stock of young plants, the seeds being fresh. The botanist who sent me the seed advised me to plant it in a cool place in shady rockwork. This I did, and we have since been almost over-run with it, so great an invader does it prove to be. It is a handsome plant, strong and upright, with broad, bright green toothed leaves. The pure white hanging flowers have a campanulate corolla and are in wide and tall panicles, bearing abundant bloom from June to October. It must be in rock and half shade. It sows itself in the cracks of the rocks.

H. CORREYON.

Jardin d'Acclimatation, Geneva.

THE MEGASEAS IN POTS.

THE section of Saxifrages still popularly called Megaseas is particularly valuable for pot culture, and when thus grown the plants escape the danger of injury by frost to which they are so subject when exposed to all weathers in the outdoor garden. This was once more impressed upon me by seeing a few pots of several species in one of the houses at the Edinburgh Royal Botanic Gardens the other day. The plants were not large, but were full of flowers, which looked exceedingly fresh and pure in colour. Among them were *S. hughata*, *S. Stracheyi*, and *S. albanica*. All were very pretty

when thus grown. There is now a wide variety to be obtained, and the plants present much difference in their foliage as well. I have had the pleasure of seeing some large collections of these Megaseas, many of them from seed, and one can only say that they might be more largely used in pots or in the open air. A new one, *S. cordifolia alba*, for which we are indebted to Herr Max Leichtlin, ought to be good, seeing that it is a white variety of a useful species. S. ARNOTT.

THE FLOWER GARDENS OF JAPAN.

IN no other Eastern land are flowers, that is to say some flowers, more thoroughly appreciated than in Japan. This flower-worship is a national one, for at certain times and seasons every man, woman, and child who can toddle goes forth to see and admire the favourite flowers bloom in orchard or garden.

They have no St. Lubbok in Japonia, no national or Bank holidays in our sense of the phrase, but they have feasts or festivals all the year round devoted to their favourite flowers.

In Tokio (Tokyo) these holidays begin with the Plum blossom, which commences at the end of January and lasts until March. Then in April there is the Cherry, followed by the Tree Peony, then in May comes the Azalea and the Wistaria, in June there is Iris, in July Morning Glory or *Convolvulus*, in August the Lotus or *Nelumbium*, also many Lilies, and finally the Maples with their gorgeously

tinted leaves and Queen Chrysanthemum close the remaining year with their beauty. While on the one hand the Japanese care but little for many beautiful flowers that we Europeans admire, they on the other hand admire and value—reverence would be a better word—many we do not care for, such as the straggling and insignificant *Lespedeza*. The *Camellia* is considered an unlucky flower, because its great red blossoms suddenly topple off whole, and this was too suggestive of the older Japanese, amongst whom execution by decapitation was too familiar, so that the Japanese do not like *Camellias*, their dislike being hereditary, and their native *Lycoris* is also a flower suggestive of death and the tomb.

Of the many beautiful wild flowers of Japan but little notice is taken. Some Lilies have been brought into cultivation, but most of the garden flowers of Japan originally came from Siberia, China or Korea. The Chrysanthemum, for example, originally Korean, reached Japan *via* China, and was developed by the Japanese gardeners on totally different lines to those of the Chinese before them. The great Chrysanthemum exhibitions at Dango Zaka and at the old palace, Akasaka, are amazing in extent and variety. At the first named the flowers are grown and trained so as to represent scenes or tableaux from native history or some popular drama, but at Akasaka the variety in size and development of the separate blooms is most extraordinary. Here is a single plant with from 1000 to 1400 individual blooms, there a

single bloom like the tousled head of a Scotch terrier; on one hand are flowers with flat florets like starfish, on the other flowers having drooping florets like silver thread or like golden hair; or again you see a gigantic specimen bearing five or six varieties on a single stem, a great nosegay of different coloured flowers—simply the result of clever intergrafting. Amongst special named varieties you may see Sleepy Head, a grotesque dishevelled monster with great curling tawny florets, or the Fisher's Lantern, a dark russety red; then there is Robe of Feathers, or Golden Dew, and, most exquisite of all, Starlit Night, with delicately fretted florets, looking like Iceland moss spangled over with frozen dewdrops or glistening hoar-frost.

To obtain and cultivate these flowers to such perfection has been a long hereditary process—the grand total of the accumulated work of centuries, pursued with most consummate care and skill.

A garden-loving friend of mine who visited Japan some few years ago was charmed with all seen there in the gardens, houses, and temples, most of which have gardens attached, and in some of these unique specialities are grown in order to attract visitors, and thus increase their revenues. The one thing in Japanese plant culture that most struck my

friend was the seeming disregard for time and season shown in the taking up, removing, and replanting of even large growing shrubs and herbaceous plants. When a man leaves his house, he digs up and removes all his plants and flowers as naturally as he takes away his other belongings. "You meet," said my friend, "in the streets and on the road processions of newly-dug trees and shrubs often in full bloom, either going to the market or to a new residence and garden."

Not only are the popular flowers in Japan interwoven with all sorts of poetry and sentiment, or with historical associations, but even their methods of arranging cut flowers are dependent on conventional and traditional rules. A glance at Mr. J. Couder's beautiful illustrated work, or a peep at the end of Mrs. Earle's "Pot-pourri from a Surrey Garden," will show at a glance this simple system of decorative floral arrangement. There are many different kinds of arrangement, of course; indeed, there are two or three separate schools devoted to the art in Japan, but "the art itself is Nature." A floral composition of let us say Cherry or Winter Sweet (*Chimonanthus*) must consist of three sprays. The longest spray in the middle is curved like a bow, a second only half its length branches out on one side, and another only a quarter of its length puts forth

on the other. In a word, form means a great deal to the floral decorator in Japan, as much or more even than bright colour; each branch must show its form and natural growth; form rather than brightness and harmony of colour is the guiding principle.

The above thoughts have in the main been suggested by my reading "Things Japanese," by Basil Hall Chamberlain (Murray), a most interesting and instructive little work on the various subjects and people connected with the country, including some account of Kämpfer and Siebold, the two men who first brought Japan and things Japanese to the notice of Europe.

In 1883, being then in Leyden, Mr. Peter Barr and myself made a special pilgrimage to what was then left of Siebold's old nursery there, and we were delighted with the old-world place and its contents; after which we saw in the museum the exquisite old "Things Japanese," with which the ancient university town of Holland had long ago been enriched by those two distinguished travellers, Kämpfer and Siebold.

Japanese landscape-gardening has been practised as one of the fine arts since the middle of the fifteenth century; and different professors belonging to different schools work on different scales, one priding himself on



A JAPANESE GARDEN.

rocks and trees and lakes spread over a large area, while another makes a garden in a bronze dish only a foot square, trees, stones, water, stone lanterns and all—a veritable doll's garden.

On page 183 of "Things Japanese," Mr. Chamberlain tells us, "The roof ridge of a peasant's dwelling sometimes presents the aspect of a flower garden, for when it is flat it is apt to be over-grown with lilies or red lilies. People disagree about the reason. Some say that the flowers are planted in order to avert pestilence, while others no less positively affirm the growth to be accidental. Others again assert that the object is to strengthen the thatch. We incline to this latter view. Bulbs do not fly through the air, neither is it likely that bulbs would be contained in the sods put on the top of all the houses in a village. We have noticed, furthermore, that in the absence of such sods, brackets of strong shingling are employed, so that it is safe to assume that the two methods are intended to serve the same purpose."

Again, we are told that "Japanese gardeners are also very skilful in transplanting large trees. A judicious treatment of the accessory roots during a couple of years enables massive aged trees to be removed from place to place, so that a Japanese *nouveau riche* can raise up everything—even an ancestral park—on whatever spot he fancies."

Other triumphs of skill are achieved by their ancient system of dwarfing. "Thus you may see a Pine tree, or a Maple, sixty years old and perfect in every part, but not more than a foot high."

Thanks to the Japanese Society in London and to other importers, these dwarf trees and tiny landscape gardens are now well known. Those interested may consult "Landscape Gardening in Japan," by Josiah Conder, with its beautiful illustrations. Those who wish to get some knowledge of Japanese art as concerning flowers and gardens should also read the chapter on "Flowers and Gardens," pages 157 and 180, of Mr. Chamberlain's book; "The Flowers of Japan and the Art of Floral Arrangement," by Josiah Conder; and a preliminary article by same in vol. xvii., part II, of "Asiatic Transactions." "The Gardens of Japan," by F. T. Piggett, is another charming book on the same subject, as also is Mr. Alfred Parsons' "Notes in Japan," originally published in *Harper's Magazine*.

F. W. BURBIDGE.

CORRESPONDENCE.

NOTES FROM BADEN-BADEN.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—*Iris reticulata typica* is well figured in *Botanical Magazine*, t. 5577. The form *majus*, if I remember rightly, was raised by Captain C. G. Nelson, of Godalming, and is certainly distinct enough to deserve the name of *majus* from its size and superior floral arrangement. The blades are larger and stretched straight out in a horizontal position, thus showing a greater surface of colour. As to cultivation, I believe it is more a matter of unsuitable climate than of soil. For many years I have grown my bulbs in heavy loam, and in their homes in Asia they grow often in clayey loam, which in summer becomes hot, dry, and hard as a brick.

To *Anemone blanda* the little *A. intermedia* will make a nice companion; it has somewhat small sulphur-yellow flowers, and is out at the same time as the former. By selective sowings I have raised a good variety of *A. blanda* showing flowers over

2½ inches across. In consequence of the nasty weather we had, *A. blanda scythica* is cautious of showing its beauty. Coming from higher elevations than the type, it is of course later, even to three or four weeks, but its late appearance is compensated for by the lustrous white and the peculiar bright glaucous-ultramarine of its perfectly shaped flowers.

Baden-Baden.

MAX LEICHTMAN.

DEEP CULTIVATION.

[TO THE EDITOR OF "THE GARDEN."]

I AM glad to find at last that I have made myself more clearly understood by Mr. James R. Hall, and regret my teaching in the first instance was not more explicit. If Mr. Hall prefers to work in a mixture of suitable ingredients into his subsoil before bringing it to the surface, little harm, but I fear not much good, will have been accomplished. My ambition is always to have a really good depth of fertile soil. I maintain the surface is only of a secondary importance, and as long as the bad subsoil, as I have before stated, is not influenced by the weather this cannot be accomplished. Let me point out that to attempt to make the subsoil anything like a suitable surface soil before bringing it to the top will surely entail more labour and time than bringing a surface soil, if trenched at the right time of the year, into a condition fit to receive the finest seed.

I am entirely in accord with Mr. Hall as to the value of burnt garden refuse, but it is quite another thing to burnt clay. I have never found anything, not even weeds, to have a particular liking for this material however mildly it may have been burnt when coal has been used. I do not for one moment wish to claim that the practice of boring holes is a new one; on the contrary, I know it to be very old. I merely mentioned the fact in my last note by way of reply to Mr. Hall as to how we obtained our exhibition specimens. My advice would be to anyone failing with Brussels Sprouts and Cauliflowers from the cause mentioned by your correspondent to trench 3 feet deep and fill up the holes when planted with finely-sifted cinder ashes.

E. BECKETT.

Abraham House Gardens, Elstree, Herts.

[We must now close this correspondence. Eds.]

VICTORIA REGIA VAR. TRICKERI.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—It may interest your correspondent "H" and some other readers of THE GARDEN to know that I have heard from Mr. Tricker himself that the variety of *Victoria Regia* which bears his name has proved absolutely and perfectly hardy in America, as some self-sown seeds which had dropped into the mud at the bottom of a pond at Riverton, near Philadelphia, at the end of the summer of 1898 and remained there without any kind of protection throughout the winter, came up of their own accord in the month of June and bloomed well during last summer. As fresh seeds of *Victoria Trickeri* can now be obtained, it is to be hoped that some English horticulturists who are interested in these beautiful plants will try this hardy variety in the open air, whether in heated or unheated tanks or ponds, and communicate the result of their experiment to the columns of THE GARDEN.

W. E. GUMBLETON.

[We understand that these seeds may be obtained of Mr. Henry Dreer, 714, Chestnut Street, Philadelphia, U.S.A.—Eds.]

NUTTALLIA CERASIFORMIS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—In calling attention to this shrub, "B." omits one of its chief recommendations; I mean its fragrance. I have one in my garden 9 feet or 10 feet in height and about 6 feet or 7 feet in diameter which diffuses its pleasant almond scent over that part of the garden, a scent as powerful as, though very different from, that of *Azara microphylla* now (April 10) full of bloom, which covers the under surface of every leaf and emits its powerful vanilla perfume.

Speaking of this rather unexpected scent reminds

me that I have occasionally found precisely the same vanilla scent strongly developed in the bloom of the common Lent Lily (*Narcissus pseudo-Narcissus*), a most unlikely plant; but other instances occur to me. One perhaps familiar to gardeners, though new to me, is that the matted roots of one of the *Acacias* (I forget which) on being taken out of the pot were more offensive than the strongest garlic. But perhaps the most curious anomaly in this line is the strong ivy smell in the crushed leaf of an Ivy-leaved *Geranium*, suggesting the idea that the scent followed the form of the leaf.

T. H. ARCHER-HIND.

Coombe-fishers.

[We have often noticed the curious and very close resemblance between the pleasant smell of the Ivy leaf and that of the Ivy-leaved *Geranium*, and have frequently pointed it out to gardeners and amateurs. The root of the common *Laurustinus* has a very strong and offensive smell, which is represented in a less degree by the roots of others of the same family.—Eds.]

NARCISSUS PALLIDUS PRÆCOX.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—A good deal of correspondence having taken place regarding this charming little Daffodil, may I (as a reader of THE GARDEN and as an admirer of Daffodils) be allowed space in your columns to write in a modest way of my own short experience of this early spring flower?

In the latter end of December, 1897, or in January, 1898, I planted one hundred bulbs of *N. pallidus præcox*. The place I selected for their home was between Filbert trees, making nine clumps in all. There are two rows of Filbert trees, and behind these a small orchard, and in the front row, with an open aspect facing south-east, I planted the bulbs in clumps already indicated. The soil is lighter and freer here than in the orchard. In the spring (1898) I had only a few blooms of this Daffodil—I cannot give the number, as I did not keep any definite record of them—and last year (spring, 1899) I had only one or two flowers here and there; but I expected this scarcity of bloom to occur the second spring. This spring (1900), however, it is gratifying to record a very much better display, and I have to-day (April 10) counted seventy-four blooms from these hundred bulbs. Is this number considered satisfactory? The Tenby Daffodil (*N. obvallaris*) was planted at the same time as *N. pallidus præcox* in the row of Filbert trees behind the one which contains the latter and is doing well.

I also planted another hundred *N. pallidus præcox* in or after November, 1898, and this time the situation was inside the orchard, only a few yards from the other hundred bulbs, planting them all together in one mass under an Apple tree, where the soil was more moist and stiffer than in the first situation mentioned above, and being a slight open space to the north-east, with fruit trees behind. In the spring of 1899 I had a fine display of flowers from these bulbs—I should think all, or nearly all, of the bulbs having flowered; and this spring (1900) I have thirty-four blooms in fine condition from this same clump. I take it the second spring you do not get the same amount of bloom as the first spring; the bulbs are making flowers for another season; and with regard to this latter remark I speak with no authority. In both cases in the planting of *N. pallidus præcox* the spade was used to lift the turf, and then the soil dug and the bulbs put in by the hand, and not with a dibber, the turf being cut with an edging iron before replacing the same in order to assist the growths through the turf. The Daffodil in question is truly a lovely little flower, and answers justly the description assigned to it in the catalogue, "variable in size and shape."

Eden Grove, Carlisle.

R. CARRUTHERS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Mr. Arnott asks for further notes on *Narcissus pallidus præcox*. A writer in THE GARDEN, April 7 (p. 263), seems to think it is more suited for a cold climate than for a warm one. I should think the

contrary. In this cold, bleak climate (Co. Cavan) it appears to have died out of all the gardens in my neighbourhood, although in some it was planted in considerable quantities. I myself planted a large clump. This gradually died off, though planted in a bed where other Daffodils do well. At last only one bulb remained. This I took up and put on a rockery facing due south under a large shelving stone, where it was safe from deluges of rain. There it flourished amazingly. This year there are ten blooms on it. It has been in its present quarters about four years. I give it occasionally a little bone-dust and leaf-mould.

It is a curious thing that Princeps and Minnie Hume hardly ever give me a blossom, though in luxuriant health and well attended to. Is this a usual experience in cold heavy soils? D. K.

Co. Cavan.

BUTTER BEANS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—The cause of our failure is certainly not either want of suitable land or want of knowledge as to the treatment. It may be, as we have only tried the Beans sold for cooking, that these have been overdried or treated in some way which causes the plants to be weakly, and if this is the case, the remedy is simple. THOS. FLETCHER.

Grappenhall, Cheshire.

VERBENA MISS ELLEN WILLMOTT.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Your notes on the revival of Verbenas should stimulate those who have the accommodation to give attention to this beautiful class of bedding plants, which, by the way, are also suitable for pot culture. My earliest remembrance of them was at the time when prizes were offered at summer flower shows for pot plants, and very fine examples I have seen. We have observed very few new varieties for some years past, the above-named being an exception. This was sent out by Messrs. Veitch & Sons, of Chelsea, a year or two ago. It is certainly a most valuable variety for bedding, the large trusses of rosy-pink flowers being produced in great profusion. It is just one of those things which attracts one from a distance, and requires only to be seen to be appreciated. It is quite true that the old varieties still exist. Purple King (which I have known from boyhood) is grown extensively by most nurserymen who supply bedding plants, the pure white, Snowflake, being also grown. Seedlings are also cultivated to a great extent, and good results may be obtained if the seed is procured from a reliable source. It is now rather late for sowing seed, but if done at once, seedlings will flower in the autumn in time to select the best to propagate from cuttings.

A. HEMSLEY.

WORKERS AMONG THE FLOWERS.

REMINISCENCES OF AN OLD FLORIST AND HORTICULTURIST.

IN response to a gracious request for an outline of my life as a "worker among the flowers," I gladly give it as sketchily as I can.

Perhaps significantly, I was born on a flower-show day (Carnations and Picotees) of the then Hull and East Riding Floricultural Society, and to revert to my earliest recollections of a love for plants will carry me back—through five and fifty years—to those first "rough leaves" of childhood that rise from the mere "cotyledons"—the longclothes—of our infancy.

Truly, I feel diffident at having to begin at a day of such small things; and yet to be autobiographical I must, in trust that some among our readers may bear to tarry for a short while with a little child.

I have always loved a seed-leaf, and vividly

remember the bitter disappointment that, as a seed, a Walnut gave me. What a great and funny pair of seed leaves there would be, were those curious halves—as revealed under the powers of the nut-cracker—turned into leaves! Alas! I knew not then that the cotyledons are sessile in the Walnut, and that I should see only a few common Walnut leaves come up instead. It feels like a "happy release," now, that I did not try the Cocoa-nut, and so was spared the misery of finding that this mighty seed does not turn into a pair of elephantine seed-leaves.

I was fond of the springing seed: for, in a way, we were as children together, and out of childish curiosity I must have played but roughly, and have been "a great tease." Among the earliest pets was a seedling common Vetch, or field Tare, which I trained in the nursery window, and a field Pea (the old "Partridge breast") and a common Horsebean, really a striking window plant if grown in a pot out of doors and brought in when flowering. Perhaps the best of early attempts was a showy



THE REV. F. D. HORNER, M.A., V.M.H., F.R.H.S.

specimen of Scarlet Runner Bean, I think my first under the dignity of "glass." Being only an annual by compulsion, and perennial if not frozen underground, this plant on an inside border came up early, sending up shoots from subterranean eyes, after the manner of the Hop. It did not pod, but flowered overhead along the roof of a great, but lightsome and airy, yet inconvenient, conservatory, hardly to be kept above freezing point in any good "skating" frost.

Very memorable to me still, are the words of an old curator of the then Botanic Gardens of the town when I timidly asked him for a "plant by the whole root."

"Bairn," said he, "you are the first one that ever has asked me for a *plant*: all the other children come for *flowers*." At that time my childish income mainly went in pennyworths of seeds and seed-shop bulbs, or was amassed for an ambitious Hyacinth or two. Occasionally I dropped a penny on the way, for I have never been able to turn aside from a Blind Man's Dog. (However, let such things pass—to the credit, if it may be, of that Account which we do not keep ourselves.)

Next, as if in forecast of a still wider love for the grain grasses, I "vulgarised" the garden with groups of Barley, Wheat, and Oats, and made attempts at Indian Corn. In years long after I had some very interesting results from crosses between the white Barleys and the black, which is of very good effect among the gold in Harvest Decorations, but sadly little known. Ripe ears of cross-bred Barley seedlings showed different densities of blue and slaty greys. Between black and white Oats, I obtained grain of divers brown-paper colours, together with some modification of the ears, where one parent had been an open-headed Oat and the other one-sided, as in the Tartarian type. Triticum and Secale (Wheat and Rye) I did not succeed in crossing—one cannot always put trust in appearances. Farmers in my country parish despised all these Corn mongrels, and said the grain "wasn't of a marketable colour!" To secure pollen on the ephemeral anthers of "the flower of grass" and purity of the stigmas on ears of the seed-parent, I extracted the anthers of these while immature, and protected the heads under bell-glasses supported on little platforms at the height required. It was almost pathetic to see how the shy waiting pistils grew anxiously and hungrily beyond their shelter in the green chaff, until they met with pollen grains collected on a camel-hair brush.

Of course, through some boyish years, and those of riper youth, I was necessarily much away from home; and can hardly honestly say that I grew plants then, though I possessed them still, in the faithful keeping of my dear father, Dr. Horner, of Hull. To his nurture, care, and knowledge, I owe more than ever I can express, not only in this one way, but in all other advantages of my life. More or less together we long grew the old round of florist flowers—the Auricula and Polyanthus (the true and now all but lost type of the real gold laced), the Tulip, Pink, Ranunculus, Carnation, and Picotee.

I will say that in those days, selfs in the Carnation were banished, as being but base and unprofitable sports, and the single Dahlia was transported for life to the waste-heap, as something outside the pale of civilised cultivation. Call this school "narrow" if you will, but we looked at the intrinsic points of beauty in each separate flower. We followed the lead of Nature, amid vast powers of variability, towards types to be only specialistically evolved.

We did not aim at effectives in the mass—at beds, clumps, groups set out for decoration broadly, and perhaps best seen from enhancing distances, since one flower might be just the same as ten thousand more of it close by. Our florist flowers are rather the parallel of the thoroughbred in dogs and horses, cats and feathered fowl. It does not follow that there should be extinction of the barndoor bird, or of the cattle that have no particular pedigree; but a breeder of blood stock must keep his strains pure.

However, "to return," as the boy said when the farmer caught him in the Apple orchard, and asked him where he was going to—return, the Cape Pelargonium and the Camellia were glories of the past decades, and we had good collections of the Pelargoniums of Beck, of Isleworth, and others, and the beautiful Camellias of famous raisers on the Continent. The Camellias were our special favourites for years, but I can only see mementoes of such flowers now, pictured in the volumes I have of Verschaffelt's exquisite "Iconographie des Camellias," 1848 and few following years. There were then no Fuchsias of the present pronouncedly reflexed type.

Indeed, when they began to come, my father held all such to be of an indiscreet and unbecoming dress, subversive of the native grace of the flower. He was laughed at for his prophecy that we should one day see the converse of the white Fuchsia with red corolla, and have sorts with red sepals round a white corolla. But he was right.

As time went on with us, there dawned an era of tropical succulents, until we had a certainly rich collection of Cactaceae, mostly of the Echinocactus and Mammillaria group. For these we were largely indebted to the labours of the late Mr. Pffersdorf, an eminent specialist. Of almost a fossil status I have some of these plants still, among them the always white-haired, but never bald, Old Man Cactus (*Pilocereus senilis*). In an intermediate sort of house we had a few Orchids, and there was a solitary plant of *Phalaenopsis amabilis* in the stove of a suburban friend. I remember none others within many miles. Orchids in those far days seemed esteemed as plants of the gods, even as ambrosia was celestial food.

When I had entered upon my first curacy, the dear old home and garden were 100 miles away, and I could only about twice a year revisit it then. It was there, in town street rooms and a back-yard garden, that I sank to the lowest ebb, and passed through the narrowest straits I have ever come to in horticulture. Some may wonder at a man attempting a garden in a disused yard where the soil was a hideous conglomerate of builder's rubble, faced with the skimpiest veneer of earth; and where the very sunshine, with constitution ruined through the smoky air, lay pale and sickly along my narrow border, as on a deathbed.

Still, somebody will understand the biting pangs, the gnawing hunger of an unrequited love, whereby I felt I must grow something. I could not hope for much; I could only try the easier and humbler animals; and these had to struggle through various impediments put down to counteract the malignant town Tom Cat and all his works. And yet there have been glories even in a back-yard! The greatest I ever knew of was where there once was a butcher's place of slaughter. A later tenant had backed up the paving-stones, dug the soil over, and worked it up for a Hyacinth bed. In this blood-stained earth he grew spikes of marvellous strength and colour.

Possibly a little window gardening with Dutch bulbs was open to me, but not to my knowledge. My fate has been to find that

those who let apartments object to a "messing about with plants." In common with the cabman, there is a racial aversion to admit anything that is suggestive of "wetting things" or otherwise "dirtying" something.

"Cut flowers for decorative purposes," which

sick bedside. They have. In all the grave illnesses of my life, plants, sometimes in flower and sometimes not, have come, always welcome and restful in the dreary room. Even so have I lain helpless, while across the window wood-work and set in spent medicine bottles, refilled with water, I have watched slips of *Nasturtium* strike root and grow, and sometimes even flower.

FRANCIS D. HORNER.

(To be continued.)

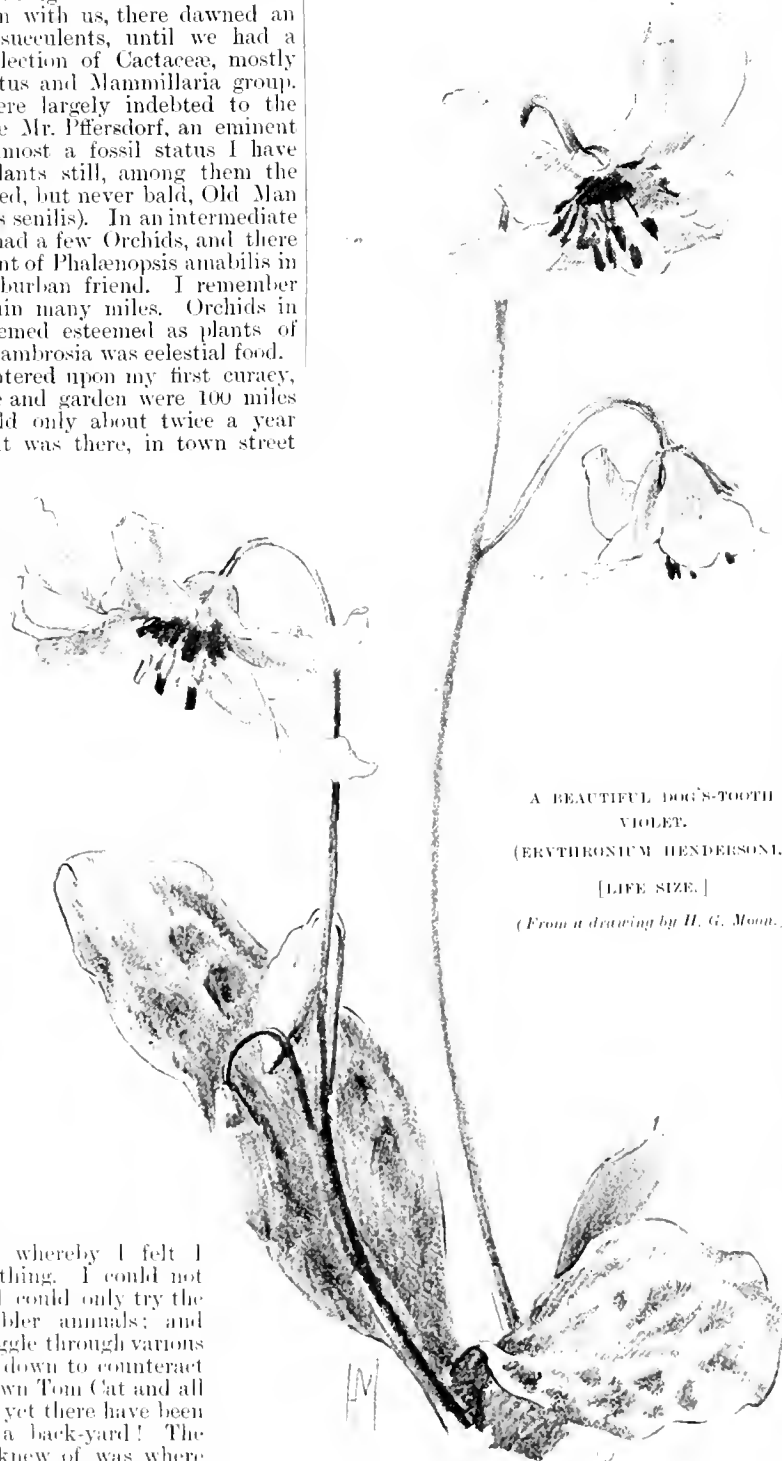
AN ARTIST'S NOTE-BOOK.

ERYTHRONIUM HENDERSONI.

PERHAPS of the best of the older kinds is the beautiful *E. grandiflorum*, as it was formerly called, now usually sold as *E. giganteum*. Even to-day both names are retained for two of the best and most worthy of this group, the former being given to the plain-leaved kind, formerly known as *E. Nuttallianum*, and having golden flowers, while the plant answering to *E. giganteum* is of paler hue altogether and the flowers much larger, often 3 inches across, and frequently with half-a-dozen on a spike of ordinary strength.

Then there has been a sort of rearrangement among the forms of *Erythronium revolutum* rendered necessary by the Messrs. Wallace, of Colchester, who have imported a batch of plants that on the reliable authority of Mr. J. G. Baker, to whom they were submitted, proved to be the *E. revolutum* as collected over 100 years ago, and only flowered in the spring of 1897 for the first time in this country.

This rendered a new name necessary for what had been called *E. revolutum*, which is now considered identical with *E. albiflorum* as formerly figured in *THE GARDEN*. The plant first sold as *E. revolutum* is now named *E. r. Watsoni*, as it obviously is related to the *revolutum* group, and named in compliment to Mr. Watson, of Kew. All these are extremely fine forms. Then followed the lovely *E. Johnstoni*, a clear rose-pink, but the plant does not appear to be very vigorous. In *E. Hendersoni*, the subject of the illustration, we find the same beautifully mottled foliage as in *E. giganteum*, sometimes quite of a coppery-bronze colour, and ever showing a good vigorous growth, while the flowers are among the most showy of the whole family. The segments vary in colour from palest rose to purple, and shaded white near the tips and margin, while at the base is a large and conspicuous blotch almost black, lightly encircled again with a yellow ring, which not merely renders the plant distinct from its fellows, but very striking also. The plant, too, is free-flowering and grows vigorously. It is well adapted for the rockery or for association with the choicest of hardy flowers. I have rather preferred briefly to mention a few of the most worthy kinds, such as cannot fail to satisfy, rather than give a more detailed list even of these very seasonable flowers, all of which possess a beauty quite their own. The *Erythroniums* are quite hardy and require a sheltering rock or something akin to preserve their flowers as long as possible, and where this shelter can be afforded them there is no spot that suits them so well as a grassy dell, as they flower while the grass is still



A BEAUTIFUL DOG'S-TOOTH
VIOLET.
(ERYTHRONIUM HENDERSONI.)

[LIFE SIZE.]

(From a drawing by H. G. Moon.)

is a hateful phrase to me, I never would have. Generally it means an ignominious end for flowers. Largely they are strictly out of place, incongruous, and all the while practically in a dying state. Yet I will not say in any hardness of heart that those who cannot grow flowers should go without them; and least of all that flowers have no gentle ministry by a

short and fresh and green. Apart from this, a cool spot is usually a good home for these flowers.
E. JENKINS.

ZYGOPETALUM (BATEMANNIA) BURTII.

THE Bollea section of Zygopetalums to which Z. Burtii belongs is not frequently met with in good condition, although the plants may be kept in health and flower freely for three or four seasons. They generally, however, begin to decline after that period, but there are a few exceptions in which the plants may be kept vigorous for many years. It is difficult in our variable climate to provide the equable temperature so characteristic of the native habitats of the various species belonging to this section, and especially to the Costa Rica group, in which Z. Burtii is included. Atmospheric moisture also is very great, for in the mountain regions facing the Atlantic it rains almost every day in the year. On the slopes facing the Pacific there is a dry and rainy season, the latter lasting from May to November, the remaining part of the year being very dry. The nights are damp in the dry season, owing to the very heavy dews. This species was originally discovered by Endres in 1867. It first flowered in Mr. Hames' garden at Winterton, in Norfolk, in 1872, and varies considerably in shape and intensity of colour. It is, nevertheless, an attractive Orchid, and one of the most desirable kinds of the section.

The plant exhibited by Mr. Pitt at the Drill Hall on April 10 last received a first-class certificate.

H. J. CHAPMAN.

I make this suggestion to help the editors of THE GARDEN to supply what is certainly wanted, viz., a concise, limited, yet complete table of the best Apples in cultivation. There is a wide field to choose from without even discussing the new introductions which keep appearing, some being first class, and others having no great future before them, and yet the fact remains that there are far more inferior Apples than really good ones. It must also be remembered that Apples do not succeed equally well in all soils and situations. Mr. Tallack points this out on page 215 in reference to Norfolk Beaufin and Wellington, though I have always looked upon the latter as a sure cropper, and certainly its present popularity is due alone to its good qualities. It may not have been generally observed that there are many Apples which are not widely known; they may be good in certain areas and possess local reputations, and there are also others—Wellington is one of them—which are grown almost everywhere. We may regard these as Apples with which to stock our orchards and plantations. Good qualities alone can make an Apple popular, and the very fact that it has a wide reputation is a proof of its good quality. The Americans have learnt this secret and

doing so, but without the Apple which gains a first-class certificate or award of merit is above the average, it will never make much headway. Some of them are first-rate. Take Newton Wonder for instance, which is new, yet no one deprecates its introduction, for it is excellent in all ways and a valuable addition to our list of long-keeping sorts.

An opportunity was given for growers to criticise the original list which appeared on page 173, and there may be something to be said about the additions made since. I think I am responsible for a few names appearing on the augmented list, and shall look with interest to see whether my opinions are shared by others or not. It is by interchange of practical growers' opinions that the best results are generally arrived at.

I observe that Manks Codlin is recommended by "Fruit Grower," and though I am prepared to admit all the good things he says of it as regards cropping and quality, in my opinion its place is as a low standard in a grass orchard rather than as a bush tree in a plantation. Its heavy cropping is probably responsible for its indifferent growth, as Manks Codlin rarely makes a strong, vigorous tree. The same thing may be noticed with Stirling Castle. It appears that two of the writers on page 214 are agreed as to Norfolk Beaufin not being a sure cropper, and if this is generally true of the variety, it is not the best for a market grower. I observe that Ecklinville Seedling is not included in the revised list on page 214, and probably there is a reason for it, though in a ballot I fancy it would have a place in a select half-dozen of early culinary sorts.
KENTISH MAN.

THE Apples named in the list at page 214 are all excellent. Of course one might raise objections to particular varieties. For instance, personally I do not care for Norfolk Beaufin because of its dirty colour when cooked, and as Alfriston is in season quite as late and is a much better flavoured Apple, plant a few more trees of that kind and leave out the Beaufin. Annie Elizabeth is also a good late Apple of good size and appearance. There is an Apple that is being more planted now; it is not in your list, though I think it ought to be, but that, of course, is only matter of opinion. The Apple I mean is a Russian variety, and is named Duchess of Oldenburg, and it ripens in August and September. It is of good colour and fair size. May be eaten off the tree if desired, and it also cooks fairly well and bears pretty freely.

There is a late dessert Apple that I used to grow when in the Peterborough district that I should like to get hold of again. It was named Lord Burghley, and was, I believe, sent out by Mr. John House when in business in Peterborough some years ago, but I do not think its flight was very wide. Possibly some fruit grower in the neighbourhood of Peterborough or Stamford may have seen something of it. It should come into season in March. It is of medium size for a dessert fruit, oval in shape, with a heavy dark crimson blotch on side next the sun. The flavour is excellent—quite equal, I think, to Cox's Orange Pippin.
E. HOBDAV.

MESSES. J. VEITCH & SONS write: With reference to the list of Apples, we have pleasure in offering the following suggestions:—

Early cooking varieties.—For Manks Codlin substitute Frogmore Prolific, a larger Apple that does well in all soils and situations and is quite equal in quality.

Mid-season dessert.—American Mother is of better quality than Worcester Pearmain and does well.

Mid-season cooking. Take out Striped Beaufin, a bad bearer, and put in Sandringham instead.

Late dessert varieties.—Lord Burghley and Duke of Devonshire are much better dessert varieties than Fearn's Pippin and Hormead's Pearmain; the latter is really only a cooking variety, and should go in the late cooking section in place of Sandringham, moved to mid-season. Boston Russet is of better flavour than Barnack Beauty, although the latter is very useful for either purpose.

Late cooking.—Royal Late Cooking will supersede Alfriston, being very hardy and free-bearing.

THE FRUIT GARDEN.

BEST APPLES FOR BRITAIN.

WHEN this important subject was opened on page 173, co-operation of practical readers was asked for to assist in compiling a complete and reliable list of varieties of Apples suitable for sale, and there are certainly many growers to-day in need of such guidance. In conjunction with the publication of the first batch of correspondence on page 214 I observe that the original list of names is augmented by varieties recommended in the various contributions. Considering that the names of different varieties of Apples are legion, and that there are people who will say good things of most of them, it has occurred to me that the ultimate list might be made more useful and reliable by confining it to a certain limited number, or there is a danger of it extending till it becomes perplexing to those who want guidance, through sheer force of numbers.

ZYGOPETALUM (BATEMANNIA) BURTII. [LIFE SIZE.]
(From a drawing by H. G. Moon.)

send us only two sorts, but they are the best they produce, viz., Baldwin and Newtown Pippin. Among our home supplies we have a few similar instances. Offer Cox's Orange Pippin or Blenheim Orange at Christmas, and they will sell, because the public know what they are buying, and prefer a really good article to something about which they know little or nothing.

"A. D." deprecates the introduction of so many new or so-called new sorts, and he may be right in



Mr. FOLLWELL, who has charge of the gardens of Alnwick Castle, under Mr. Wythes, writes: "I enclose the list of Apples which appear to succeed best in the north. Good dessert kinds such as Cox's Orange Pippin, Lady Sudeley, and others are grown on walls, thereby getting the fruit earlier and of a much better colour. Lane's Prince Albert succeeds remarkably well here. We have a fine lot of fruit still and as fine as when gathered, also Wellington." The list is—

Early dessert.—Lady Sudeley, Mr. Gladstone, Irish Peach, Duchess of Oldenburg.

Early cooking.—Manks and Keswick Codlins, Domino, Lord Grosvenor, Ecklinville, New Hawthorn.

Mid-season dessert.—Worcester Pearmain, King of Pippins, Kerry Pippin, Ribston Pippin.

Mid-season cooking.—Warner's King, Pott's Seedling, Lady Henniker, Lord Derby, Tower of Glamis, Bismarck, Cellini, Yorkshire Greening.

Late dessert.—James Grieve, Cox's Orange Pippin, Ribston Pippin, Blenheim Orange, Baumann's Red Winter Reinette, Adam's Pearmain, Reinette du Canada, Court pendu Plat.

Late cooking.—Alfriston, Norfolk Beaufin, Lane's Prince Albert, Newton Wonder, Northern Greening, Annie Elizabeth, Wellington.

Mr. A. H. PEARSON, Lowdham, Notts, writes us to include amongst the early dessert Apples, Devonshire Quarrenden, and amongst the cooking kinds, Ecklinville, Pott's Seedling, Duchess of Oldenburg, Grenadier, or Golden Spire, excluding Manks Codlin, which drops its fruit. In the mid-season dessert list Gascoigne's Scarlet is substituted for Cackle Pippin, and of cooking varieties of the same season include Frogmore Prolific, Stirling Castle, New Hawthorn, and Golden Noble, removing Lady Henniker, which is neither good for cooking nor eating, and Striped Beaufin, a poor cropper, placing Wellington amongst the late Apples. Of the late dessert Apples, Barnack Beauty, Baumann's Red Winter Reinette, Dutch Mignonne, and Reinette du Canada are poor. Winter Ribston is a poor cropper. Court pendu Plat, Mabbot's Pearmain, Kedleston Pippin, and Lord Burghley are substituted. Of cooking varieties for the same season, Norfolk Beaufin and Sandringham give place to Mère de Ménage and New Northern Greening, with Dumelow's Seedling, which is usually regarded as a synonym of Wellington, but the true variety of this is a soft, early, striped Apple.

Mr. H. MERRYWEATHER, Southwell, writes: "As a whole, the original list is a remarkably good one, and open to very little criticism." Domino is substituted for Keswick Codlin, and Grenadier for Manks Codlin; New Northern Greening for Striped Beaufin, and Royal Jubilee is added to the mid-season cooking kinds. Claygate Pearmain gives way to Brownlee's Russet, and Winter Ribston to Wyken Pippin.

A NOTE FROM SOMERSETSHIRE. No more important question could have been brought forward, and at no better season, than the one that has been advanced under this heading in THE GARDEN. Naturally many opinions will be expressed, and I think it would be wise to give this question as free a discussion as possible. It is to be hoped cultivators from all parts that have had experience will give us their views, so that a wider knowledge of Apple culture may be diffused. I reside in a western district known as a big Apple-growing locality, where some of the best Apples could be profitably grown. Still, strange to say, we get many of our Apples for use from early in February onward from America and elsewhere, not because no Apples are grown, but simply from the fact they are either cider kinds, or the growers do not know the best kinds and how to store and gather the fruits. I am convinced that in many orchards if the trees be given attention, there are kinds that would pay for gathering and keeping, but at present the Apples go to the cider mill. In proof of this there is an orchard close to me containing trees of Adam's Pearmain that give fruits of average size. These go for cider. Last year I obtained

some of them and kept them beside fruit grown in our orchard, and they were equal to them in every way. In February the public does not object to pay 3d. per pound in the town for fruit from America not so good in flavour. Some may think it would be easy to get these growers to see how they may obtain good prices for fruits by gathering and storing. I recently gave a lecture in our village for the benefit of the lovers of fruit and flowers. I made Apple culture a strong point, and to prove the differences in prices and flavour in foreign and home-grown specimens I obtained three samples, two American and Newtown Pippins from California, giving the price wholesale in Covent Garden in the middle of March, and then compared them to eight kinds grown in our garden. Everyone agreed that the home-grown fruits were the best. It could not be said that home-grown Apples received special culture, as the trees are in a grass orchard. Recently Mr. Turton, the gardener at Sherborne Castle, and myself tried Newtown Pippin from California with Claygate Pearmain, and we agreed that the latter was the better flavoured.

Ford, Abbey.

J. Crook.

Mr. J. CAIRNS, The Hersel Gardens, Coldstream, Berwick, writes: "I have scored out those kinds that I do not think suitable for our district and substituted those which succeed well here. Some of the late dessert varieties must be omitted, and I am not able to replace them, as so few reliable late kinds are a success here. I am taking much interest in hardy fruit culture, believing that no foreign Apples can compete with well-grown home cooking kinds. Unfortunately, too many kinds have been grown in the past, but during the last few years things have changed for the better."

Mr. Cairns substitutes Pott's Seedling for Cellini Pippin, Ecklinville for Keswick Codlin, Cox's Pomona (not strictly a dessert Apple, but very useful all the same) for Cackle Pippin, Gascoigne's Scarlet for Margil, Saltmarsh's Queen for Lady Henniker; and amongst the late dessert varieties Calville Rouge Precocce is put in place of Claygate Pearmain, and Blue Pearmain for Dutch Mignonne, but, as our correspondent says, "few late kinds are a success here."

THE more one knows of Apples the less is the desire to approach the subject of a choice of varieties in anything like a spirit of dogmatism. Equally as capricious as the Strawberry, perhaps more so, it is only after a trial extending in some instances over years that it is possible to speak with certainty whether or no a variety is suited to a garden, its climate and its soil. Even such generally esteemed sorts as Stirling Castle, Wellington, and Ribston Pippin cannot be depended on always. Everywhere north of the Tweed the last-named as a rule requires a wall to bring it to that perfect condition for which it is so justly esteemed. I am afraid, too, that varieties are not infrequently condemned because they do not lend themselves to the routine management to which all sorts are alike subjected. Those varieties that succeed with the least expenditure of labour on root-pruning, that exhibit a facility in producing fruit under a system of pruning that calls for little thought, and that do not too often resent inattention to fruit-thinning are the ones that most strongly appeal to popularity; nor is it unreasonable that this should be so.

There is little to find fault with in "Best Apples for Britain," including, as the list does, the pick of well-known varieties. Most Scotch growers would, however, like to include a few sorts not very well known in the south, and, perhaps, also exclude others that are too tender in constitution for any but the most favoured localities or for wall culture. Thus, in the early section, that highly-esteemed little dessert Apple known as Thorle Pippin or Lady Derby would find many anxious to give it a place, while James Grieve, a comparatively new sort, is rapidly making way as a standard variety. Then of the cooking sorts, Cellini, on account of the tendency of the tree to canker, has lost favour as a sort to be depended on, and Manks Codlin in many districts is too small a fruit. Personally, I rather like it, but the fruit must be well thinned to secure it of good size and quality. Ecklinville

Seedling is very highly esteemed, and few, if any, Scotch gardens are without some trees, more or less. Duchess of Oldenburg of late years has become very popular. On light, warm soils it is one of our handsomest Apples, never fails to crop, and is largely eaten raw. However, I would not by any means call it a first-rate Apple. Of the later sorts, Camlansethan Pippin, widely known also as Winter Redstreak, is one of the most popular of northern Apples. It is particularly suitable for cold soils and late districts, where it seldom fails to afford its quota of fruit in all but the worst seasons. Equally valuable is Galloway Pippin of the west of Scotland, Croft Angry of the east, one of the most certain croppers and the best of keeping sorts. I should also be inclined to include Mère de Ménage, which generally does well and keeps till late in spring.

Northern Greening, again, is so reliable and otherwise so valuable, that in my opinion it ought to be in the most select list. Among late dessert varieties, though some cultivators do not fancy it, I should include Duke of Devonshire, and from the list I would strike out Claygate Pearmain as too tender, Dutch Mignonne as deficient in quality, and perhaps Horthead's Pearmain for the same reason, though I have discarded it for its unreliability as a cropper. There are a few sorts besides Cellini which are so subject to canker, that on some soils it is practically impossible to keep them in a fruitful condition. Stirling Castle is such an one, but where Warner's King does well, the loss of the former is not much felt. Reinette du Canada is also fearfully subject to canker, and Wellington occasionally as much so. Newton Wonder or Bramley's Seedling afford good substitutes for the last named. Moreover, some varieties are not treated with the thoughtfulness they deserve. Thus Keswick Codlin is generally over-cropped, and the same remark applies to Adam's Pearmain. King of the Pippins requires a longer season to finish on the tree than many growers allow it, and in the same way Alfriston, which should be left ungathered till November, is, I am afraid, judging from the way the fruit shrivels early in winter, too often harvested long before it has attained maturity. Moreover, all late Apples should be lightly cropped. This is perhaps more desirable in Scotland than in England, but no one who has studied Apple culture intelligently but must be forced to the conclusion that the fruit from an under-cropped tree is of better quality and keeps better than that off a tree I will not say over-cropped, but cropped to its fullest capacity. Further, it is the only certain method of preserving healthy trees in an annually fruitful condition.

At the Edinburgh spring show I noted the following varieties as being specially good. The names are selected from the whole of the collections, and these were derived from districts as widely apart as Perthshire, Galloway, Roxburgh, Midlothian, and Ayr. The best dessert varieties were Blenheim Pippin, Reinette du Canada, Scarlet Nonpareil, Baumann's Red Winter Reinette, and Blue Pearmain (from wall). The best cooking varieties included Gloria Mundi (too shy to be generally recommended), Wellington, Striped Beaufin, Waltham Abbey Seedling, Galloway Pippin, Bramley's Seedling, Bismarck (from wall), Mère de Ménage, Alfristoff, and Prince Albert. One cultivator informed me that he has been obliged to set apart a portion of a wall in order to produce the better sorts of Apples, which would include Blenheim Pippin, Ribston Pippin, Scarlet Nonpareil, &c.

With regard to the market value of Apples, it is largely the practice with gardeners when they find the supply likely to exceed the demand to send the surplus to market in autumn. I have been favoured with the inspection of a sales book, from which it appears that the finest cooking Apples bring in autumn from about 16s. to 30s. per cwt., the latter an exceptional price, 20s. being a fair average. During winter prices are very low, sometimes as low as £3 to £5 per ton; consequently it is the practice to dispose of Apples previous to the advent on the market of American supplies, which at once effect a fall in prices. At the same time a very good fruiterer can always dispose of high-class

fruit at a fair price, because a section of his customers are prepared to pay a much higher figure for home produce than for foreign. Thus I was shown last year fine-looking Americans at 13s. 6d. per barrel of 1½ cwt., while the vendor was paying 17s. 6d. per cwt. for good home produce. The pity of it is that at the same time fruit of the poorest quality could not be purchased in the less wealthy parts of that city at less than 2d. per lb. B.

TREES AND SHRUBS.

WISTARIAS.

DECIDEDLY the oldest and best of the Wistarias is *W. sinensis*, which "may truly be considered the most magnificent of all our hardy deciduous climbers." These words were used by Loudon about sixty years ago, and they are certainly just as true now as when first written, as, in spite of the number of plants introduced since that time, the Wistaria stands out alone in the massive woody character of its long and flexible stems, besides which its delightful blossoms are borne in the greatest profusion during the spring. Besides this, a second crop of flowers often makes its appearance towards the end of the summer or in early autumn, and though by no means equal to the spring display, yet it is at times sufficiently numerous to entitle the Wistaria to rank high as a flowering climber if only the secondary crop of blooms were taken into consideration. As a climber the Wistaria is suitable for clothing pergolas, arbours, or arches, and it yields a grand display of flowers when trained to a wall if there is ample space for the development of its cable-like branches. The protection of a wall is in some seasons an advantage, for in the open the blossoms are at times cut by late spring frosts. In Mr. Waterer's nursery at Knap Hill the Wistaria has been allowed to take possession of some Laburnum trees, the effect of which is charming. Of late years the Wistaria has been employed for flowering under glass at a time when the plants out of doors are still dormant. This mode of treatment has led to the growing of standards, as in this way the pendulous clusters of blossoms are seen to great advantage, and furnish a pleasing and uncommon feature in the greenhouse or outdoors. These standards have their heads spurred back after flowering in order to keep them in a compact state. A good illustration of the Wistaria as a clothing for arbours may be seen at Kew, where, near the ferneries, a large specimen, at one time trained to a wall, was, on the latter being demolished, furnished with a large circular trellis, which it now completely envelops.

Besides the typical *W. sinensis* there are several varieties, the best of which is *W. alba*. This affords a pleasing change, but it cannot be depended upon to flower with the freedom of the common kind. Other varieties are *flore-pleno* and *variegata*, both poor sorts.

Wistaria multijuga is readily distinguished from *W. sinensis* by its long, slender racemes and by being a week or two later in flowering. The flowers are of a lilac tint, but they vary a good deal in depth of colouring. The roots of the Wistaria are very stout, few in number, and descend deep into the soil; hence, as might be supposed, it does not transplant readily. Owing to this circumstance, stock plants are in most nurseries kept in pots and plunged out of doors, but though this method allows of the plants being moved at any time, it is scarcely to be commended, as the massive roots become permanently cramped if grown in this way for a lengthened period. T.

IMPROVEMENT OF HARDY PLANTS BY HYBRIDISING.*

By CHARLES STUART, M.D.

As a rule, very careful selection is required, as even with all the skill of the hybridist many of his seedlings are deficient in some vital point of constitution, however sound the parent may be in that respect. A small minority is all that need be expected to be better than the parent in crossing varieties, and, besides, an accurate knowledge of quality is necessary to ensure "the survival of the fittest." No more delightful satisfaction can be experienced by the amateur florist than to watch the development of the beauties of his seedlings from which he expects an advancement in quality. It is not in every season that the elements are propitious for hybridising operations; and even when successful crosses have been effected, do the results always satisfy the anticipations of the operator? The month of June, 1899, has been an ideal one to the seedling raiser. There has been more continuous sunshine than for many years. The temperature at the same time has been very high, and the weather on the whole has been

house. In the month of May, when they were both in bloom, I removed the stamina in an imperfect condition from several flowers of Scarborough Defiance, cutting off the remaining flowers on the plant, after examining the stigmas with the glass to see that there was no pollen already there. Waiting till I saw that the stigmas had matured, I took the pollen from *M. cupreus* and dusted over the two lipped stigmas of Scarborough Defiance. They showed an irritability well worthy of observation. On depositing the pollen, the two lamellæ or plates of the stigma clapped together, effectually protecting the pollen and preventing the intrusion of insects. Tying a piece of scarlet worsted round the stems and footstalks of the fertilised flowers, I waited patiently for the maturation of the seed-pods, which contained a large quantity of minute seeds. The seed, as you all know, is of a dust-like character, and requires careful manipulation to get it to germinate and produce plants. Having prepared some seed-pans, filled with vegetable mould and a sprinkling of sand, finely sifted, watered the soil, and allowed it to drain, I sowed the seed, pressing it into the soil with a piece of glass. Placing the seed-pans on a moistened surface in a



A STANDARD WISTARIA SINENSIS.

very suitable for crossing hardy plants as well as exotics. The early spring was the worst on record, and in consequence the Primulaceæ, from which so much was expected, are a miserable failure as regards seed. With this preface I shall now endeavour to give a short statement of work carried out during many years of my life.

MIMULUS TIGRIDES.—More than forty years ago the late Mr. Robert Stark, a well-known Edinburgh botanist and florist, brought me a plant of *Mimulus cupreus*, a native of Mexico, saying, "There is the very thing for you. Cross the garden *Mimulus* with the pollen from this plant, and you will get something different from the ordinary forms." At the time I had no plant of *Mimulus* in the garden, but I speedily got Scarborough Defiance, a good *Mimulus* in its day, and potted it and *M. cupreus*, growing them together in a cool green-

* Extracts reproduced by kind permission from the Journal of the Royal Horticultural Society containing hybrid conference report

shady situation, a good stock of seedlings appeared, and got past the stage of childhood.

In the following spring, upon their flowering, I found the whole to be identical in character. The plants were very dwarf in habit, like the pollen-bearer, short-jointed, and the stems of a reddish-brown colour. The flowers were much smaller than the seed-bearer, yellowish in colour, and covered with minute dots, clearly demonstrating the powerful influence of the pollen of another species, and keeping more to the character of the pollen-bearer, and proving the dwarfest of the *tigroides* section of the *Mimulus* family. This hybrid was sent out by Mr. Camell, of Swanley, and was a favourite in its day for bedding and for edgings to flower-beds.

TUFTED PANSIES OR VIOLAS.—The garden Pansy has been a favourite with all lovers of flowers, and its florist varieties have been brought to a high state of perfection and beauty. Its origin is still uncertain, our native *Viola tricolor*, crossed with

Viola altaica, having the honour of furnishing the original plants from which all the florist varieties have been derived. As far back as 1835 the march of improvement in quality of petal, size, and shape commenced; and the illustrations of the Pansy in the floricultural magazines of that period give some idea of the immense improvement that has been brought about by crossing varieties of the garden Pansy. With its advancement in refinement, however, it was found that its constitution did not improve, and costly varieties had a habit of suddenly dying in hot weather. This led hybridists to turn their attention to endeavour to secure a hardier race by crossing some of our wild species with the garden Pansy, the result being the plant now popularly known as *Viola*, but a still better name is Tufted Pansy. At present it is a plant with a very dwarf habit, abundance of fibry roots, moderately large flowers, and a compact tufty appearance. The fibry roots enable the plant to withstand the changes of temperature and climate which affect plant life, and which we are all so well acquainted with. In general, one man succeeds in crossing two plants of different species, while another takes up the idea and carries out this fertilising process a step further. In 1873 Mr. B. Williams, of London, succeeded in getting true hybrids between *Viola cornuta* of the Pyrenees and the garden Pansy. Following up his idea, I fertilised *Viola cornuta* with pollen from Blue King Pansy (a bedding Pansy), and ripened a pod containing twelve seeds, which were at once sown. Every seed germinated, and in the following spring the plants bloomed, with flowers of identical character, the long spur or horn seen in the under petal of *V. cornuta* being very conspicuous. These flowers were quite distinct from anything in the *Viola* family I have ever seen. Indeed, it is safe to write that the cross had never been made till the plants of Mr. Williams and those above mentioned appeared. I tried to reciprocate the cross by taking pollen from *V. cornuta* and applying it to the pistil of the same family (Blue King). The produce was a failure, and many failures besides that recorded have occurred to other persons who have endeavoured to raise Tufted Pansies in that manner, the result being straggling habits in the plants and large Pansy-looking flowers. The next step followed with the seedlings from *V. cornuta* crossed with Pansy Blue King when in full bloom was to fertilise the blooms with various coloured Pansies, the results being flowers showing almost every colour except yellow. The plants were of true tufted character, with blooms showing the horn or keel of *V. cornuta* species. Afraid lest these crosses should become too similar to the Pansy, I took pollen from the original *cornuta* hybrids and fertilised some blooms of those above described. "The stocks being sound, this in-and-in breeding does not necessarily impair the vigour of the race." Nor did I find it so in this instance. If any flaw in their constitution existed, there is no doubt that, sooner or later, a similar defect would ultimately appear in the progeny; but this did not happen here, as the produce of the cross proved healthy in every respect. These seedlings had flowers three times larger than *V. cornuta* and were of various colours, very tufty in habit, some almost proliferous, also most abundant in blooming. As a bedding plant the *Viola* is peculiarly adapted to our Scottish climate, delighting as it does in cool, moist soil. The flowers are capable of making a continuous display in the flower-beds to compete with it, and by hand-crossing the varieties are numberless. I may mention here that these varieties were all more or less rayed in the centre of the flower. A floral friend remarked, "With regard to a white-rayed self, if you could only get that flower without any rays in the centre, it would, in my opinion, be an improvement." Keeping a sharp look-out on the seedling beds, I did not succeed in obtaining what I was searching for till the year 1887, when for the first time I observed a white flower, entirely rayless, dwarf in habit, and with most pronounced almondy perfume. The plant was removed and propagated, and grown on next season. In the following year, 1891, *Violetta* was figured in *THE GARDEN*, and

with many florists it still holds a first place as a bedder. With pollen from *Violetta*, a white-rayed self, still in cultivation, was crossed, which yielded *Sylvia*, a variety more grown than any *Viola* yet raised. Of first-rate hardiness, its freedom of flowering is remarkable. By taking *Violetta* as a seed-bearer and using pollen from rayless flowers, a great many varieties have been raised, chief among them Blue Gown, Florizel, *Rosea pallida*, Christiana, Coolgardie, &c. By careful selection the rayless strain of Tufted Pansy has been fixed; and now, if more colours could be got into the flowers, this strain would soon be preferred to the ordinary rayed form. With the fine colours in the Peacock Pansy I was induced to try a cross with the rayless strain. A hundred and fifty plants, the result of the cross, were tested, but the flowers turned out of the most varied character, with one exception, which proved a first-rate departure—a fine reticulated blue, perfectly rayless, and with a good dwarf habit. It was named Border Witch, and is well known as a show flower, and has been certificated. The fashion of showing Tufted Pansies in sprays done up with wire is open to criticism, but it seems the fashion, and we must submit. In the meantime there is just the question whether or no the Tufted Pansy should ever be shown in sprays at all. As a cut flower the blooms arranged in stalked glasses, garnished with their own foliage, have a good appearance on the table. The Tufted Pansy, however, looks best treated as a perennial in an open situation out of doors with masses of bloom on dwarf plants, where both habit of plant and quality of bloom can be examined. The dwarfier the plants are, with free-flowering properties, the more desirable they are. Take Blue Gown as a type. If every variety had its habit and free-flowering properties, we would soon possess a race of Tufted Pansies which would supersede all others. In time this desirable end will be attained.

(To be continued.)

THE ROSE GARDEN.

OLD GARDEN ROSES.

AMONG the old Roses some of the very sweetest kinds in existence are to be found. Even to-day the common Provence or Cabbage Rose has no rival as far as fragrance is concerned. Whilst I desire to put forward a plea for old-fashioned Roses it is not with a view of supplanting modern varieties, but rather to augment the existing collection by adding some of these very hardy older kinds. These old sorts are early flowering; in some seasons there is as much as ten days' difference between the blooming of these old Roses and the majority of the Hybrid Perpetuals. Where the space allowed to Roses is of considerable area, one can surely afford a bed or two, or a border upon the outskirts of the rosarium for a few of the most useful kinds. Wherever possible let them be grown as standards or half-standards. Many readers of *THE GARDEN* can recall to mind the beautiful effect produced by fine-headed standards of such good kinds as Charles Lawson, Coupe d'Hebe, Chénédole, Blairi No. 2, Juno, Brennus, Madame Plantier, &c., and I question if their equal is found to-day, from a true decorative point of view, for the short time they remain in bloom. One kind, Paul Ricaut, yields quantities of very fine crimson blossoms that I have found very useful for early cutting in bud state.

Where no space is available for standards, some pillars of the hybrid Chinese kinds mentioned above would be a very fine feature, as they grow so quickly and seem naturally intended for pillars, filling out as they do so well at the base, and they are also extremely hardy. Whatever happens to our modern Roses through the visitation of a hard winter, we may be sure this and kindred tribes are safe. There are also the charming Moss Roses, of which the old common blush, so elegant in every way, has a formidable rival in its more densely growing

companion *Graeilis*. The purity of the paper-white buds of White Bath are to-day unequalled even by *Blanche Moreau*, a variety which is supposed to give autumnal flowers, which, however, are very rarely seen. *Gloire des Mousseuses* is another lovely kind, its flowers being so beautifully mossed, and the Crested Provence should be grown by everyone who has a garden, if only for its curious Fern-like fringe enveloping the buds and blossoms. The true old York Rose, commonly known as the White Provence or Unique, must not be omitted from any representative collection of old Roses, and the pretty early-flowering miniature Provence de Meaux, White de Meaux, and the rather larger flowered and stronger growing Spong are almost indispensable, especially if used, as the two first named should be, as edgings to beds of old-fashioned Roses.

The varieties of *Rosa alba* are distinctly beautiful in their way, the kind known as Maiden's Blush being seen in many a cottage garden against wall or fence. Some years ago I met with a fine lot of this old Rose growing in the pretty cemetery at Harrow, and thought how well adapted it was for the purpose in which it was employed. But there are none of this group so exquisitely lovely as the variety *Celestial*, which is of a much warmer pink than Maiden's Blush and the tiny buds are more beautifully moulded. Another pretty gem is *Félicité* (Parmentier), its flowers being most perfectly formed and of a very warm shell-pink colour. Two almost pure white kinds of this same tribe often found in cottage gardens are *Madame Legras* and *Blanche Belgique*. Of the Damask tribe (*Rosa damascena*), perhaps none are better known than *Madame Hardy*. In bud and when half open it is lovely, but when fully developed it usually exhibits a green centre, which detracts somewhat from its beauty, but as an early white this Rose has few equals. *Leda* or Painted Lady has curious fluted petals, prettily splashed and edged with pink on an almost white ground. *La Ville de Bruxelles* of the same tribe is also good. These Damask Roses have a very peculiar bright green foliage which enables one to readily distinguish them from other tribes. In like manner one can pick out the varieties of *Rosa alba* by their glaucous foliage.

The Gallica Roses are not of much value, except the striped forms, of which *Rosa Mundi* and *Dometille Becar* are the best. The former is now much grown under the name of York and Lancaster, though I doubt if anyone would care to possess the true York and Lancaster, for it is a very poor sort. There are other groups that one may mention, such as the pretty little Scotch Roses that develop into such dense bushes, the delightful *Rosa lutea* and its varieties and others.

For public parks and open spaces these old Roses, obtained, as doubtless they may be, upon their own roots, would provide material at once hardy and decorative. In like manner I would recommend them for planting in front of shrubberies, by lakes, upon railway embankments, or other positions of this kind. If required to remain dwarf, they blossom freely if the branches are pegged down around the parent plant, and in course of time quite a large space may be covered in this way. If the layering be done in June, every branch layered will yield some blossom the following season. Such kinds as *Madame Hardy*, the old Blush Moss, &c., are most effective when thus treated. PHLOMEL.

SNOWDROPS GROWING AMONGST IVY.

IN recent issues of *THE GARDEN* much of interest has been written regarding hedge-bank gardening. Recently, as I was walking in the pleasure grounds here I could not but admire a bank covered with a close-growing Ivy, and overhung by big Yew trees. Among the Ivy are a splendid lot of double and single Snowdrops. These are scattered about in a natural way, rising 3 inches or 4 inches above the Ivy. During the latter half of February and onward they make a charming picture. Some may think they would die out, but this is not so, as these have been in their present position for up-

wards of twenty years, and they go on increasing every year and bloom most satisfactorily.

I often think as I go over many large pleasure grounds how devoid they are of beauty, and how much could be done at a very little cost by using hardy bulbs and plants in such positions as suit them, and where they would go on from year to year. Who is there that would not admire Snowdrops planted in this way? They are far more beautiful grown in this way than where their fair heads are dashed with mud and dirt.

Forth, Abbey Gardens, Clivedon. JOHN CROOK.

IN THE GARDENS OF KELLY HOUSE, TAVISTOCK.

ONE of the sweetest pictures in the gardens of Mr. Kelly at Kelly House, Tavistock, is "The Retreat" shown in our illustration. The gardens generally are filled with interesting flowers, many of which succeed here, but further north quickly succumb to a colder climate. Water gardening is a feature of much interest and charm, and many of the most precious of the hybrid *Nymphaeas* have

been planted. In "The Retreat" the Water Lilies luxuriate upon the water's surface, and all around are Bamboos, giant Gunneras, and noble plants that appreciate a moist soil. Rock and wild gardening find true expression indeed, this is an interesting and beautiful garden of flowers, and at this bright season of the year is full of colour.

GARDENING OF THE WEEK.

KITCHEN GARDEN.

SUMMER PEAS.

IN order to obtain a supply of these in July the cultivator must sow in April, and there is even more care needed at this period than earlier, as of late years July crops have failed on account of heat and drought unless well done. Thick sowing often ends in a poor crop, as this, with a dry, hot summer, cripples the plants. At the same time, deep cultivation with ample food is a necessity. In our thin soil resting on gravel we find it necessary to make

shallow trenches for summer Peas, placing manure in the bottom of the trenches. In sowing, the seeds should not be closer than 3 inches, and a drill the width of a spade should be allowed to prevent crowding.

There are few better varieties than Autocrat, Perfection Marrow, Sharpe's Queen, a splendid main crop variety, Continuity, Windsor Castle, and Veitch's Main Crop. I prefer strong growers for light soils, and in wet seasons, should they grow too tall, it is an easy matter to stop the plants. For succession crops, No Plus Ultra and the newer Goldfinder are excellent, the last named being a grand late Pea in any soil.

BROAD BEANS.

These are often liked as late as possible, but they do not always thrive unless sown on cool quarters, and for July supplies it is well to grow on a north border and in heavy soil if possible. The Green Broad Windsor is a good type for July and August supplies, and if grown as advised the plants are less subject to the attack of fly, which is so troublesome and which often ruins the crop.



"THE RETREAT" AT KELLY HOUSE, TAVISTOCK.

RUNNER BEANS.

Though early to advise sowing in the ordinary way, a crop may be had much quicker by sowing in a cool frame in pots or boxes and then planting out in the open. Of course large quantities are not needed, and a row or two of plants grown thus will suffice. If sown in heat, the plants suffer if not thoroughly hardened previous to planting out; but if sown a little earlier in a cool frame, the latter being kept close till the seed germinates, better plants are secured. The new type of climbing French Beans, such as Tender and True, Earliest of All, and Excelsior, are most valuable for early supplies, as they are reliable, being earlier and dwarfer than the old runner and of splendid quality, and they may be grown in gardens where space is very limited, needing less room. If a sowing of these be made in the open at the end of the month, they will be useful for succession.

FRENCH BEANS.

It is now safe in the southern parts of the country to sow these in the open ground, choosing warm, well-drained borders, and sowing where the soil is in a workable condition. In cold, heavy soils little progress is made, and often serious losses occur if sown too early, and it well repays the cultivator to cover the seed with some lighter soil, placing a portion under the seed. For early use such varieties as Ne Plus Ultra, Syon House, and Progress are advised, and should severe weather follow the sowing, a little long litter or dry bracken shaken lightly over the plants as they come through the soil will be useful, as few vegetables suffer so quickly as dwarf Beans. Plants raised in cold frames as advised may now be planted out if protection is given, and after the planting, very little moisture is needed till growth is active. Any spare sash-lights, hand-glasses, or even mats or thatched hurdles will be valuable for covering, as these plants will not be safe for a time. Should there be difficulty in providing shelter, it will be far better to defer planting and to expose the plants as much as possible during fine weather.

TENDER SEEDS.

raised under glass, such as early Cauliflowers and Brussels Sprouts, should not be left too long in the seed beds, but should be pricked out early either on a bed with a little warmth or on a warm border that can be sheltered at night. This also applies to Vegetable Marrows and other tender things.

G. WYTHES.

Syon House Gardens, Bradford.

INDOOR GARDEN.

WINTER CARNATIONS.

THE earliest batches will have been potted on from the cutting pots, stopped, and by this time will have their pots sufficiently full of roots to require another shift. It is a mistake to allow the plants to become pot-bound before taking this work in hand or to allow them to root through into the material on which they are standing, which, when sea-shell is used, they are very prone to do quickly. The soil used for potting should consist chiefly of fibrous loam which has been stacked for a considerable time, and I like to reserve a portion of the two-year-old loam heap for the purpose. With this, a judicious mixture of broken shell, mortar rubbish, and burnt soil from the fire-heap, we shall have such a soil as the plants enjoy. Have the balls of soil in a fairly moist condition, so that the plants will keep up for a few days without having more water given to them than they get through the daily syringings.

HIPPIASTRUMS.

The latest of these will now be passing out of flower, and this will prove the best time of the year for growers who do not grow them on the plunging bed system to pot those which need it. They are not plants which require annual potting; still, I think there is a tendency with those who do not make a speciality of these plants to leave them too long in the same soil, so that they become starved and do not give such fine spikes or flowers. Good loam freely mixed with sand, broken oyster shell, and dried cow manure rubbed

through a fine-meshed sieve will suit them well. Pot firmly, and cover rather more than half the bulb with soil, so that it is held stationary. Grow on in an intermediate temperature as long as the plants show signs of growth, after which the water supply may be gradually lessened and cooler treatment given.

GESNERAS AND TYDEAS.

Those who grow these plants in great numbers usually make two or three batches for successional flowering, potting these up from March to June as required, but where only one batch is needed the present is a good time to start with them. A light peaty soil with plenty of sand will be requisite, well-drained 6-inch pots being filled with this to within 2 inches of the top, and on this from three to five of the best selected tubers should be placed, covering them with another inch of soil. Very little water should be given until the growths appear, and even then it will be necessary to increase the supply very gradually. A temperature of 65 as a minimum will be the best that can be given, and as the leaves are most susceptible to injury from bright sunshine, shade should never be neglected. The leaves, too, are very liable to attacks from thrips, and become much disfigured and stunted if these are allowed to molest them. The plants have the peculiarity of liking a very humid atmosphere, while being at the same time averse to the use of the syringe overhead, so that the humidity must be supplied by frequent damping down of all available surfaces except those of the hot-water pipes, steam from hot pipes being also injurious.

CRASSULAS.

These are usually grown in very poor soil with a view to getting firm growth, and as the flower-heads are now showing, they will be assisted in developing by giving supplies of manure water up to the time they show colour.

J. C. FALLACK.

Shipley Hall Gardens, Derby.

FRUIT GARDEN.

CUCUMBERS.

PLANTS from seed sown now will be ready for planting in about a month, a time when frames or hotbeds that have been used for propagating bedding plants and growing early vegetables are no longer required for these purposes, and may be advantageously used for growing Cucumbers during the summer months. The heat from hotbeds, if properly made at the beginning, will continue sufficient for the second purpose.

Plants in bearing should from now onwards be frequently looked over for the purpose of tying in and stopping sufficient young shoots at the second joint to cover the trellis without crowding, and to take out the surplus, old leaves, and wood that has borne fruit. They will bear few fruits if crowded, whether grown in a house and trained on a trellis, or in a frame with the bine on the soil. Give more moisture in the atmosphere and at the roots, and on fine days syringing may be done twice, in the morning and at closing time, which should be early in the afternoon, so that the temperature rises to 90°. The demand on the soil for moisture is great; therefore water should be given as often as necessary, *i.e.*, before the soil is quite dry, occasionally adding manure, drainage from farmyard manure, alternated with artificial. Add a top dressing of soil when the previous one gets full of roots, which takes but a short time. The system I follow and recommend is to plant in a limited quantity of soil, afterwards adding more as the roots require it. This results in an abundance of fruit over a long season. The time to cut Cucumbers is when they are of the right size for the table. The practice of leaving them until old is merely waste of the plants' energies. To guard against this I look over them twice a week and cut all that are ready, besides cutting daily for immediate use.

STRAWBERRIES.

The sun has now great power, and the soil in pots standing on shelves gets dry quickly, entailing a large amount of labour in watering. On shelves near the glass is the only position given to them

throughout the forcing season in many private places, but I think the market grower's system might be followed with advantage for later supplies. This is to grow the plants in low houses near the glass and standing on a damp bottom, which would be the means of saving much labour at this busy season.

Plants on dry shelves must now be attended to every day, and twice a day when the sun shines from morning until night. The only time the soil may become at all dry is when the fruit is ripe. Feeding with manure water is of great assistance. This should be given from the setting stage until the fruit begins to colour, as the feeding period is short. It is advisable to give manure in small quantities and often, say at alternate waterings, giving farmyard drainage and artificial stimulants alternately. Syringing moistens the atmosphere and keeps red spider in check. For the latter purpose it should be directed to the under side of the leaves, and it can be done before and after the flowering—indeed, until the colouring of fruit begins. I prefer a thorough syringing once on fine days only. Many fruits rot through syringing too often and in dull weather; water fills the cavity of the reflexed calyx and the fruit decays, particularly large ones. Thin out the fruit early on plants in later stages of growth. I do this as early as possible, leaving eight to twelve to each plant, according to the variety, whether of large or second size when ripe.

Plants for succession must be taken indoors if a supply of fruit is required until they are ripe outside. They will be invaluable if the season is late, and if early they will not be wasted. Surplus plants still in the winter quarters must be watered when required; if they are not required indoors, the fruit from them, if ripened outside, will pay for this attention.

G. NORMAN.

The Gardens, Hatfield House, Herts.

NOTES FROM NURSERY GARDENS.

DAFFODILS AT SURBITON.

SPRING has burst upon us and bidden the Daffodils open in profusion, and we welcome this glad season when park and garden display the beauty of the season. This is one of the times of the year when we visit the Daffodil grounds of Messrs. Barr & Sons at Surbiton and revel for a few hours in that wonderful collection got together by the firm during many years, and representing a beautiful series of hybrids and varieties. It was a bright, almost summer day when we went through the collections. The cold weather of the past few weeks has left its mark upon the Daffodils, but the display is worth many miles' journey to visit. From now onwards these interesting grounds are a storehouse of rare bulbs and plants in flower, and soon the noble Tulip species and the Darwin kinds will be in bloom. At present we are concerned with Daffodils only.

Among the yellow trumpet section were *maximus*; M. J. Berkeley, larger and paler than *maximus*; Santa Maria, rather similar to *maximus*, but smaller; a lovely show of the well-known Emperor, and Queen of Spain, with rather pale yellow flowers and reflexed perianth.

The white trumpet Daffodils were represented by William Goldring, or Swan's neck, with drooping primrose trumpet, covered by the white perianth; Apricot, having a white perianth with a slightly apricot-tinted trumpet, the nearest approach to red of any Daffodil; Princess Ida, a silvery coloured flower; W. P. Milner, a very pretty free-flowering pale coloured variety; and pallidus praecox, an excellent variety for growing in the grass, and about which we have had an interesting discussion.

In the bicolor section were J. B. M. Camm, a beautifully formed large flower with a soft yellow trumpet and white perianth; Victoria, a large flower with a bright golden trumpet, the earliest

of the section: Horsfieldi, also a large early flower; and Proserpine, suitable for grass culture, and having a large, open trumpet.

The varieties of *N. incomparabilis* included Sir Watkin, C. J. Backhouse, a very pretty form with a rich orange cup; Gloria Mundi, having a large orange cup and clear yellow perianth; and Stella superba, a very pretty new sort superior to Stella, having a large white spreading perianth and rich yellow cup.

Among the representatives of *N. Leedsi* were Mrs. Langtry, a fine large variety with white perianth and yellow and white cup; Duchess of Westminster, also a very fine variety with yellow cup and white perianth; and Grand Duchess, which has a rich-coloured spreading cup and a white perianth.

There were many other fine sorts, among which we would mention Burbidgei John Bain, a valuable kind with a large white perianth and citron-yellow cup; Yellow Hoop Petticoat (*N. Corbularia citrina*), Barri Flora Wilson, and Nelsoni aurantius.

Under glass there were several fine varieties in flower. The new sorts included Maggie May, a lovely pale Daffodil of the Leeds section, and Duke of Bedford, the largest trumpet Daffodil yet introduced. Other kinds were Weardale Perfection, a very fine large primrose flower; Mue. Plem, having a large white perianth and a golden trumpet; Mrs. Morland Crossfield, a lovely flower of the bicolor section, nearly new; Glory of Leyden, a handsome yellow trumpet Daffodil; and Monarch, a new large yellow trumpet variety. We shall refer again to these newer kinds, but cannot do more now than say that at this time the Subiton nurseries are enveloped in blossom.

THE EDITORS' TABLE.

At this season the flowers of the garden are coming forth abundantly, and we invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, orchid, or hardy flower, and they may be addressed either to Miss Jekyll, Munstead Wood, Godalming, or to Mr. E. T. Cook, 20, Tavistock Street, Covent Garden, London.

FLOWERS FOR ILLUSTRATION.—We shall be pleased if readers will send any rare or good garden flowers worthy of illustration to Mr. H. G. Moon, Herbert Lodge, St. Albans. This will assist us greatly in maintaining an interesting series of flower sketches.

DAFFODIL KING ALFRED.

BLOOMS of the magnificent trumpet Daffodil King Alfred reach us from Mr. Kendall, in Devonshire. They are remarkably fine specimens, on strong stalks 22 inches high. The colour is a full middle yellow, slightly stronger in the trumpet. The flower measures 4½ inches across the perianth, whose three wider divisions are each 1½ inches broad, a breadth that produces that deep imbrication that gives so much quality to a flower. The large, firm trumpet has a bold lip, handsomely recurved, with a diameter of 2 inches. We hope that others are succeeding as well with this grand Daffodil, which last year gained a Royal Horticultural Society's first class certificate.

FLOWERS FROM IRELAND.

Two extremely interesting flowers come from Mr. Greenwood Pim, in County Dublin. One is a wild Primrose that at the first glance appears to be fully double. On closer examination it is seen to be single, but each of the

five petals is abnormally large and wide, and it is only their close folding that gives the double appearance. But this folding or plaiting is not irregular, as in the case of most full flowers of this form, but makes a symmetrical pattern by being, as it were, pinched up at almost exactly the same three points in each petal. Mr. Pim found the plant last year and has some seedlings not yet bloomed which it is hoped may retain the same character. The other flower is a Daffodil that Mr. Pim found in a Welsh garden. We may describe it as having a Sir Watkin trumpet, a Tenby perianth and a Telamonius smell.

A SEEDLING FUMITORY.

FROM Mr. James Allen, who has done so much for Snowdrops and other good spring flowers, come blooms of a seedling Fumitory, yellowish-white tinged with purple at the lip, and with rather large bracts. It looks as if it might be *Corydalis solida* influenced by *C. nobilis*.

ERRATUM.—In our issue of April 21, Miss Jekyll's address was given in error as Munstead House, Godalming. It should have been Munstead Wood, Godalming.

IRIS FÆTID-ISSIMA.

THIS is one of the native plants that well deserves a place in our gardens, for though the flower is modest in size and colour, the sheaves of deep green leaves are handsome throughout the year, and in late autumn and early winter the gaping pod of scarlet berries is extremely ornamental.

GRENADIN CARNATIONS.

OF these there are three forms at present in cultivation, the single (*Éillet à ratifia* of the French), the double scarlet, and double white. The single variety is perhaps seldom cultivated in gardens, though as an economic plant it is the most valuable: I have, however, grown it one or two years and it forms when massed a fairly good hardy border plant, its perpetual flowering being greatly in its favour. Both the double varieties are comparatively dwarf, sweet-scented, and pretty. The flowers are small, and perhaps represent in a direct line the *Éillet des rosettes* of the French gardens of the sixteenth century. These, like the singles, possess the remountant habit in a degree pleasant to those who like a late autumn Carnation bloom.

They are best treated as biennials, and the seeds should be sown in drills out-of-doors from April to June, treating the seedlings afterwards

exactly like Sweet Williams or Wallflowers. If the plants, in addition to being pricked out of the seedling beds, can also be transplanted in autumn, they may when coming into bloom in July or August be transferred with absolute safety to any place in borders which at the moment may require a few plants to make good the failure of others.

R. PAGE.

THE NEW CHISWICK.

JUDGING by what one reads in various gardening papers, the subject of the proposed new gardens of the Royal Horticultural Society seems to be arousing great interest amongst the Fellows. But there does seem also considerable disposition to distrust the council, which so far had entirely enjoyed the confidence of the Fellows, and it may have been imagined was fully entitled to possess that confidence still. The council is as much the legal governing body of the society as the Government or Cabinet is the governing body of the nation. Yet does there appear to be great indisposition to place confidence in the wisdom or judgment of the council in relation to the proposed new Chiswick; and its acts, suggestions or actual, are severely discussed already and somewhat harshly prejudged, without any grounds for such criticism being furnished. Surely in a matter of such exceeding importance the council should be allowed to prepare any scheme and conduct needful negotiations without being hampered by hard criticism, up to such point as that the scheme be fully developed and negotiations completed, all subject to the council's proceedings being ratified or otherwise by the Fellows. To elect a governing body with entire unanimity that the council is, and then to pronounce distrust in that body without reason, is most unjust. What gentleman would care to serve the society under such conditions? The position is a grave one, and a time of exceeding anxiety for the council. That position is not of the council's creation. It has been produced by circumstances over which that body has no control. Not only does the old Chiswick lease soon expire, but, lease or no lease, atmospheric and structural environment has made the continuance of the society's gardens at Chiswick almost impossible. Then if it is found that, besides securing a fine site for the new garden, the council has been enabled to make a first-rate bargain with various county councils, all in the interests of national horticulture, should not all rejoice?

F. R. H. S.

SOCIETIES.

ROYAL BOTANIC SOCIETY.

LECTURES ON SOILS, MANURES, AND SEED-TESTING.

THE course of lectures and demonstrations on "Seed Testing" given last season by Mr. D. Finlayson having met with much success, the council decided to carry out more fully the idea with which they were commenced, namely, that of dealing with the preliminary operations of gardening and horticulture from a scientific point of view. With this object a series of twelve lectures on "Soils, Manures, and Methods of Testing the Purity and Germinating Powers of Garden and other Seeds," will be given in the museum at the gardens at 4 o'clock on Friday afternoons, commencing April 27, by Mr. D. Finlayson, F.L.S., the well-known analyst and seed expert. Fellows and their friends are invited, and a ticket admitting to the course can be obtained upon application to the secretary at the gardens.

At first intended as part of the ordinary curriculum of the society's practical gardening school, the importance of the subject at the present time has led the council to believe that there are many others who would be glad to participate in its advantages.

It has long been a reproach to this country that the teachings of science in gardening and agriculture and the application of scientific methods should have met with so partial an appreciation. In every other country than our own, governments not only encourage and supervise instruction of this kind, but in most rural districts they have established seed-testing stations, where all that appertains to the general and particular branches of agriculture practised there is made the subject of experiment and investigation, and the results attained published and circulated among all those connected with it. Soils are analysed, their good and bad qualities pointed out, and methods for their improvement suggested; the composition and values of manures and their application to different soils and crops made the subject of experiment; the best means of com-



IRIS FÆTIDISSIMA.

batting plant diseases and insect pests studied and taught, and special attention is given to the adulteration and detection of impurities in seeds. As to this last, it is difficult to understand the lethargy and indifference evinced by farmers and growers, yet it is one of the most important points affecting cultivation at the present time, and is likely to be still more so in the future, what with the increasing range of countries from which we draw our seed supplies and the lower commercial morality caused by the rage for cheapness. It is a matter of common knowledge that a great deal of bad seed is brought into this country from abroad. Sometimes through age or bad storing it has lost the power of germination; at other times it contains the spores of deleterious fungi, such as rust and smut; or, again, it may be mixed with the seeds of noxious weeds. The farmer or gardener sows it and finds all too late that his crops are thin, or diseased, or that he has been made the unconscious instrument in introducing and disseminating weeds sufficient to give himself and his neighbours work for a long time. Theoretically he has his remedy against the seller, but the difficulty of proving damage after seed has been sown for perhaps months is so great, that practically he has none. Were seed-testing stations of the continental or American type to be established in this country, growers would need only to forward samples of suspected seeds, and the analysts' report would be equivalent to legal proof. Only a month or two ago an influential deputation waited upon the President of the Board of Agriculture to ask him to deal with the matter, and a promise was given that something of the kind should be attempted.

It is to the credit of this society that they should thus have been the first to attack this subject from a practical point of view by initiating these lectures and demonstrations in 1899, and by instituting an incubator for seed-testing.

THE ROYAL HORTICULTURAL SOCIETY.

FLORAL COMMITTEE.

THERE were many exhibits before this committee.

A fine group of Hippocostemms was shown by Mr. Wilberforce Bryant (gardener, Mr. D. Kemp), St.oke Park, South. The plants were remarkably fine, being grown from seed sown in March, 1894. A silver Banksian medal was awarded.

A collection of cut Camellia flowers, gathered from outdoors, was sent by Sir Francis Barry, Bart., M.P. (gardener, Mr. R. Brown), St. Leonard's Hill, Windsor. This also obtained a silver Banksian medal.

A pretty stand of scented-leaved Pelargoniums was sent by Mr. Leopold de Rothschild, Gunnersbury House, Acton (gardener, Mr. James Hudson). It contained good blooms of Mrs. Kingsbury, *querendia* variegata, Scarlet Unique, &c.

A group of *Cheriana* Lady Threpton-Dyer was sent by the director of the Royal Gardens, Kew. It is a pretty flower and graceful plant.

A group principally composed of Roses, belonging to Messrs. Paul & Son, Chesham, was awarded a silver-gilt Flora medal. It was a charming exhibit, and contained among other kinds Ma Capucine, Clara Watson, Belle Siebrecht, Mme. Victor Verdier, and also *Galleina trifoliata*, *pans of Adonis vernalis*, *Prinula denticulata*, &c.

A handsome collection of cut Roses was sent by Mr. W. Rimsey, of Waltham Cross, and obtained a silver Flora medal. In it were the blooms of Ideal, Marechal Niel, Celine Forestier, Niphotos, The Queen, and others.

A fine group of Roses in pots was staged by Messrs. Frank Cant & Co., Colchester. It consisted of such sorts as Muriel, Mrs. R. G. Sharman Crawford, and The Bride, and also some small plants of *Polyantha* Roses. This was also awarded a silver Flora medal.

A fine exhibit of Tea Rose Sunrise in vases was sent by Mr. G. W. Piper, of Uckfield, Sussex.

Messrs. Carter, High Holborn, showed a group of both double and single *Cherianas*, the latter being specially fine both in the colour and size of the blooms. The group obtained a silver Banksian medal.

Messrs. J. Veitch & Sons, Chelsea, also showed a pretty group of *Cheriana* polyantha in a variety of colours. The same firm also had a group of Hydrangeas and one of *Lilacs* and *Magnolias*, for which they obtained a silver Banksian medal.

A group consisting chiefly of Begonias and *Nepeta Gleehoma variegata* was exhibited by Messrs. H. Cammell and Sons, Swanley. The Begonias were Count Zepplin, a large double brilliant vermillion variety, *Triomphe de Lorraine*, *Boule de Neige*, and *Glorie de Monteb*.

A collection of the curious dwarfed Japanese counters was sent by Messrs. Barr & Sons, King Street, Covent Garden.

Mr. John Russell, Richmond, Surrey, staged a pretty group of *Avers*, which obtained a silver Banksian medal, and included among others *palatum*, *p. roseum marginatum*, and *japonicum* *Bicolorium*.

A splendid group of flowering plants shown by Mr. H. E. May, Upper Edmonton, was awarded a silver-gilt Flora medal. It consisted of such plants as the Crimson Rambler Rose, *Chematia Nellie Moss*, *Hydrangea hortensis*, *Hydrangea Thomas Hogg*, and various *Catalpas*.

Messrs. J. Lang & Sons, Forest Hill, obtained a silver Banksian medal for a group of plants, such as *Chivias*, *Henthis*, *Crotos*, *Diacaenis*, &c. This firm also won a silver Banksian medal with the collection of forest hardy shrubs, including *Rhododendrons*, *Azaleas*, *Prunus triloba*, and the *Crimson Rambler* Rose.

An interesting group of flowering plants exhibited by Messrs. W. Cuthbert & Son, Highgate, obtained a bronze Flora medal. It consisted largely of Ghent and other *Azaleas*, *Viburnum Opulus*, *Calla*, *Ellorhiza*, *Staphylea trifolia*, &c.

Messrs. J. Fred & Sons, Norwood, S.E., staged a group of flowering shrubs and *Chivias*, which was awarded a bronze Banksian medal. Among the flowering shrubs were *Benzia graebis*, *Mains floribunda*, *Viburnum Opulus*, &c.

From Messrs. R. A. G. Cuthbert, Southgate, Middlesex, some collection of Ghent *Azaleas*.

A collection of alpine plants, very naturally displayed, was sent from the Guildford Hardy Plant Nursery. In this group various sections of *Arniculas* were represented. There were also *Atragene alpina alba*, *Androsace pyrenaica*, *A. coronifolia*, and *Primrose* Miss Massey.

Messrs. R. Wallace & Co., Colchester, sent a small collection of choice plants, such as *Erythronium Johnsoni*, *E. revolutum*, *Fritillaria plariflora*, *E. pudica*, *F. Meleagris*, *Tulipa saxatilis*, and a delightful exhibit of *Daffodils*.

A group of hardy flowers, shown by Messrs. G. Jackman & Son, Woking, obtained a bronze Banksian medal. It contained various *Narcissi*, *gentiana verna*, *Phlox canadensis*, *Auricula Golden Queen*, *Tillium grandiflorum*, &c.

Mr. Rogers, River Hill, Sevenoaks, sent a stand of cut blooms of Himalayan *Rhododendrons*.

A very handsome collection of *Tulips* came from Messrs. Hogg & Robertson, Dublin, and was awarded a silver Banksian medal. The group included *Rachel*, *Brisch*, *Thomas Moore*, *Pink Beauty*, *Couleur de Cardinal*, *Prince of Austria*, *Admiral Reynolds*, *Pottebakker*, and many others.

Mr. W. J. Godfrey, Exmouth, sent plants of a fine pink *Pelargonium*, *Emmanuel Lias*. From Messrs. Barr & Sons came *Ophrys verna* *allus plenus*. Plants of *Azalea mollis* *altalarensis* were sent by Messrs. J. Veitch & Sons.

A peculiar green-edged, double *Petunia*, *Swaney Gem*, came from Messrs. Cannell & Sons. This firm also sent a plant of *Canna Secretaire* *Chabanne*. Messrs. R. & G. Cuthbert, Southgate, exhibited plants of Ghent *Azalea Lady Pigott*, and also of *Azalea Yodogama* (Japanese variety). Messrs. Paul & Son, Chesham, showed a plant of Hybrid Tea Rose *Mme. Jules Grolez*, a very beautiful kind, which the committee wished to see again.

From Perry's Hardy Plant Farm, Wincmore Hill, N., were sent *Mertensia virginica*, *Trillium sessile album*, *T. s. californicum*, and *T. s. atropurpureum*.

A cultural commendation was voted to blooms of *Nymphaea stellata*, shown by Mr. L. de Rothschild (gardener, Mr. J. Hudson), Gunnersbury House. W. Mr. Nobbs, the Royal Gardens, Osborne, showed a *Richardia* seedling, rather similar to *Little Gem*. A fine light-coloured *Hippenstrum*, *Phoebe*, was exhibited by Mr. Burns, North Mymsam Park, Hatfield; and a plant of *Carnation Grand Duchess Olga* came from Mr. J. Colman, Gattopark, Reigate.

NARCISSUS COMMITTEE.

An excellent group of *Narcissi* shown by Messrs. R. H. Bath, Ltd., Wisbech, obtained a silver Flora medal. Some of the best varieties contained in it were *Wearside Perfection*, *J. E. M. Camm*, *Glory of Leyden*, *double Jonquil Queen Anne*, *Flora Wilson*, and *Mme. Plempe*. There were many kinds well staged, but want of space prevents further reference to them now.

Messrs. Barr & Sons, Messrs. J. Veitch & Sons, and Mr. H. J. Jones obtained silver Banksian medals for very fine collections of *Daffodils*. Other good groups were also shown by Messrs. R. Wallace & Co. and Mr. Robert Sydenham, who had *Daffodils* in bowls. We shall refer to this method of culture again at greater length than is possible now.

The Rev. G. Engleheart, Appleshaw, Andover, had another brilliant display of his seedling *Daffodils*, of which *Virgil*, *Diana*, and *Chancellor* obtained awards of merit. These seedlings we shall describe, we hope, next week.

M. Van Waveren, Hillegom, Holland, obtained a first-class certificate for Van Waveren's Giant, and awards of merit to *Olympia* and *Minnie*. J. der Groot & Sons, Noordwyk, Holland, were awarded an award of merit for *Wilhelmina*.

Dorothy Kingsmill, shown by Mr. A. Kingsmill, Harrow Weald, obtained a first-class certificate. Miss Willmott, Warley Place, Essex, obtained a first-class certificate for *Countess Grey* and *Mrs. Berkeley*, and awards of merit for *Eleonor Berkeley* and *Charles Wolley-Dod*.

It is impossible on this occasion to refer at greater length to these beautiful seedling *Narcissi*, but it is our intention to give each kind careful consideration as soon as possible.

ORCHID COMMITTEE.

Mr. W. A. Edney, Fir Grange, Weybridge (gardener, Mr. C. Whitlock), sent a group consisting principally of finely-grown and beautifully-flowered *Dendrobiums*, the forms of *D. Wardianum* in the back row being most remarkable. Among the numerous varieties of *D. nobile* were some good dark forms, the most prominent being *D. n. nobiliss*, *D. Visswithii*, and *D. Dominium*, other hybrids being also included. Some good plants of *Cattleya Lawrenceana*, *Lelia lanophylla*, and other interesting *Orchids* were shown. A silver Flora medal was awarded.

Mr. H. I. Pitt, Rosslyn, Stamford (gardener, M. Thurgood), sent a fine group, in which were some well-flowered *Cattleya Schroderae*, a large plant of *C. Lawrenceana* with five racemes of flowers, some good forms of *C. Triana*, and a beautiful variety of *C. Schilleriana* with a distinct bright purple labellum. Among the numerous *Odontoglossums* were excellent varieties of *O. crispum*, *O. Pescatorei*, *O. Andersonianum*, and *O. Wilekeum* Pitta (previously certificated) with a lilac-purple raceme of its deep brown and yellow flowers. *Dendrobium Devonianum*, *D. thyriflorum*, *D. atro-vaccinaria*, and other species were included, also *Miltonia Roehli*. Among the numerous *Cypripediums* were fine varieties of *C. bellatulum*, finely-flowered *Masdevallias*, and *Cochlidiums*. A silver Flora medal was awarded.

Sir F. Wigan, Bart., Clare Lawn, East Sheen (gardener, Mr. W. H. Young), sent a small but choice group among which were some grand forms of *Cattleya intermedia*, the most beautiful being *C. L. alba*, with a four-flowered raceme of absolutely pure white flowers; *C. Mendeli*, *C. Schroderae*, and *C. Schilleriana*; *C. William Murray* (Mendeli-Lawrenceana), with two racemes of four flowers each, showing the intermediate characters of the parents used in its production; *C. intermedia superba*, derived from the parents indicated in the name; and *C. Alachua* were also included. Amongst other exhibits were *Lelia-Cattleya*, *highburnensis* (*conducina* - Lawrenceana), which with its purple and orange flowers was in striking contrast to *Lelia Latona* (*Gumburata* - *purpurata*), which has brighter yellow seg-

ments. *L. Jongheana*, several good *Odontoglossums*, and other interesting *Orchids* were also exhibited. A silver Flora medal was awarded.

Mr. W. Thompson, Stone (gardener, Mr. Stevens), sent some remarkable forms of *O. crispum*, *O. c. Victoria Regina*, a beautiful rose-tinted form, finely spotted, the lip white, with brown markings; *O. c. The Earl*, with deep reddish-brown blotches on a white ground, and a good variety of *O. triumphans*.

Mr. De B. Crawshaw, Rosefield, Sevenoaks, sent several finely-flowered *Odontoglossums*, the forms of *O. crispum* being all of excellent substance and comprising many finely-spotted forms. Vote of thanks.

Mr. J. Coleman, Gattopark (gardener, Mr. Brand), sent a finely-spotted *Odontoglossum Andersonianum*.

Mr. H. Little, The Barrons, Twickenham, had *Lelia purpurata* *Traceyana*, a beautiful white variety with pink lines and suffusion through the throat.

Mr. W. Cobb, Dulcote, Tunbridge Wells, sent the small, densely-spotted *Odontoglossum nevium*, two good forms of *O. triumphans*, and a good *Cattleya Schroderae*.

Mr. Vanner, Camden Wood, Chislehurst, exhibited a pretty variety of *Cypripedium* Charles Rickman.

Sir J. Miller, Manderston, showed a form of *Lelia Hippolyta*.

Sir T. Lawrence, Bart., Burford, Dorking, sent a delicate form of *Cattleya Schroderae*, *Dendrobium teretifolium*, *D. macrostachyum*, with green and purple-veined flowers (botanical certificate), and *Cyrtopetalum finburnium*, with clusters of brown and green flowers, which also received a botanical certificate.

Messrs. Hugh Low & Co., Bush Hill, Enfield, exhibited a good group consisting of finely-flowered plants of *Cattleya Schroderae*, *C. Mendeli*, and *C. Lawrenceana*, and some dark forms of *Cypripedium Lawrenceanum*. Several good forms of *Odontoglossum*, a fine form of *Oncidium Papilio* and the lovely *Phalenopsis Lady Rothschild*, certificated at the last meeting, were also exhibited. A silver Banksian medal was awarded.

Messrs. J. Veitch & Sons sent *Cypripedium Jocaista* (C. Hayalidnum - C. insigne Chantini), *Lelia-Cattleya Welliana*, and some hybrid *Dendrobiums*.

Mr. H. A. Tracy, Anyard Park Road, Twickenham, sent a pretty form of *Cattleya Schroderae* with a blotch in the centre of the lip.

FRUIT COMMITTEE.

There was a very small number of exhibits before this committee, and no special awards made. From the Royal Gardens, Kew, came interesting fruits of *Citrus medica* var. *Limonum*, very large fruits, the outer rind being much softer than the ordinary Citron. Lemons were sent by Mr. J. T. Bennett-Poe (gardener, Mr. J. Downes), Ashley Place.

Very fine Royal Sovereign Strawberries came from Messrs. Hammond and Johnstone, Brentwood, receiving a cultural commendation.

Pear Winter Orange, an excellent late stewing variety, was sent by Mr. R. C. Nottent, Woodbridge, Suffolk.

Mr. Markham, Wrotham Park Gardens, Barnet, sent a new seedling *Chumber*, the result of crossing Veitch's Perfection with *Loekie's*, and it appeared an excellent selection, but the fruits sent were a little past their best.

THE AURICULA SHOW.

SHOW AURICULAS.

THESE were in larger quantities and in decidedly better quality than was at one time anticipated, the warmth of the past few days bringing them on and assisting a more perfect development, much to the delight of those who attended at the Drill Hall to inspect them, for, after all, there is a peculiar fascination about the beaded flowers of the show varieties with their jewelled surfaces and striking contrasts.

Mr. James Douglas, of Great Bookham, still retains the premiership as a grower and exhibitor, as his collection of twelve show varieties stood out from all the rest competing with them for their vigorous growth and massive trusses. Chief among them was a bold and striking green-edged variety with twelve expanded pips, which recalls to memory the interest taken in the flower by the late Mr. Shirley Hibberd, whose name it bears. Other green edges were Mrs. Henwood and Abbe Liszt; grey edges, Marmion, Perseverance, Sanders, a pleasing variety; *Olympus* (Douglas), probably a seedling from *George Lightbody*, which it somewhat resembles; *Acme* and *Magpie*, two very pleasing white edges; *Raven* and *Cleopatra*, selfs.

Mr. W. Smith, Bishop's Startford, who has strenuously tried during the past three or four years to come near to the top as an exhibitor, improved upon his position of last year by coming in second. He had of green edges, Mrs. Henwood and Abbe Liszt, *George Lightbody* and *Rachel* were his grey edges. He had also Mrs. Dodwell, white edge, and *Cleopatra*, self.

Messrs. Phillips & Taylor, Bracknell, Berks, were third, but came to the front with six show varieties. Mrs. Henwood and the Rev. F. D. Homer represented the select and difficult green-edged section; grey-edged *George Kudd*; white-edged, *Acme*; and Miss Bennett and Mrs. Phillips, two fine selfs raised by Mr. Phillips, shone in this section.

Mr. W. Smith had again to be content with second place; he had John Hamford (green), a red self named Ruby, and a dark one, Black Bess, one of the most constant. Mr. A. R. Brown, Bardsworth, Birmingham, was third.

In the class for fifty Auriculas not necessarily distinct, Mr. J. Douglas was again to the fore. He had of green edges, Abbe Liszt, one of his own seedlings, Rev. F. D. Homer, *Greenleaf*, *Shirley Hibberd* with eleven very fine pips, and *Lancashire Hero*, generally a grey edge, but which will sometimes come green. Of grey edges the most prominent were *Olympus*, *Ringleader*, and *Colonel Champneys*. The white edges were *Frank Simonite*, *Perseverance*, and *Acme*; and of selfs, *Fanny Glass*, *Andrew Miller*, and *Black Bess*. Messrs. Phillips & Taylor, Bracknell, were second, this collection including one or two yellow selfs, which are somewhat scarce. Mr. Funnell-Funnell, Streatham, was third.

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THE WORK OF THE HYBRIDIST.

THE Hybrid Conference Report which forms the twenty-fourth volume of the Journal of the Royal Horticultural Society, just issued, is a collection of valuable papers contributed to the famous conference held in the Chiswick Garden last year, and is worthy of more than passing notice. It is an index in a large degree of the great work accomplished for horticulture by the hybridist, whose labours are written large in the gardens of the world, and this work proceeds with greater energy as the love of flowers grows amongst us. The fortnightly meetings in the Drill Hall teach us one lesson, that the raising of new plants is an industry of increasing importance, not maybe directed always in the right channel, but generally for the improvement of the groups of flowers, fruits, or vegetables upon which especial attention is bestowed.

It is not our intention to enter into a lengthy disquisition concerning plant hybridisation in this land. That is embodied in this journal, and a glance through its pages shows how universal is this desire to people the world of flowers with new inhabitants. Many of the leading raisers of new productions in France and Germany record their labours, and we are thankful that this knowledge and love of flowers is characteristic of many nations. Whether we enter the humble garden of the cottager or the domain of the wealthy, glance through the trade lists or visit the exhibitions, we greet flowers not native of any land, but born into the world through the means of hybridisation. It is, perhaps, hardly pleasant to reflect that, as in the animal kingdom, so in that concerning the flora of the world, the general scouring by naturalist and botanist that goes on year by year diminishes in no uncertain way natural species and hybrids new to our gardens. Not many years have flown since the meetings of the Royal Horticultural Society were made interesting by the acquisition of plants from other lands unknown to us before; but this interest is at present maintained largely by hybrids and selection—novelties not confined to flowers alone, but represented by new fruits and new vegetables. There is no limit to the productions of the hybridist, and without his labours our gardens would be shorn of much of their present interest and beauty.

In his introductory address to the conference,

Dr. Masters quotes from a work of Richard Bradley, called "New Improvements of Planting and Gardening, both Philosophical and Practical." This was published in 1717, and in this book is the record of the first garden hybrid, produced by Mr. Thomas Fairchild, an ardent gardener of Hoxton. Bradley, after writing of fertilisation, says:—

"By this knowledge we may alter the property and taste of any fruit by impregnating the one with the farina of another of the same class; as, for example, a Codlin with a Pearmain, which will occasion the Codlin so impregnated to last a longer time than usual, and be of a sharper taste; or if the winter fruits should be fecundated with the dust of the summer kinds they will decay before their usual time; and it is from this accidental coupling of the farina of one with the other that in an orchard where there is variety of Apples even the fruits gathered from the same tree differ in their flavour and times of ripening; and, moreover, the seeds of those Apples so generated, being changed by that means from their natural qualities, will produce different kinds of fruit if they are sown.

"'Tis from this accidental coupling that proceeds the numberless varieties of fruits and flowers which are raised every day from seed.

"Moreover, a curious person may by this knowledge produce such rare kinds of plants as have not yet been heard of by making choice of two plants for his purpose, as are near alike in their parts, but chiefly in their flowers or seed vessels; for example, the Carnation and Sweet William are in some respects alike: the farina of the one will impregnate the other, and the seed so enlivened will produce a plant differing from either, as may now be seen in the garden of Mr. Thomas Fairchild, of Hoxton, a plant neither Sweet William nor Carnation, but resembling both equally, which was raised from the seed of a Carnation that had been impregnated by the farina of the Sweet William."

"Fairchild is mentioned," says Johnson in his "History of English Gardening," "throughout Bradley's works as a man of general information and fond of scientific research. He was a commercial gardener at Hoxton, carrying on one of the largest trades as a nurseryman and florist that were then established. He was one of the largest English cultivators of a vineyard, of which he had one at Hoxton as late as 1722. He died in 1729, leaving funds for insuring the delivery of a sermon annually in the Church of St. Leonard's, Shore-ditch, on Whit Tuesday. 'On the wonderful works of God in the Creation; or, On the certainty of the resurrection of the dead proved by the certain changes of the animal and vegetable parts of the Creation.'"

From this simple beginning have arisen beautiful groups of plants, the pride of our hothouses and flower beds, and this industry, if we may so call selecting and cross-breeding to obtain new departures of existing types, is developing in a way that would have astonished the earlier workers in this interesting field of scientific horticulture. As we look around, Roses, Chrysanthemums, Anthuriums, Begonias,

Nymphaeas, Orchids, Fuchsias, Azaleas, Daffodils, Lilacs, Chinese Primulas, Clematises, Ferns, and other plants remind us of the rich results accomplished by the hybridist for the beautifying of the garden, orchard, and park.

SPRING FLOWERING BULBS.

ONE of the most puzzling problems that presents itself for solution in a general collection of hardy plants is to determine how best to use the numerous bulbs that comprise the greater number of our spring flowers. One way of meeting the difficulty is easy and most effective, but can only be employed by those who have rough ground adjoining the garden, where the bulbs can be planted in grassy or woody places. Few people care to give up a space of ground for bulbs only that shall be bare in summer, though if such space can be given, it is not only desirable as a means of growing the bulbs to their best strength, but also makes a useful reserve to draw upon for other plantings; while even those who prefer free ways of gardening cannot but see how pretty bulbs are in even the stiffest and most Dutch-garden-like beds.

There is a method of compromise that is not a bad way out of the difficulty, which is to have long bulb beds of the convenient width of 4 feet or at most 5 feet, and to plant the bulbs in transverse strips about a foot in width across the bed, leaving a space of a foot between each strip, to be planted later with Verbenas or Heliotrope, or anything else that will fill its own space and partly or entirely cover the ground left bare by the bulbs. The weak point in this arrangement is that when one has to raise any bulbs, which happens generally about the end of June or early in July, there will be some disturbance of the things planted in the spaces between them which will then be making strong growth.

Sometimes there occurs in a garden a low bank or bed of hardy Ferns. The space between these offers excellent places for bulbs, such as the smaller Scillas, Chionodoxas and Puschkinias. This is well worth noting in preparing a Fern garden—a kind of garden that seems to have fallen into disuse, but that is capable of being made extremely beautiful, though not by planting the Ferns among heaped-up stumps, as was formerly so often done. When the little bulbs are blooming the Ferns are not yet thinking about unfolding their fronds; but after the bloom is over and the foliage has grown full and tall, as it begins to turn colour after completing its life's work, the Fern fronds are unfurling and spreading over the ground. To avoid the monotony that might be felt if the space showed nothing but flowering bulbs and brown tufts of undeveloped Fern, it would be well to introduce just a few early-leaving plants such as Dentaria, Woodruff, Virginian Cowslip, and the pretty feathery Myrrhis odorata.

Now while some of the early bulbs are still

in bloom, anyone who, like the writer, has the preparation of such a bit of garden in contemplation will do well to watch the little flowers before they are gone and see how best they would combine or follow one another. First there are the splendid blues of the *Chionodoxas* and early *Scillas*; then there is a range of colourings that must be kept apart from these, but will do well among themselves as near neighbours. These will comprise the old garden Dog's-tooth Violet and its varieties, and an old cottage garden plant that is not showy, but is full of a certain quiet modest charm, namely, the purple Fumitory (*Corydalis bulbosa*). These should be intergrouped, as they form a quite delightful colour harmony. Following these and keeping within the same colouring will be the purple Fritillary and some of the white variety, and this white kind will also be near a good planting of the beautiful *Scilla italica alba*, a plant not common in gardens. Further back will be patches of the tall Snowflake (*Leucojum aestivum*), while its earlier relative, *Leucojum vernum*, will be in connection with the patch, or rather long straggle, of *Scilla sibirica*.

Winter Anemites and Snowdrops are too early for this bit of garden, so their homes are elsewhere; and as the space is somewhat shaded, possibly neither the brilliancy of *Anemone fulgens* nor the splendour of *Iris reticulata* can be depended on, but this condition will make it all the better for *Anemone apennina* and the best of the wood Anemones.

The Ferns will be few in number of kinds, and there will be nothing out of common—the Male Fern and Lady Fern, dilated Shield Fern, Hart's-tongue and Polypody; perhaps these, and no others. Other selections could easily be made, but these are the ones that in the present case are at hand and will give the effect desired. They will be planted mostly in long drifts, and there will be a few large stones sunk in the earth, partly for appearance sake and partly for comforting coolness and moisture to the roots of the Ferns. There will also be some tufts of *Iris foetidissima*, a plant whose dark green sword-shaped leaves would make a distinct contrast to the feathery light green Fern-fernd masses.

LESSONS LEARNT AT THE SHOWS.

WANDERING round a delightful collection of spring flowers, such as that at the Drill Hall on Tuesday, 24th ult., a critical observer could not but notice how important to the good appearance of the plants is the manner in which they are placed before the public. It is like the good and tasteful dishing-up and suitable garnishing of viands, which puts a distinct mark on the work of the high-class cook, and presents food in a manner that is acceptable to the most refined taste, rather than merely as so much provender.

So, when one has had a first look at the flowers, on going round again one finds oneself passing some of the stands almost without notice, even though they may contain some of the most beautiful blooms, and lingering with a feeling of pleasure before others, because these are pleasantly arranged. Specially noticeable was a basket of Auriculas from the Guildford Hardy Plant Company, the pots hidden by a covering of the grey foliage of one of the *Androsacs* (*Antennaria*). Flowers so delicate in colour as the grey or green edged Auriculas are grateful for this quiet ground of a grey still more colourless than their own, whereas they are absolutely killed by the garish green of the new baize that drapes the fronts of the stands.

Doubtless the many matters so ably dealt with by the officers of the Royal Horticultural Society leave small scope for the consideration of details of upholstery, but looking round the show and seeing how in every case without exception all foliage, as well as much of the bloom, was distinctly hurt by juxtaposition with the pitiless raw green dye, one could not but regret that such a colour should be the normal complexion of new green baize. As texture and nature of material it is all that can be wished, and some of the older pieces pass through stages of quiet and pleasant colouring, ending in a dingy brown that, though unbecomingly, is comparatively harmless.

The colour of the foliage of Orchids is rarely brilliant, and, for the most part, is of a rather pale and low tone that harmonises exactly with the delicate tinting of the flowers. But against the garish baize the whole value of the leaf-colouring is lost.

We are well aware that it is easier to criticise than to offer at once a distinct solution of the difficulty, though it would be quite easy to fix upon a neutral half-tint of greenish quality that would suit all flowers and foliage. But it might be worth inquiring among the manufacturers whether a material of approximately the same price and texture could not be specially dyed when from time to time a new supply was needed. In the usual course manufacturers of woollen goods will dye specially without extra charge any length of thirty or more yards.

We should be glad if we could be of service to the society, if they should desire it, by trying patterns of colouring and suggesting one that might be fixed upon and kept as a standard.

MR. ENGLEHEART'S SEEDLING DAFFODILS.

AMONG the many who are working for the bettering of our garden flowers no one is more distinguished, either for patient labour or abounding success, than the Rev. George Herbert Engleheart. Following in the steps of his ancestor, Dean Herbert, as a devoted student of Daffodils and as a hybridiser in those of the fine northerners, Leeds and Backhouse, and their more recent followers, Mr. Engleheart has already outstripped them all, and now stands alone as the best living raiser of new forms of these beautiful flowers.

The fruits of twenty years of labour are now maturing, and whereas formerly only a few blooms showing new forms of beauty would come from this Hampshire garden, its yearly exhibit of high-class seedlings may now be numbered by the score.

Among the many good things Mr. Engleheart showed on April 23 were some white flowers of that delicate lemon-white that characterises all the so-called whites (other than the poeticus section) whose earlier hybrids resulted in some of the Leeds varieties, of which such beautiful flowers as Katherine Spurrell will no doubt always hold their own.

In the flowers Mr. Engleheart showed this year these whites are amongst the most remarkable. One named Diana, which may be described as a large white Leeds, is a flower of the highest beauty and refinement. Lilian is a lovely Daffodil of the same class. Another called White Queen is larger and has a half-length trumpet whose edge is richly fringed and plaited. Another, a single flower not as yet named, has a straight white trumpet, in form resembling that of *abscessus*, and wide-spread white perianth that measures no less than 3½ inches across. The strange thing about some of these large white flowers is that they are derived from the small *Narcissus triandrus*,

whose descendants, whether of pod or pollen, show this marked tendency to increase in size.

Though the fine whites are perhaps the most conspicuous among the new flowers shown by Mr. Engleheart, there were in all sections varieties of high merit, some of the best being incomparabilis Fiametta, with cup-edge of brilliant scarlet, and Chancellor, a large-cupped Leeds with lemon-white perianth and clear pale yellow cup.

A seedling poeticus named Virgil, though scarcely to be called a distinct variety, was good to see, because it seems to express the most complete beauty of which its kind is capable. It has the wide petal of ornatus of a substance better than usual, the colour-splendour of cup-edge of poetarum, a whiteness of petal enhanced by its unusual substance and a dignity all its own. It possesses every quality of beauty that a poeticus is capable of showing combined in one flower. It is to be hoped that this good plant will increase well, so that we may look forward to it as available as the central type of beauty in its own section. If raisers of other kinds of new flowers would keep in view the value of such standards of excellence and strive for these as well as for well-considered divergences from the type, our gardens would be all the richer.

NEW GARDENS FOR THE ROYAL HORTICULTURAL SOCIETY.

We give special place to the following communication from the Rev. W. Wilks, for it is an appeal to the Fellows to assist the council in determining the site that shall be chosen for the future practical work of the society:—

For the purpose of giving full effect to the decision of the general meeting of the society held recently, requesting the council to examine further sites for the new gardens of the society, the council request any Fellow who knows of a suitable position to be so kind as to send at once to the office of the society detailed particulars of the acreage, distance from London, nearest railway station, aspect, nature of soil, name of owner or agent, and price.

A site at Limsfield had been fixed upon by the council as providing the necessary requirements for experimental work, but this was apparently not favourably regarded by the meeting held last Wednesday week.

Nothing, as we have before said, was accomplished at this meeting except to pass the foregoing resolution, which was in effect the same as the Fellows agreed upon at the annual meeting in February last.

THE CENTENARY OF THE ROYAL HORTICULTURAL SOCIETY.

It may not be inopportune, when the question of a new Chiswick is occupying the attention of the Fellows of the Royal Horticultural Society, to ask you to find space in this week's issue of THE GARDEN for the accompanying notes on the Chiswick trials. These notes I communicated, with the consent of the president, to each member of the council in March last, and Sir Trevor Lawrence then suggested that there would be no objection to my publishing them if I cared to do so.

I am conscious that, after many influential persons have expressed the view that a new Chiswick is necessary, it is perhaps presumptuous on my part to offer a contrary opinion, but it may not be too late even now to ask whether the purchase of a new garden is certainly the best means of celebrating the centenary of the society.

We have still twenty years of the Chiswick lease unexpired. Can we not make the best of Chiswick

for at any rate some years to come, and devote our energies to obtaining by some means or other the new horticultural hall which is so sadly needed for the fortnightly shows?

From the crowded state of the Drill Hall, both as regards the exhibits themselves and the visitors, it must appear to everyone a necessity that some other place be found before long. This is as necessary for the work of the various committees as for the shows, and I cannot doubt that if £27,000 was raised or promised several years ago, a much larger sum could now be raised when the society has reached a degree of popularity and success never before known, at least in recent years.

ARTHUR W. SUTTON.

Buckbury Place, Woodhampton, Berks.

P.S.—As mentioned by Mr. Elwes at the general meeting on the 25th ult., I have most reluctantly resigned my seat on the council of the society, to which I was elected at the annual meeting in February last, as I was unable to endorse the recommendations of the council embodied in the resolutions which the general meeting was called to consider.

[Mr. Sutton also sent notes upon the Chiswick trials in comparison with other trials, which shall have attention next week. Eps.]

WILD FLOWERS.

“... champs d’anémones sémés par Dieu. RENAN.

Without a cloud the sky is blue,
And blue the Violets that strew
The copse, as though between the trees
The April sky had fallen through,
And stained the ground with azure hue.
Anemones, so thick they grow
Around the field, are white like snow;
And in the shelter of the wood
Marsh Marigolds begin to glow,
And Bluebell buds already show.

M. C. D.

THE EDITORS' TABLE.

AT this season the flowers of the garden are coming forth abundantly, and we invite our readers to send us anything of special beauty and interest for our table, as by this means many rare and interesting plants become more widely known. We hope, too, that a short cultural note will accompany the flower so as to make a notice of it more instructive to those who may wish to grow it. We welcome anything from the garden, whether fruit, tree, shrub, orchid, or hardy flower, and they may be addressed either to Miss Jekyll, Munstead Wood, Godalming, or to Mr. E. T. Cook, 20, Tavistock Street, Covent Garden, London.

FLOWERS FOR ILLUSTRATION.—We shall be pleased if readers will send any rare or good garden flowers worthy of illustration to Mr. H. G. Moon, Herbert Lodge, St. Albans. This will assist us greatly in maintaining an interesting series of flower sketches.

ROSE MME. BERARD FROM PADSTOW.

A DELIGHTFUL box of flowers is sent by Mr. W. Brown, The Gardens, Pridaux Place, Padstow, gathered from “a plant growing in a cool greenhouse with *Maréchal Niel* and *Niphotos*, which form a capital trio. Mme. Berard produces good long shoots with plenty of foliage, which we think, is a point in its favour, especially when used in a cut state.” We thank our correspondent for his interesting note about such well-grown flowers of this noble Rose.

THE BLUE WOOD ANEMONES.

ON p. 284 Mr. F. W. Burbidge asks readers of THE GARDEN to keep a look-out for blue varieties of Wood Anemones. I am sending a box of a variety which was brought to my notice

recently in an old garden on this estate. These were growing in a very shady corner under a large Oak tree, the sun scarcely ever reaching them, and covered the ground for many yards to the exclusion of all else. It was one of the prettiest things I have seen at this time of the year, the masses of chaste delicate blossoms standing out from the extremely beautiful foliage, the whole forming a picture one would go a long way to see. Besides covering the whole of this corner of the garden, the roots had spread and established themselves on the other side of the hedge close to the public road. We shall be much interested to know if this is either of the varieties Mr. Burbidge inquires about. J. G. WESTON, *The Garden, Bessborough, Piltown, Ireland.*

[The blue Wood Anemone received with this note is not a blue variety of *A. nemorosa*, but is *Anemone apennina*, the blue flower of the copse and thicket of Northern Italy, and fortunately a willing colonist in our islands. It is one of the loveliest flowers for wild gardening, adapting itself most happily to the companionship of rough grass and wild growths on woodland edges.]

IRIS ORCHIODES AND OROBUS VERNUS.

SOME interesting flowers come from Mr. Carrington Ley, near Maidstone. *Iris orchoides*, clear yellow, the fall with a few splashes of a dull olive-brown, among which rises a keel-like crest with serrated edge. The alternate leaves, long, broad, and of a lively green colour and high polish, clothe the stem handsomely and give the plant a distinct appearance. The blue variety of *Orobis vernus* is a pretty plant of remarkable colouring, for the blue is of the greenish turquoise colour so rare among flowers, fading to a brilliant coppery green. The quality of the blue is all the more remarkable because in parts of the flower it joins into the red-purple that forms the chief part of the tinting in the bloom of normal colour. Mr. Ley says that this blue variety is sometimes misnamed *O. cyanus*, which is a Greek plant that he understands on good authority is not blue at all. He also sends the white variety of *O. vernus*. The flower is white, flushed at the top with rosy pink, a pretty thing, but not very important. Mr. Ley remarks that though the name *Orobis* is now merged in *Lathyrus*, it is convenient to keep it, as the *Orobis* branch of the family is so distinct from a garden point of view from the perennial Peas.

DOUBLE PRIMROSES FROM SOUTH DEVON.

I AM sending you blooms of two double Primroses which I believe are not known or not generally known. The hot sun and a night of sharp frost have spoilt all good flowers, but you may be able to form some idea. Regina is really a *Polyanthus*, and the colour of Red Paddy or nearly so. The other is a salmon, as you will see.—H. E. C. *Hood Manor, Totnes, S. Devon.*

[The bunch-flowered bloom is a fine flower of a magenta-crimson colour; the other had evidently lost some of its colour on the journey. Both show that the culture of the double Primrose (so difficult in many gardens) is successful in this favoured district.]

THE YELLOW ROCKET WALLFLOWER.

MRS. EDMUND EVANS sends us from Ventnor blooms of the pretty yellow Rocket Wallflower, a charming early-flowering plant. It grows in compact little bushes that will live for several years. The flowers are neat, double rosettes, not much more than half an inch across.

CORONILLA CORONATA.

MRS. EVANS also sends flowering branches of *Coronilla coronata* “from a neighbour's garden, out of doors, but close to a sheltered wall. The bush is 6 feet high and about 4 feet wide, and had been covered with flowers for six weeks. The cold east wind of the last few days and the hot weather of a week ago and the very cold nights before that had no effect upon it. In the same garden under the verandah is a scarlet *Geranium* that has been in constant flower for two years.”

RHODODENDRON CAMPANULATUM FROM PFEFFERSHIRE.

IN reply to your request in THE GARDEN for flowers for the “Editors' Table” I am sending you a spray of *Rhododendron campanulatum* cut 14 feet from the ground on a large bush here. The bush grows entirely unprotected in the open air, and receives no treatment to speak of. We consider the freedom with which it flowers every year creditable to the climate of the east coast of Scotland. The bush was planted certainly before 1852.—WILLIAM BERRY, *Tayfield, Newport, Fiffe.*

[Mr. Berry sends a densely-flowered spray of this handsome Sikkim *Rhododendron*. The bush must be a fine sight, the large trusses of bloom being borne in close clusters. The flower is white, faintly tinged with lilac; each upper division is finely spotted with red-purple. The dark green leaves are of moderate size, and have their outline largely waved and their backs thickly coated with a rust-coloured meanness that much enhances their appearance.]

PURPLE AND CRIMSON PRIMROSES.

FROM Mrs. Leslie Williams, near Bath, come some splendid Primrose blooms of purple and crimson colourings measuring fully 1½ inches across. They are so large that it is almost surprising to hear that they are seedlings from some of Mr. Wilson's blue strain, which, though remarkable in colour, is not generally of very great width of bloom.

A GOOD BLUE WOOD ANEMONE.

FROM Mr. James Allen, who has done so much in the raising of good kinds and varieties of spring flowers, comes a beautiful form of blue Wood Anemone of fine colour and substantial petal round and white. The blooms are 2½ inches across and a distinct advance upon the original. The same batch of seedlings gives a pretty white variety with the petals narrower and more in number. This white Anemone is distinguished from other white forms of the Wood Anemone by having the gold-coloured anthers that are so conspicuous in *Anemone Robinsoniana*, whereas in most of them the anthers are of a paler colour and not nearly so effective.

AMERICAN NOTES.

COLUMBINES IN POTS.

ONE of our representatives calling at Denver, Col., some time ago found that the native Columbine of that region, *Aquilegia cornuta*, is occasionally grown there in pots for indoor use in the winter and spring. It is true, of course, that the proper place for Columbines in summer is the flower border or rock garden, and in these locations they are all very charming plants, but they are none the less welcome additions to our greenhouse flora on that account. Owing to the rather fleeting character of their flowers, it is doubtful if pot-grown Columbines will ever be extensively used by our floral artists. There may be, however, some small demand for them, and in this connection it should be remembered that the flowers of the double and semi-

double varieties remain perfect much longer than those of the strictly single sorts, although it must be admitted the latter are always the most graceful and beautiful, eclipsing in these attributes many more popular garden flowers.

In the long list of species of *Aquilegia* there is none quite so beautiful as the typical form of *A. corulea*. The flowers are of a delightful light blue tint, such a shade indeed as one could fancy clothing the tips of its native Rockies, merging them with the skies beyond to the delusion of the spectator. But it is an extremely variable plant and the type is quite rare even in its native wilds. The variation is found chiefly in the flowers, the colour ranging from blue to white with many intermediate blendings. The form shown in the picture had blooms of a lavender shade.

We have seen *A. canadensis*, with orange-scarlet flowers, similarly grown in pots for the adornment of greenhouses and conservatories in winter and spring, and its bright colour renders it very serviceable for this purpose. *American Gardening*.

NOTES OF THE WEEK.

Jersey Potato crops ruined. A sharp white frost has wrought extensive damage to the Jersey Potato crops. One-half of the total acreage has been affected, whole fields being completely ruined. This is all the more disappointing, as the crop this year was a week earlier than usual and a good season was anticipated. The importance of the Potato industry to the island is evinced by the fact that over 60,000 tons of Potatoes, valuing over £333,000, were exported last year.

The Gardeners' Royal Benevolent Institution.—The 61st anniversary festival dinner in aid of the funds will take place at the Hotel Metropole on Friday, May 18, under the presidency of his Grace the Duke of Portland, K.G., P.C., G.C.V.O., who will be supported by the Dean of Rochester, Viscount Powerscourt, the Right Hon. A. H. Smith-Barry, M.P., Sir Walter Smythe, Bart., and other influential gentlemen. We hope that the noble efforts made on behalf of various war funds will not mean any loss in the annual contributions to this deserving institution.

Nymphæa Chromatella. This is one of the many beautiful hardy hybrid Nymphæas, and perhaps one of the strongest growers, raised by Mons. R. Latour-Marliac. I find that when planted in shallow water of about 18 inches to 20 inches deep, it has a tendency to throw up its leaves several inches above the surface, and become much crowded after a few years, hiding its flowers. Last spring I divided a large plant that had been growing in the same place for a long time and had become crowded, as above stated, with the result that, instead of having a huge tuft of leaves, I had over sixty fine plants, which spread their leaves on the surface of the water, with numerous large flowers nestling between them which could be well seen. Not so in the old plant. *W. O., Fota, Cork.*

Destroying queen wasps. Now is the most favourable time to commence a vigorous warfare against these pests by destroying, if possible, every queen. We have a good plan here which I think would be well for all owners of gardens, fruit growers, &c., to adopt. Twopence is paid for every queen wasp that is brought in, and they are cheap at the price when we consider the damage that would have been done if they were allowed to develop into strong colonies. When outdoor fruit begins to ripen, hosts of wasps appear on the scene, attracted from far and near by the smell of the fruit. Fruit growers then begin to awaken to the fact that the time and labour that have been spent to bring the fruit to this stage has been in vain, and in despair they offer sixpence, and I have known cases of one shilling being offered for each wasp's nest. It is then too late to begin the extermination of the pest, as a good deal of harm has generally been done before it is noticed. It is also a very ineffective way of getting rid of them, as many of the nests can never be found, and the destruction of a few seems to make no difference to the numbers around the fruit trees.

Last season, when wasps were so numerous in most parts, we were comparatively free of them. This can be easily understood, as we had 152 queens brought in during the months of April and May. If all fruit growers were to encourage their employes and others to bring in the queens, the extermination of the pests would only be a matter of a few years. *M. TAYLOR, Penbedar, N. Wales.*

Thompson's Gardeners' Assistant.

We learn that this standard work has been revised and considerably enlarged by numerous specialists, under the general editorship of Mr. W. Watson. It will consist of two volumes of about 600 pages each, divided into twenty monthly parts, the first of which will be issued this month. It will be freely illustrated with engravings and coloured plates.

Dinner of Kew Guild.—The first dinner of this guild will take place at Holborn Restaurant, High Holborn, London, on Tuesday, May 22, the eve of the Temple show. The director of the gardens, Sir W. Thiselton-Dyer, K.C.M.G., &c., will preside. A large gathering is expected, and those wishing to attend should write to the hon. secretary, C. H. Curtis, 68, Whitteville Road, Brentford, Middlesex, to whom remittances should be made payable.

Royal Horticultural Society. The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, May 8, in the Drill Hall, James Street, Westminster, 1-5 p.m. A lecture on "Is there any Natural Limit to the Improvement of Cultivated Plants?" will be given by Mr. W. Bateson, M.A., F.R.S., at 3 o'clock. A schedule of the Temple flower show can now be obtained on application to the Secretary, Royal Horticultural Society, 117, Victoria Street, S.W., enclosing a stamp.

Cineraria Lady Thiselton-Dyer.

This *Cineraria* was brought before the floral committee, but failed to secure an award, many of the members exhibiting a lamentable ignorance by considering it to be a form of *Cineraria cruenta*. We cut this from the *Gardener's Magazine*. It is funny to read the comments of a member of the floral committee upon the judgment of his associates. We are unaware that any member considered this beautiful hybrid "a form of *Cineraria cruenta*," and we have reason for our remark.

Magnolia stellata. To-day (April 22) I counted over thirty flowers expanded on a small bush of this, and certainly there are as many buds to open yet. The effect of the array of large starry pure white blossoms is very fine. There seems no need to give the shrub any sort of protection, for mine are in a position where, although well exposed to the sun, they get a great deal of the north wind. The best effect should, however, be got by placing them in front of evergreen bushes, as there is no vestige of foliage on them at flowering time. *T. J. W., Woodside Park.*

Diary of White of Selborne. The "Diary of White of Selborne" is to be published. He kept it, as is well known, for more than twenty-five years, and used for the purpose a form "invented" by Daines Barrington, entitled "The Naturalists' Calendar," constructed for recording on each day, in proper columns, the readings of the thermometer and barometer, the direction of the wind, the measurement of the rainfall, the weather, the appearance of leaves and flowers of plants, the appearance or disappearance of birds and insects, observations with regard to fish and other animals, and miscellaneous observations. But Gilbert White enriched his "Calendar" with much other matter. There are not only numerous disquisitions on points of natural history, but notes of events of public interest and of personal or domestic concern. These are written on interleaves, or such spaces as may happen to be available. It is proposed to arrange for the publication of the diary in the manner of the original in every substantial particular. There will be no editorial notes, except in elucidation of a few points of real obscurity. It will fill two large quartos of about 700 pages each, and Messrs. Constable and Co. are to be the publishers. *Atholcum.*

Myosotis German Star. This new Forget-me-not is a chance seedling from *M. palustris*,

according to *Moller's Deutsche Garten Zeitung*, and forms neat, compact, little tufts about one foot in height. It possesses all the good qualities of *M. palustris semperflorens*, but its flowers are larger, sweet scented, and produced continuously. The flowers are borne on long stems and are of the most beautiful sky blue shade. It is an excellent variety for pots, beds and cutting.

Narcissus triandrus. Last year I planted a seedling *N. triandrus* in a bed under trees and behind a bush, the soil being composed mostly of cinders, stones, and leaf-mould from the sweepings of paths, &c. In the spring the sun and air get to the bed, but when the trees are in leaf the spot is very shaded. Much to my surprise, the *Narcissus* is perfectly happy and has a truss of three very nice blooms. May we gather from this that *N. triandrus* likes a shady home and a bed in which the wet can never lie? Mine is a very cold climate, and the north wind has full play over this particular spot.—*JAY AYE.*

Sale of botanical books.—The botanical and other books of the late Mr. Barber, of Oakfield, Aston-on-Clan, Salop, sold recently by Messrs. Sotheby, Wilkinson & Hodge, were chiefly of a technical interest, but the following may be mentioned: A complete set of the "Botanical Magazine," from the commencement in 1787 to 1879, in 75 volumes, and with 6468 beautifully coloured plates, £91 (Bain); Sydenham Edwards's "Botanical Register," from 1815 to 1847, a complete set in 33 volumes, £44 (Bain); C. Loddiges' "Botanical Cabinet," 1817-33, on large paper, in 20 vols., and with 2000 plates, £38 (the same); B. Maund, "The Botanical Garden," vols. 1 to 13, 1825, &c., £13 10s. (the same); H. G. Reichenbach, "Icones Floræ Germanicæ et Helveticæ," 1834, &c., with 1841 beautifully coloured plates, £40 (the same); a complete copy of John Parkinson's "Paradisi in Sole," 1629, £22 10s. (Ellis); P. J. Redouté, "Les Liliacées," 1807, on large paper, £50 (Bain); and F. Sander, "Reichenbachia," with 192 plates of Orchids, 1888-98, £20 (Bumpus).

Primula rosea.—The ways of some plants are by no means easy to understand. They have a most provoking habit of declining to do well in some gardens, though they flourish in others which possess, so far as one can see, almost identical soil and position. I often think that the charming *Primula rosea* is one of these flowers. One finds it doing admirably in some places, while in others it can only be retained by planting in a bog. In my own garden I can only keep it by growing it by the margin of my Water Lily pool, where it is constantly wet. I was thus delighted to see it growing in great numbers in the borders in the garden of General Stewart at Carruchan, Dumfries, N.B., the other day. There was nothing that one could see to account for its thriving condition. It had as its companion a number of plants of *Primula denticulata cashmeriana*, which grows equally well with me as at Carruchan, and that, too, in the ordinary border and on the rockeries. It is another instance of the presence of hidden conditions which baffle our search. One would hardly expect that the soil at Carruchan would suit *Primula rosea* so well that it would do in the border, yet it does. In other gardens only a few miles away it cannot be grown without a special supply of moisture such as it has in my own garden. Some find that it needs frequent propagation, either from seed or by division. It is worth almost any trouble to induce it to flourish, yet it is possible that there are many gardens where it has not yet found a place, but in which it might grow with the same freedom as in the garden I have referred to. *S. ARNOTT.*

Epimedium pinnatum. The large yellow Barrenwort is one of the finest of the genus, and it is unfortunate that it is not more largely grown. I saw a nice little bed of it in the nursery of Messrs. Little & Ballantyne, of Carlisle, a day or two ago, and was struck even more with its beauty and value than I had been before. It was flowering very freely, and the numerous spikes of flower were unusually fine. One might rank them with some of the indoor Orchids, and it was no surprise to hear how much this *Epimedium* was

valued by Mr. Arthur, the manager of the nursery. The golden-yellow flowers are very beautiful, and the colouring of the leaves at various seasons adds greatly to the attractions of the plant. At this nursery it was grown with no special treatment in the way of soil, yet it was remarkably thriving in appearance, and the wealth of bloom it yielded showed that the ordinary nursery practice suited it. In my own garden it thrives well in the sandy peat which forms the staple of the garden soil. It is, we are told, a native of Persia, but I think it is perfectly hardy in most gardens in this country. S. ARNOTT.

Narcissus moschatus and **N. Johnston Queen of Spain.** As many know to their cost, it is not everywhere that these charming Narcissi can be persuaded to grow for longer than a year or two. After the first year they frequently dwindle away, and depart finally in the second or third year, if they even reach that stage in the garden. One is therefore glad when one sees them both thriving under conditions where there would be no reason to expect exceptional success. In the garden of Mr. Davidson, Summer-ville, Dumfries, there are small clumps of these Narcissi in the herbaceous border among other flowers and growing in a way which would make many envious of their owner's success. I am speaking of the small and most lovely *Daffodil* which is said to be the true *moschatus* of Haworth, and not of that called *moschatus* by Dutch growers. It is an exquisite little flower, and it is a pity that everyone cannot persuade it to grow so well as it does at Summer-ville under such simple treatment. The soil appears to be congenial to these *Daffodils* in the garden referred to.

Synthryis reniformis. This is a little plant which well deserves a note at the present time. I have been in several gardens containing collections of hardy flowers in and around Dumfries of late, and I have been observing with pleasure the way in which it thrives when under reasonable conditions. Although some years have elapsed, I can yet remember the admiration I felt for this *Synthryis* when I first saw it in a frame in the garden of one of my flower-loving friends. This admiration still exists, and has been even heightened by its hardiness and freedom when grown in the open in the rock garden. Its pretty kidney-shaped leaves and spikes of small blue flowers are unlike anything else we have in bloom so early in the season. Its requirements are not very exacting, though I find that it rather dislikes a dry soil and likes a little shade. I do not think that it is very largely grown, and no one who has it not need fear to become a purchaser of a plant or two. S. ARNOTT, *Carsluen, by Dumfries, N.B.*

Asystasia scandens. This is now quite an uncommon climber, though at one time it was far more generally met with under the name of *Hentrea scandens*. It is not of particularly vigorous growth, hence it is well suited for training to the roof or rafters of a moderate-sized structure. Though one of the numerous order of *Acanthads*, the flowers of this *Asystasia* almost suggest an affinity to the *Bignonias*. They are trumpet-shaped, nearly a couple of inches long, and of a creamy white tint. When in flower the plant is decidedly chaste and pretty. It is a native of the tropical portion of Western Africa, and needs the warmest part of the stove. It is now in flower in the Fringe at Kew, where in the Mexican house the only other member of the genus is unfolding its blossoms. This is *A. bella*, far better known, however, as *Mackaya bella*. It forms a large bush, clothed with handsome shining leaves, while the colour of the flowers is mauve, veined with purple. This last is a native of Natal, and a warm greenhouse is needed for its successful culture. T.

Ionopsidium acule. This charming little annual, known also under the titles of *Violet Cress* and *Diamond Flower*, is worthy of a place in every garden, clothing the ground as it does with a dense carpeting of its tiny lavender-white blossoms. In some South Devon gardens it has been in continuous bloom since January, and where congenial conditions are present it seeds itself so abundantly, that repression rather than encouragement is needed. In many gardens it

refuses to reproduce itself naturally, and in such an annual sowing is necessary for the enjoyment of its beauty from year to year. As a native of Portugal a somewhat sheltered site is advisable, while a porous compost is better suited to its requirements than a stiff and retentive soil. S. W. F.

Rhododendron Shilsoni. This hybrid *Rhododendron*, now in full flower, furnishes one of the most attractive features of the new north wing of the temperate house at Kew. It is one of the large specimens presented to the Royal Gardens by Mr. D. Shilson, of Tremough, Cornwall, and was raised by that gentleman's father. It forms a large bush 12 feet or so in height, and is thickly studded with clusters of brilliantly coloured blossoms. *R. Shilsoni* is a hybrid between those two bright-coloured Himalayan species *R. barbatum* and *R. Thomsoni*, and from a garden point of view it is superior to either of its parents. The flower clusters are compact and of moderate size, while the individual blossoms, which expand more widely than some of the others, are scarlet, or nearly so. One of the parents, *R. barbatum*, is also in flower closely. H. P.

SPRING FLOWERS AT BATH.

We give an illustration of a rocky bank in the Botanic Garden at Bath. Nothing could better show the beautiful and right use of the free-growing spring-flowering plants of the *Arabis* class that so often even in private gardens are planted in flat, uninteresting lines, or appear as startling patches of white bloom in an otherwise empty border. Here we have them grouped on a boldly designed rocky bank, growing in a way that is in perfect sympathy with their nature, extremely pictorial.

Some years ago botanic gardens were things of stiff, straight beds in the highest degree unattractive; but, following the example set at Kew, they are now becoming places of beauty and delight. Such an example as that of our illustration proves how a very common plant may be shown in a way that is altogether delightful, and how in broken ground the well-placed rock steps and naturally-treated path give a suggestion of the plant's native rocky home that is not only pleasant to every eye, but instructive to the student. For this and much other of tasteful and intelligent arrangement the public may well be



A BANK OF SPRING FLOWERS IN BOTANIC GARDEN AT BATH.

thankful to the curator, Mr. J. W. Morris, and to the superintendent, Mr. Milburn, to whose combined labours this pleasant garden owes its many pictures of plant beauty.

NYCTITROPIC AND ALLIED MOVEMENTS OF PLANT-ORGANS.

SLEEP or nyctitropic (*i.e.*, "night-turning") movements of leaves have long engaged the attention of botanists; for this is a phenomenon which can scarcely escape observation, whether it be in the tropical Mimosa or our own Clovers and Melilots. In some cases a mechanical touch sends the leaf to sleep, as in the familiar case of the Sensitive Plant.

When leaves are developed from buds in spring they often show kindred phenomena in their evolution, but they do not close and open again repeatedly; they, so to say, start closed, but finally expand and remain so; hence a common cause must lie behind these groups of facts, and that is the sensitiveness or irritability of living protoplasm to varying degrees of light and temperature as well as to mechanical contacts.

Darwin has treated and illustrated the true sleep of plants as well as other of their movements so exhaustively, that all who wish to study the subject thoroughly can do so with the aid of his books, "The Movements of Plants" and "Climbing Plants." In this article I would call attention to a few cases which may be more easily observed, and readily show what advantages are gained by sleep and allied movements.

Taking a Clover leaf as an example, it should be observed first in a very young state. The three leaflets will be seen to be conduplicate, that is, folded in half like a piece of note-paper, and they are all pressed tightly together, side by side, so that they form six layers so closely in contact, that it is almost impossible to separate them.

Two objects are thus gained—first, the protection of the outer, *i.e.*, upper surfaces of the blades, as well as all the surfaces but the two outermost; and secondly, they stand in a vertical plane. The importance of these two results lies in the avoidance of any chilling and injurious effect of radiation of heat at night, which always takes place more abundantly from a horizontal than a vertical surface.

When the blades are fully developed they spread themselves out horizontally. As, however, they may, even when adult, suffer by radiation, protection is secured by a true sleep, which may readily be observed at sundown. This is effected as follows: The two basal leaflets revolve through 90°, so placing their blades in a vertical position; they then approach each other and place their upper surfaces in contact. Lastly, the terminal leaflet rises up, passes through a whole diameter of a circle, or 180°, and then comes down upon the other two, the underside forming a sloping roof over them; they thus remain till the following morning. A not very dissimilar process may be seen in the French Bean. The first pair of unifoliate leaves are horizontal by day, but fall vertically at night. The next and following trifoliate leaves are all spread out horizontally by day; but while the basal pair simply drop vertically, the terminal and smaller leaflet comes over and clasps the upper edges of the two.

In the Wood Sorrel the trifoliate blades go to sleep, but in a different and simpler way. They merely drop down, and each leaflet having its two halves at an angle of 120°, the three touch each other's sides. In the unde-

veloped condition the Wood Sorrel leaf is just like that of the Clover.

Some Lupins and the Horse Chestnut show another similarity, not only in having digitate leaves of many radiating leaflets, but in their method of protecting themselves from injury. If a bud of the Horse Chestnut be examined as it is expanding in spring, it will be found that the bud-scales are really transformed leaf-stalks, the innermost having a few diminutive leaflets. As soon as the true leaves are sufficiently developed, the leaflets all turn downwards, overlapping one another. The same object of avoiding radiation as much as possible is thus gained. Now some species of Lupin go to sleep in a precisely similar manner. The leaflets which had been in a horizontal position by day drop down, and so tend to cover each other like a shuttlecock. In other species they are reversed in position, while a third method is seen in the star-like blade assuming a vertical position, by the basal leaflets falling simultaneously with the terminal ones rising.

A very good illustration of downward curvature by growth is seen in the Lime when developing its buds. At first small and conical, they elongate and curve downwards. The bud-scales are really stipules. The first blade which appears is folded in a conduplicate manner, and at once turns downwards; the inner stipules grow broader and longer, more or less protecting the leaf. As fresh leaves emerge each in turn behaves in the same way, while the earlier ones, as soon as they are full grown, rise up and assume a horizontal position. The others, each in turn, follow suit.

In the Walnut the leaf is pinnate; each leaflet is conduplicate, and in order to place them in a vertical position the main stalk curves strongly downwards. When fully developed it rises up again, and the leaflets are spread out horizontally.

In the Ash, which has a pinnate leaf like the Walnut, a converse method is adopted, in that the petiole curves upwards, and so holds the conduplicate leaflet in a vertical plane, but upwards instead of downwards.

Parts of flowers often move for various purposes; and one kind may be called "sleep," though it may take place soon after noon, for some flowers can only expand in the brightest sunshine, such as those of the Mesembryanthemum, "mid-day" flower, as the name implies. So do our Pimpernel, Dandelion, and Daisy close up in dull weather. Crocuses will readily open their closed tubes if brought near a strong lamp. As another instance *Silene nutans* may be mentioned. This flower lasts for three days and three nights. The petals are cleft, white, and somewhat reflexed upon the calyx tube. In this state they attract moths at night. On the approach of light, the petals curl up into an incurved spiral, being longitudinally creased as well. As soon as the second evening arrives the corolla unroll, the wrinkles are smoothed out, so that it becomes once more attractive. On the first occasion the stamens only were mature, and on the second the anthers have perished, but stigmas are now ready.

The movements of stamens, whether slow or fast (as in *Berberis*, *Helianthemum*, &c.), are concerned with methods of insect-fertilisation. Such movements may be spontaneous, as in the Grass of Parnassus, or due to mechanical irritations, as in the last two genera as well as in the style of *Styidium* and *Maranta*, and cannot be compared with true sleep. In the case, however, of the Sensitive Plant (*Mimosa pudica*) the result of a touch is precisely the same as that of sleep. The leaf of this plant has a long, slender petiole articulated with the stem. It carries about four or five pinnae, each

pinna having two rows of leaflets. If the terminal one be pinched, all the pairs fold themselves together upwards in succession from apex to base. If all the pinnae do this, then the whole leaf drops down, by the lowering of the main stalk or petiole; it is then in the same position as if asleep.

It may be asked, What is the nature of the mechanism by which leaves are enabled to rise, fold or twist on their axes? Darwin tells us that the movements can be effected in two different ways. First, by the alternately increased growth on the opposite sides, preceded by increased turgescence of the cells. This will also apply to the leaves emerging from the buds, which first grow downwards and then upwards, or *vice versa*. The second method is by means of the "pulvinus," or aggregation of small cells, producing an enlarged base to the petiole. The pulvinus is usually destitute of green chlorophyl, and becomes alternately more turgescient on nearly opposite sides, so that when swollen on the upper side the leaf-stalk will, of course, bend downwards. This turgescence is not followed by further growth except during the early stages of development.

The pulvinus or swelling is formed by a group of cells which remain in an elementary condition of growth. Darwin noticed that when a pulvinus is present, the nyctitropic movements are continued for a very much longer period than when such does not exist. Thus he adds that some leaflets of the red Clover were pinned open during ten days, and that on the first evening after being released they rose up and slept in the usual manner. Besides the long continuance of the movements when effected by the aid of a pulvinus, a twisting movement at night is almost confined to leaves thus provided. ("The Movements of Plants," p. 397.)

A point observed by Darwin, but of which he does not appear to have noticed, what seems to me at least to be significant, is that the leaves of many plants do not sleep at night unless they have been well illuminated by day, and that leaves which are shaded, by being seated too low down on the plant, sometimes do not sleep at all.

Now these facts seem to show that in proportion as leaves have been exposed to heat by day, so does the protoplasm react and cause such a distribution of the water as to make the leaf fall. In other words, the heat which has accumulated within the leaf during the day is the immediate cause of the leaf falling asleep at night—*i.e.*, the more heat there is within, the greater the danger from radiation; hence the exposure itself is the cause of the protective sleep afterwards. GEORGE HENSLAW.

THE CENTURY BOOK OF GARDENING.

It is very gratifying to receive many letters expressing approval of this new illustrated general work upon gardening, and some of my correspondents have asked for even fuller information upon certain points than afforded by the articles. It will be a great pleasure to answer either through THE GARDEN, COUNTRY LIFE, or by post (a stamped envelope should be enclosed for the purpose) correspondents in difficulty over any matter contained in the work. E. T. COOK.

LAWNS.

SUCH familiar objects are our smooth green lawns of fine turf closely shorn, that we are apt to forget that they are an adjunct to garden beauty almost special to the British Islands.

And when we have the pleasure of receiving a visitor from the Continent, we are sure to be reminded of this by the delight he expresses at the soothing sight of their velvet-like expanses.

A wide lawn of perfect turf is indeed a pleasant sight, and one that disposes the mind to that feeling of restful tranquillity that is one of the best of the many good gifts of a garden. For this reason a wide lawn is all the more beautiful if the main part is not cut up in any way, but is pure lawn and nothing else, and it always seems to be best bounded by the downward sweep of the lower branches of noble trees.

Holme Lacy is famed for its ancient gardens, with their protecting hedges of clipped Yew,

THE FLOWER GARDEN.

BLUE WOOD ANEMONES.

THESSE are to be found scattered thinly in several parts of Camarvonshire. In my mountain rambles, which often used to cover a very wide extent of ground in a day, I used to find a plant here and there, the shades of blue being very variable, sometimes hardly to be distinguished from the type; in other instances quite as blue or deeper than the standard *A. Robinsoniana* of gardens. They were most plentiful within a mile or two of the Penrhyn slate quarries, and found also in woods near Gwydyr and sparingly in other

mixed with *Robinsoniana* near Bayonne, but *Robinsoniana* is the prevailing form in some spots. I should not be surprised to hear of the occurrence of blue forms of *A. nemorosa* in Ireland, as they might easily be overlooked. If found there it would be likely that they might be of the large size, as I have in my garden giant forms of pure white *A. nemorosa* which were found wild in the county Cork.

C. WOLLEY-DOB.

Edge Hall, Malpas.

"F. W. B.'s" note on these (page 284) recalled to my mind my first acquaintance with them. Forty years ago, more or less, a dear old Quaker, named A. Lamb, of Peartree Hill, Lishurn, Ireland, carried on what I imagine must have been a small



THE LAWN, FROM THE HOUSE, HOLME LACY, HEREFORDSHIRE.

also for the noble Yews growing free and for its other mighty trees. But the great lawn stretching down to the water, with its lines of repose continued in the level mead beyond, is by no means the best of its many beauties. It might have been better still if, when it was made, the banks right and left had been formed in a single unbroken sweep, because in the first place stiff glacis-like slopes are always unbeautiful, and in the second, the garden landscape would have accorded better with the fine lines and masses of the rising ground beyond. The further line of the meadow would also have been improved had it been slightly broken by a few bushes towards the right, the better to join into the bushy slope,

parts. They were always mixed with the typical kinds, and often I would find one plant in a wood, and look for long in vain for another. The flowers were of the normal size of the common kind which grew round them, one-third less than the genuine *Robinsoniana*. But near Bayonne this true *Robinsoniana* grows in abundance in woods between the Adour and the Nive, where formerly *Narcissus pallidus precox* abounded. I speak of what I have myself seen and gathered, but I believe *A. Robinsoniana* is to be found in equal abundance in the country to the east of those woods. Large baskets full of bunches are brought at the beginning of March into Biarritz market which were said to come from Peyrehorade, thirty miles east of Bayonne. The common type of *A. nemorosa*, but of a larger size than is common in England, grows

business in hardy plants. He made a specialty of the double Primroses and the highly-coloured single varieties which were then coming into cultivation. I corresponded with Mr. Lamb for several years, and had various little lots of plants from him, and I shall never forget my delight when the first single bright crimson Primrose greeted my eyes. That day a new world opened to me.

Amongst other things I had from Mr. Lamb was the blue Wood Anemone, which also pleased me greatly. This succeeded fairly well with me, and in spite of attacks of the fungus I have grown it from then till now. *A. Robinsoniana* is larger, but there is something about the older form which prevents my giving it up. Although *A. nemorosa* in great variety grows wild in this district, I have

never met with any blue form of it. When staying at Pau in the spring of 1887, I frequently found very light blue varieties of the Wood Anemone; in fact, these forms were quite common in the neighbourhood. On one of the *Coteaux* some three or four miles from the town I found quite a richly coloured form growing on a steep hedge-bank in a very secluded spot. The patch covered a few feet only, and appeared to have never been disturbed. I secured some roots, and have found it quite distinct from the old forms. The bud is red and the flowers bluish purple. I find that if grown in the full sun the colour quickly fades, but in the shade it stands well. Seedlings from *A. Robinsoniana* vary very much in character and in colour, from pure white to various shades of blue or purple. Some of the white forms are, I think, superior to those sold under the name of *A. n. major*, which I find very much. One of my blue seedlings, which I have named *A. Alleni*, is larger, of more substance, and better in colour than the parent. Mr. Ewbank considers it the best of the species. What a pity it is that the yellow form of *A. nemorosa* (not *A. ranunculoides*), discovered in Ireland some years ago, should have been lost to our gardens! Seeing a notice of it in *THE GARDEN* several years since, I hunted up the nursery to which it had been introduced by a previous manager, only to find that the plant had been lost the year before my application.

Highfield, Shepton Mallet, JAMES ALLEN.

YELLOW AURICULAS.

THESE are now before the flower-loving public in the form of a fine Scotch strain known as Storrie's, and what has been seen of the varieties when they have come south shows that they are large-flowered, some of good form, varied in shade, and generally highly fragrant. They are, perhaps, better adapted for pot than border culture, because it is found in practice that seedlings from fine types, especially when grown under glass, are apt to become less robust for open-air exposure—a circumstance not confined alone to the Auricula. Then, as the Auricula blooms early, the flowers are apt to be injured by frost and storm. As plants grown in pots, protected in a greenhouse or frame, the results are most satisfactory. The grateful perfume they exhale from their petals is most acceptable, and this can be better enjoyed in a house than in the open. There are yet some useful yellow-flowered Auriculas capable of service in the open garden, such as the old Dusty Miller; Buttercup, a tree-blooming, small-flowered variety which is much grown in Scotland; Golden Queen, a strong-growing variety with mealed foliage and pale brownish yellow blossoms, which is hardy enough to stand in the open through the roughest of winters, and one or two others which can be found in catalogues. A few years ago when visiting Normanhurst, Lord Brassey's seat near Battle, I saw a batch of plants of a quite distinct variety, one of which Mr. Allen gave me, and I have since grown it under the name of Norman Yellow. It was remarkably good growing in the open at Normanhurst, but I have to grow it in pots, for my soil and probably atmospheric conditions are against cultivation in the open air.

Yellow Auriculas seed pretty freely, and it is worth while cross-fertilising them to secure more certain results. To assist in keeping the colours pure, the plants should be isolated from contact with the pollen of others of a different type. I have been raising yellow Auriculas for a few years past with good results, and by cross-fertilising the best of these I have secured 100 or so seedlings, which I have just pricked off from the seed-pans, but none of them can be expected to bloom until a year hence, and then, though a goodly number may be depended upon to be true to colour, some are certain to come of other colours.

Those who appreciate high quality in Auriculas should endeavour to obtain a plant of Buttercup, raised by the Rev. F. D. Horner. It is a very fine yellow self, having the high quality of the most approved self varieties of the florist. It should, of course, be grown in a pot under protection; it is much too precious to be placed in the open border.

Nor must it be confounded with the Scotch Buttercup, a widely different thing altogether. Mr. Charles Phillips, of Bracknell, has also obtained a fine yellow self which he thinks equal to Horner's Buttercup. Both are good growers, and they afford a pleasing variation among such dark selfs as Black Bess, Heroine, Pizarro, Sir William Hewitt, and others, and such blue and violet selfs as Mrs. Potts, Rev. Charles Kingsley, and Sapphire. Though in the estimation of the florist the self Auriculas rank lower than the edged types, many of them are very beautiful. Blue flowers on mealed foliage, as in the case of Mrs. Potts, afford a delightful contrast.

R. D.

GARDEN PRIMROSES.

IT is difficult to understand what Mr. A. Dawson desired to obtain by crossing Primroses and Polyanthuses, as the result was certain to be the production of a mongrel strain, such as we have already far too abundantly in our border Polyanthuses. I mean by mongrel those that have intermediate characters, first sending up flowers on long single stems, as the true Primrose does, and then later come others on scapes borne on weak stems, which cause the flowers to fall about, and are far from being satisfactory. When, many years ago, I employed as seed-parents the then so-called *Primula altaica*, a large mauve-coloured Primrose, as the seed-producer with that most beautiful crimson variety known then as *Primula auriculiflora*, I got as a strain the most perfect of all garden Primroses in great variety of colour and perfect form that has ever been seen. I fear we have no such parents now. But after some ten or twelve years of high-class character this strain gradually developed the mongrel character of being half Primrose, half Polyanthus, thus losing much of its original charm and beauty.

I fear we may look in vain anywhere for such gloriously beautiful things now as I then had, and when plants three years old were masses of bloom some 12 inches across and of a dozen diverse rich hues of colour, they served to arouse a love for them that will never in life be quenched. Half a century were those for the garden Primrose. The Polyanthus also has had its troubles, for whilst every effort was made by constant selection for seed-production of the most erect, free-flowering and most attractive of bloomers, yet even with all care 50 per cent. would in the progeny show the mongrel habit referred to. Possibly, could both Primroses and Polyanthuses for seed-production be severely isolated, so as to prevent demoralisation

by pollen contact with inferior ones, much may be done to keep strains pure. But there does seem to be in these hardy members of the Primrose family much tendency to revert to inferior forms. None the less, an enthusiastic amateur cultivator might, with ample room for isolation, accomplish much with them.

I do not follow Mr. Dawson in his enthusiastic eulogies of the form of the wild Primrose, but he is very much of a naturalist, perhaps, and likes ragged outlines. I have more of the florist's tastes, and prefer good forms to ragged outlines. Hence in the old strain I had for so long in Middlesex I always selected for form in the flower, good coloration, and substance of petals. These are features it is desirable to find in all garden Primroses or Polyanthuses, but the latter to be true should not produce mongrel flowers, but have the entire florescence in good round scapes borne on stout, erect stems. How beautiful indeed are such when the heads are from 10 inches to 12 inches over and of lovely colours! There is room for more of richer coloration in Polyanthuses than is so commonly seen. Whites, yellows, sulphurs, &c., are all very well, but none excel in effect the rich reds, roses, crimsons, and violets when seen in strong plants. How seldom I see now any of the old Hose-in-hose strain, or the pleasing Jack-in-the-Green or Jackanapes forms! I used to have them by hundreds at Bedford. Now is the time to sow seed of all this tribe, and the amateur who will take up their culture, selection, and improvement with zest will find a marvellous delight in the procedure.

A. D.

ORCHIDS.

ORCHIDS AT ROSSLYN, STAMFORD HILL.

FEW who pass along the busy thoroughfare of Stamford Hill, or travel through the gardens at the back on leaving Stoke Newington station (G.E.R.), are aware that one of the most extensive of modern Orchid collections is to be seen here. Rosslyn, Stamford Hill, has long been the home of Mr. H. T. Pitt, who is one of the most enthusiastic horticulturists in the north of London. Stoke Newington is well known as the home of the Chrysanthemum, where the great National Society had its birth. After the National Society migrated elsewhere, Stoke Newington was without its annual



GROUP OF ORCHIDS IN MR. H. T. PITT'S GARDEN, ROSSLYN, STAMFORD HILL.

show for many years, and it is mainly due to Mr. Pitt and a few friends that the old associations have been revived during the last few years. I may mention that Mr. W. Noble, Mr. Pitt's gardener, took no less than sixteen prizes in the flower, fruit and vegetable classes in November last. The outside garden was gay at the time of my visit with various spring flowers. The vineries and plant houses are interesting. Hippeastrums are at the present time making a good show, and Chrysanthemums, if need not be added, are made a speciality of. A fine plant 5 feet through of *Euphorbia splendens* is covered with flowers.

THE ORCHID HOUSES.

thirteen in number, contain some thousands of plants, and are under the care of Mr. Thurgood, the Orchid grower, who is to be complimented on the fine condition of the various sections. It is no easy matter for the most experienced of our Orchid specialists to fight the London atmosphere in winter, and the past season has not been favourable. It is, therefore, all the more creditable to the grower to be able thus early in the season to produce flowers such as displayed in the accompanying illustration, which is reproduced from a photograph recently taken and kindly sent by Mr. Pitt.

The first house is devoted to the culture of the warm Eastern section of *Cypripediums*, including most of the best species and hybrids of this group. One of the principal of these, *C. Lawrenceanum* Hyanum, is just expanding its yellow, green and white flowers. On the back staging are the *Selenipediums*, represented by all the known forms, *S. pulchellum*, *S. calurum*, *S. Roezli* and others being in bloom.

In the next division I noticed a finely-grown batch of the *Pescatorei* section of *Zygopetalums*, a section difficult to grow. *Miltonia Roezli* and *Spathoglottis* are also well done. Hybridisation is successfully practised, and a number of seedlings are being produced in various stages of growth. At the back of this division the East Indian *Aerides*, *Saccolabiums*, and warm *Vandas* are grown. The Madagascar section of *Angraecums* are well represented, *A. sesquipedale*, *A. Leonis*, *A. modestum* being in flower. The rare *Thrixsperma Berkeleyi* is producing a fine spike.

The next division is devoted to the intermediate section. *Miltonia vexillaria* and its forms are well represented. One of the best varieties is *M. v. Leopoldiana*, which is superior to *M. v. superba*. *M. Phalenopsis* is also grown well. A plant of the lovely hybrid *M. Bleuana* (*vexillaria* - *Roezli*) was in flower, the sepals being white and the petals bluish-pink, the broad lip white, faintly suffused with rose in front of the deep brown disc. This is one of the best varieties we have seen. *Odontoglossum grande* is extensively grown, and includes the charming yellow *O. g. Pitt's* variety, recently certificated. The rare *O. Duvivierianum* is also included. On the back stage *Maxillarias* are well grown. *M. Sanderiana*, with its large brown and white flowers, and *M. luteo-alba* are also in bloom. In the centre of the stage is a grand plant of the hybrid *Cymbidium Lowiano-eburneum*.

In the Mexican house some large *Celogynes*, *Odontoglossum citrosium*, *Laelia anceps*, and its allied species are extensively grown. Some large plants of *Dendrobium Falconeri* were resting here.

At the back of the next division plants of the *Vanda tricolor* section are grown. One of the largest plants of *Celogyne Dayana* in the country is in fine condition. Suspended from the roof and on the front stage the rare *Cattleyas* and hybrids of this section are grown. Among the best of the species are *C. Trianae* (Pitt's variety), *C. Mossiae*, *Mrs. C. H. Feilding* (certificated at the last Temple show), *C. Mendeli* alba, and *C. intermedia* (Rosslyn variety), having the faintest possible shade of rose in the flowers. The latter has also been recognised by the Orchid committee. Among the numerous hybrid *Cattleyas* is a *C. Hardyana*, which flowered for the first time among some imported plants last year. This is no doubt one of the best forms that has yet appeared. *Laelia-Cattleya Dominiana*, *L. C. Lady Wigan*, *L. C. Mrs. Astor*, *L. C. Ingrami*, and others of the better crosses are represented.

The *Dendrobium* house is filled with choice

species and hybrids. The large plant of *D. aggregatum*, which is reproduced in the accompanying illustration, will give an idea as to the way the plants are grown. This plant was recently exhibited at the Drill Hall, and received an award of merit. *D. Phalenopsis* and *D. formosum giganteum* occupy the roof of a second division, while a third is devoted to the culture of *D. atro-violaceum* and *Vanda teres*.

A house is filled with *Phalenopsis*, which represent well-grown plants of all the leading species, the plants being suspended from the roof. The cool *Cypripediums* occupy another division. Among the varieties noted was a good plant of *C. insigne Sanderæ*, *C. i. Pitt's* variety (another of the albino section), the best forms of *C. Leeaanum*, *C. Arthurianum*, *C. Lathamianum*, and others.

The large span-roof *Cattleya* house contains finely-grown plants of all the leading and best species, which will make a good display of bloom in their proper season. Two large plants of *Cymbidium Lowianum* had, at the time of my visit, eight and nine racemes respectively. A plant of *Sobralia Lucasiana*, having growths some 10 feet high and strong in proportion, promises a fine display a little later on.

Though I have left the *Odontoglos-*

s until last, they are by no means the least, for this is one of the features of the collection. Mr. Pitt is a plucky buyer of *Odontoglossums*, and it is not surprising that one of the best collections of these Orchids in the world is being accumulated, the plants being exceedingly well grown. In flower were some grand varieties of *Odontoglossum* triumphans and several good hybrids of the *O. Andersonianum* section. The principal form in flower at the time of my visit was *O. crispum Pittii*. The sepals at the back are covered with rich purple. This is reflected through the white area in front, giving the appearance of a deep rose suffusion. There are a few rich purple spots at intervals on the sepals. The petals are white, spotted with rich purple, and having a slight suffusion, as in the sepals, through the central area. The lip is white, with a yellow disc, around which are a few brown spots. It is one of the most distinct and beautiful varieties we have seen.

Among the previously certificated plants approaching their flowering stage were *O. Wilkianum Pittianum*, *O. W. Rosslyn* variety, and *O. excellens* *Rosslyn* variety. This is considered the best form of this hybrid that has yet appeared. The imported plants also leave nothing to be desired, and we hope Mr. Pitt may be fortunate enough to obtain a few superior varieties among the large number of plants that have yet to flower.

H. J. CHAPMAN.

BOOKS.

Hybrid Conference Report.

We welcome the volume of the *Journal of the Royal Horticultural Society* containing the valuable report of the hybrid conference held last year. It is a volume that should be in the hands of everyone interested in the great strides that horticulture has made during past years. It embraces a remarkable series of articles contributed by the leading botanists and hybridists of the day, with an account, too, of the plants exhibited at the conference, the luncheon at Chiswick, and speeches at the banquet at the Hotel Metropole. It may interest readers who do not belong to the society, and therefore perhaps have not seen this number of the *Journal*, to know that the contributors comprise Dr. M. T. Masters, F.R.S.,

Journal of the Royal Horticultural Society's Hybrid Conference Report. Edited by the Rev. W. Wilks, M.A. London: 117, Victoria Street, S.W.



DENDROBIUM AGGREGATUM.

(Shown recently before the Royal Horticultural Society.)

Mr. W. Bateson, M.A., F.R.S., Monsieur de la Devansaye, Professor Hugo de Vries, the Rev. Professor George Henslow, M.A., V.M.H., Mr. C. C. Hurst, F.L.S., Mr. Herbert J. Welber, Mr. John H. Wilson, D.Sc., F.R.S.E., Mr. R. Allen Rolfe, A.L.S., Professor L. H. Bailey, Professor Dr. Ludwig, Monsieur L. Henry, Monsieur E. Jouin, Professor J. Muirhead MacFarlane, D.Sc., Dr. Trabut, Dr. L. Wittmack, Herr Max Leichtlin, Professor Willet M. Hays, Mr. R. Irwin Lynch, Monsieur Paul Chappellier, Monsieur Chappellier, Dr. Charles Stuart, Mr. C. T. Drury, F.L.S., V.M.H., Mr. H. B. May, Monsieur E. Lemoine, Monsieur F. Morel, Mr. A. G. Jackson, Monsieur Duval, Mr. Thomas Meehan, Mr. H. Weeks, Mr. James Lye, Mr. W. Smythe, and the volume is edited by the secretary, the Rev. W. Wilks, who has done his work well.

The Praise of Gardens.*—"The garden is the perfection of peace and loveliness." These words of the late Frederick Walker, as Mr. Sieveking writes in the prologue, strike an admirable keynote to the book. How universal is this feeling of restfulness and happiness in the enjoyment of all that a garden gives may be read in the words of the authors quoted throughout the book from the days of ancient Egypt to our own times. These words bring to mind the thoughts of men from remotest times on the subject of delights so old and yet ever new, and show how through the written records of more than thirty centuries there have been always men, and some of them the greatest that have ever lived, who have felt just as we do to-day, that a garden is one of the greatest as well as the purest of human pleasures. This continuity of human sympathy from the earliest ages in the enjoyment of a garden is only one of the many pleasures of thought that it arouses. Gardens have always been the reflections of men's minds, whether as displays of pomp and state or as peaceful harbours for mind and body.

We can only make a few extracts from this admirable book of garden love and lore and wisdom, but again and again comes the evidence of the best use of a garden from men of all ages and religions and ways of thought. Theocritus, in the third century B.C., writes thus in his "Idyll VII.," as translated by Walter Pater: "So, I and Eucritus and the fair Amyntichus turned aside into the house of Phrasidamus, and lay down with delight in beds of sweet Tamarisk and fresh cuttings from

* *The Praise of Gardens.* By Albert Forbes Sieveking, F.S.A. London: J. M. Dent and Co.

the Vines, strewn on the ground. Many Poplars and Elm trees were waving over our heads, and not far off the running of the sacred water from the cave of the nymphs warbled to us; in the shimmering branches the sun-burnt grasshoppers were busy with their talk, and from afar the little owl cried softly out of the tangled thorns of the Black-berry; the larks were singing and the hedge-birds and the turtle-dove moaned; the bees flew round and round the fountains, murmuring softly; the scent of late summer and of the fall of the year was everywhere; the Pears fell from the trees at our feet, and Apples in number rolled down at our sides, and the young Plum trees were bent to the earth with the weight of their fruit."

To come to more modern times. In the end of the eighteenth century, Prince de Ligne writes: "I should like to inflame the whole world with my taste for gardens. . . . Engrossed in this passion, the only one which keeps pace with advancing years, a man day by day casts off such as disturb peace of mind or social order. When he has passed the drawbridge at the gate of the city, that refuge of moral and physical corruption, to work in or enjoy the country, his heart laughs with Nature, and experiences the same feeling as his lungs in absorbing the fresh air, which regenerates them. Fathers, instil into your children the garden mania. They will grow up the better for it."

Early in the nineteenth century, Maine de Biran writes in his "Life and Thoughts": "I have experienced this evening, in a solitary walk taken during the finest weather, some instantaneous flashes of that ineffable enjoyment, which I have tasted at other times and at such a season, of that pure pleasure which seems to snatch us away from all that is of the earth, to give us a foretaste of heaven. The verdure had a new freshness, and took beauty from the last rays of the sinking sun; all things were instinct with a soft splendour; the trees waved tenderly their majestic crests, the air was full of balm, and the nightingales interchanged sighs of love, which yielded to accents of pleasure and joy. I walked gently in an alley of young Plane trees which I planted a few years since. Above all the vague incomplete impressions and images, which were born of the presence of the objects and my moods, hovered this feeling of the infinite which bears us onward, sometimes towards a world superior to phenomena, towards this world of realities, which links itself to God, as the first and only reality. It seems in this condition, when all sensations without and within are calm and happy, as if there were a peculiar sense appropriate to heavenly things, which, wrapped up in the actual fashion of our existence, is destined perhaps to develop itself one day, when the soul shall have quitted its mortal husk."

Thus Walter Savage Landor, in his "Imaginary Conversations" (Epicurus, Leontion, and Ternissa): "Ternissa: "O what a pleasant thing it is to walk in the green light of the Vine leaves, and to breathe the sweet odour of their invisible flowers!" Epicurus: "The scent of them is so delicate that it requires a sigh to inhale it; and thus, being accompanied and followed by enjoyment, renders the fragrance so exquisite." Ternissa: "It is this, my sweet friend, that made you remember the green light of the foliage, and think of the invisible flowers as you would of some blessing from heaven."

Douglas Jerrold thus writes of his own desire of garden happiness: "A small, quiet nook of a place, nestled among trees and carpeted with green around. And there a brook should murmur with a voice of outdoor happiness; and a little garden brimming over with flowers should mark the days and week and month



SARRACENIA FLAVA.

(Scale 1/2, this at original drawing.)

(Drawn in the nursery of Messrs. Sander & Co., St. Albans, by H. G. Moon.)

with bud and blossom; and the worst injuries of time be fallen leaves. And then, health in balm should come about my path, and my mind be as a part of every fragrant thing that shone and grew around me. A garden is a beautiful book, writ by the finger of God; every flower and leaf is a letter. You have only to learn them, and he is a poor dunce that cannot, if he will, do that. To learn them and join them, and then go on reading and reading, and you will find yourself carried away from earth to the skies by the beautiful story you are going through. You do not know what beautiful thoughts for they are nothing short grow out of the ground, and seem to talk to man. And then there are some flowers, they always seem to me like over-dutiful children; tend them ever so little, and they come up and flourish, and show, as I may say, their bright and happy faces to you."

Nathaniel Hawthorne writes thus of an old college garden at Oxford: "These gardens of New College are indescribably beautiful—not gardens in our American sense, but lawns of the richest green and softest velvet grass, shadowed over by ancient trees that have lived a quiet life here for centuries, and have been nursed and tended with such care, and so sheltered from the rude winds, that certainly they must have been the happiest of all trees. Such a sweet, quiet, cared, stately seclusion, so age-long as this has been, and, I hope, will continue to be, cannot exist

anywhere else. . . . My garden, that skirted the avenue of the manse, was of precisely the right extent. An hour or two of morning labour was all that it required. But I used to visit and revisit it a dozen times a day, and stand in deep contemplation over my vegetable progeny with a love that nobody could share or conceive of who had never taken part in the process of creation."

From the many of our more recent writers in praise of gardens it would be pleasant to make copious quotations, but one must suffice from the pen of "E. V. B.": "A garden! The word is in itself a picture, and what pictures it reveals! All through the days of childhood the garden is our fairy-ground of sweet enchantment and innocent wonder. From the first dawn of thought, when we learned our simple lessons of Eden and its loss, and seemed to see the thornless garden, watered with clear streams, beautiful with spreading trees, and the train of unnamed beasts and birds meekly passing before their spotless Lord; and then beyond, far onward to that other garden beloved by the Man of Sorrows, Gethsemane, where we could never picture the blossoming of Roses or murmurous hum of summer bees, but only the sombre garden walks, and One kneeling among the Olives, and dark, heavy drops upon the grass. And near to this, the Garden of the Sepulchre in dewy dawn-light, angel-haunted. These were our Gardens of the Soul. In later years the mists of those older, holier spots wear away as snow-wreaths in the vivid brilliance of the Gardens of Poetry. . . . They are all beautiful, these Gardens of Poetry! and through the midst of them flows the broad stream of Memory, isled with fair lily-lawns, fringed with willow forests and

whispering reeds. And not less beautiful than these ideal shades are the gardens which live unchanged and unchanging in many a painted picture within the heart. Real, and not less ideal, is the remembrance of the gardens we have seen; once seen, it may be, and never since forgotten.

"Un souvenir heureux est peut-être sur terre Plus vrai que le bonheur."

So, lovely as truth, crystal clear as a poet's thought, are the earthly Edens our eyes beheld in the years that are past."

The book is pleasantly got up, with good type and paper.

AN ARTIST'S NOTE-BOOK.

SARRACENIAS.

WHO grows Sarracenias? They are likely to become lost to gardens because the few who essay their cultivation find some initial difficulty, arising generally from ignorance of their requirements, which are really so easy to afford, that they are plants for every garden possessed of a greenhouse. If only their flowers could be shown as, for instance, Mr. Cannell shows his Geraniums, then Sarracenias would find general favour as flowering plants. They rival in elegance, size, richness, and variety of colour the best of the Daffodils indeed, in my opinion there are no Daffodils so attractive as a vase of the flowers of Sarracenias such as might be cut at Kew at the present moment. Mr. Moon has caught the elegance of pose and form of *S. flava*, but the beautiful yellow colour must be imagined; and there are crimson, maroon, variegated and green yellows besides. Some of them are elevated on stalks 2 feet high, and some are at least twice as large as that here shown. Books, even garden books,

speak of Sarracenias as Pitcher Plants, and omit all mention of their flower charms. The leaves are ornamental certainly, but the flowers are much more so. Twenty years and more ago Sarracenias were taken in hand by a few breeders, chief among them being Mr. Moore, of Glasnevin, and Messrs. Veitch & Sons. Numerous hybrids were then raised, but the work of improvement appears to have ceased. There is in Sarracenias all the material required to enable a plant breeder to score, and score well, if only he would cross and select with a view to obtaining improvement and variety of flowers.

There are six species of Sarracenia, that here figured being one of them. These, together with the monotypic *Darlingtonia* and *Heliophora*, form a natural order all to themselves. *S. flava* was introduced and cultivated by Tradescant in 1640. A figure of it was published in the *Botanical Magazine* in 1804 (t. 789), where it is quaintly described as "a common inhabitant of the swamps in North America, from Carolina to Florida. The singularity of the flower consists principally in the stigma, which is spread over the parts of the fructification like an umbrella. Between the angles of this umbrella the faccid petals hang down somewhat in the manner of a woman's legs hanging over the pommel of the side-saddle, which we suppose was the origin of the name given it by the first English settlers."

The essential points in the cultivation of Sarracenias are, briefly, recognition of the fact that they dislike fire-heat, but revel in the heat and light of bright sunshine during the early summer whilst growth is in progress. They also like plenty of water, but it should be provided by frequent watering, and not by standing them constantly in a dish of water—a fatal mistake, the soil soon becoming sour. The compost should be such as is used for *Odontoglossums*, viz., two parts of fibrous peat, in lumps, to one of living sphagnum, with the addition of silver sand and a sprinkling of ½-inch bones. The plants should be shaken out in March, washed clean at the roots, all dead rhizomes, roots, and leaves cut away, and then repotted firmly in the new soil in well-drained, shallow pots. A sunny corner of a greenhouse is now the best position for them, and they should be kept moist by frequent syringing in sunny weather. If the sun warms the house up to 70° or 80°, so much the better for the Sarracenia;

but the temperature may fall to the normal with the decline of the sun. When the new leaves have matured, the conservatory or a frame will be a suitable place for them. W. W.

TULIPA KAUFMANNIANA.

A most difficult thing to understand is the fact that so few take part in the cultivation of the many interesting and beautiful species of Tulip, for the genus is full of beautiful kinds apart from those we recognise as the bedding or fancy sorts. These, of course, are grown by millions the world over, while the much more attractive

Some of the kinds impress almost everyone, and this may be said of the handsome form so well portrayed in the accompanying sketch. The plant in question was one of a collection of beautiful things brought recently from Colchester by Messrs. R. Wallace & Co. to the Drill Hall. The interest these few things created was in itself an object-lesson, proving beyond doubt that a solitary example of a beautiful and rare plant is of greater moment than a huge bank of mixed things that too often convey so little to the mind. This pretty Tulip caught the eye at once, and both in the long tapering buds and expanded flowers there is plenty to admire. The buds are about 2 inches long,

tapering to a point, and externally flamed rather decidedly with carmine or scarlet. The inner segments are white, with an occasional faint line of scarlet on the reverse side. This, however, is only seen as the flowers day by day reach their full size of bud, thus creating an interest from quite an early stage. Presently, when the flowers expand, we see a finely-proportioned, creamy white, very substantial-looking blossom, and, with its huge blotch at the base of richest orange, possessing all the beauty of one of the newer Water Lilies, a notion conveyed by the substance of the petals. The kind is amenable to cultivation, not merely existing, but succeeding and improving with years. The best position is a warm border in sandy loam or a warm spot in the rock garden. This handsome plant is from Turkestan. No species is more full of promise for the future, and none more worthy of an extended cultivation.

E. H. JENKINS.



TULIPA KAUFMANNIANA (LIFE SIZE).

(From a drawing by H. G. Moon.)

species are only seen here and there, and only grown by those who take especial interest in them. It is quite true of not a few of the species that they do not create the display of their better-known brethren; but while one group may be grown for making an imposing display in the garden, the others, or a small collection of them, may well occupy some quiet nook apart where their beauty may be appreciated. It is when grown thus that not a few of the species make an indelible impression on the mind, and prolonged experience only confirms and deepens the fondness for the best and most picturesque of this fine race of plants.

trumpet which remains sulphur, adding greatly to its effect. Another point about it is, that the flowers face rather upward and can be well seen. T. W.

Puschkinia libanotica. I like this modest little striped Squill, and was therefore disappointed to find a good sized clump did not flower this year. But, curiously enough, I found stray single bulbs, not collected from the clump, flowered well enough and in several instances quite strongly. It looks as if this were a plant that does not like being crowded up as one plants Crocuses. Yet other Squill-like plants do not seem to find crowding mimical to flowering. T. J. W., *Woodside Park*.

GARDENING OF THE WEEK.

KITCHEN GARDEN.

SOWING BROCCOLI.

THE great scarcity of Broccoli this spring shows us what a fickle plant this is, and it frequently happens that the main crop varieties suffer badly. On the other hand, the plant may pass through the next winter unharmed, and, being so valuable, should now be sown. Few plants need more simple culture, and I shall not dwell upon this point, but would strongly advise thin sowings, as it often happens the quarters on which the main crop and late Broccoli are grown are not vacant in time for the seedlings, and if left too long in the seed beds they become drawn and poor, with the result that, no matter how good the after-treatment may be, the plant is too weak to battle against our variable winter climate. I prefer an open, exposed position; in such quarters the plant makes a sturdier growth, and it will be found that the chief Broccoli supply comes from open fields, whereas those in sheltered gardens are often much injured.

For late supplies the best varieties I have grown are Model, Late Queen, and June Monarch. None are perfectly hardy, but these varieties sown thinly and planted out in June will be found very reliable. The sprouting varieties must not be overlooked; these, especially the Late Purple variety, give a crop when the others fail, and green, sweet vegetables at this period of the year are most valuable.

BORECOLE OR KALE.

At the end of April or early in May is a good time to sow this vegetable to be in season from December to May. To get a mid-winter supply I would recommend the Early Dwarf Curled or Favourite, both excellent kinds, and for later supplies the newer Arctic Kales are specially good, as they give a lot of cutting and are deliciously sweet when cooked. For April cutting the best late Kale I have grown is Beal's Hearting, a very late, distinct, curled Scotch variety, and very hardy. To this may be added such kinds as the Buda or Asparagus and the Cottager's, both these being large-leaved kinds and producing large quantities of sprouts.

LATE SAVOYS.

We have just finished our last Savoys, and, needing large quantities of green vegetables, we find that late Savoy Cabbages are more useful than early ones. They are also much sweeter and milder in flavour than when cut in the autumn. For late supplies I would advise a medium or small kind, such as New Year or Bijou. These are not affected by severe weather, and do not split like larger kinds during severe frost. If a north border can be given and the plants placed 15 inches apart, they will be very late and useful.

MAIN-CROP CARROTS.

For early supplies I consider the Short Horn varieties the best, and those who wish to store roots in quantity for winter supplies should now make a large sowing. In many old gardens this root fails, and in such I would advise a change of soil, a free use of soot or lime, or, what is better, to omit animal manures for a time and rely upon fertilisers during growth. Such aids as road scrapings, old fine mortar rubble, or burnt refuse of any kind wheeled on to the surface previous to sowing will be most beneficial. In poor land I advise the use of a medium-sized root, such as Model or Gem, both good kinds and good keepers.

G. WYTHES.

Squa House Gardens, Bradford.

FRUIT GARDEN.

FIG TREES.

Grow and bear fruit satisfactorily outdoors in the southern parts of this country when trained, or semi-trained, to a south or west wall. They require the protection of a wall to preserve the fruit-bearing wood and the embryo fruit through severe

winters, and for the better ripening of the fruit and wood in the summer. There are but few favoured situations in this country where Fig trees will grow and bear fruit on open ground trained as standards. Well-ripened wood is necessary for the production of Figs, and is produced by the trees being planted in a firm rooting medium, by disbudding, and pruning to prevent crowding of growth in the summer.

The present is a suitable time to plant. The soil should consist of four parts loam to one of lime rubble. A pit should be made about 4 feet in diameter and 2 feet deep; the bottom is best composed of dry gravel, but if of clay, the hole will be better about 6 inches deeper, so as to admit of a 6-inch layer of concrete. About 5 inches of brickbats for drainage should be placed on the concrete, and kept clear with a layer of turf placed with the grass side downwards. The pit should then be filled with soil to within about 4 inches of the top, when it will be ready to receive the tree. Turn this out of its pot, remove all soil from the roots, disentangle them, and lay them out straight on the soil; then fill in the remainder of soil and ram or tread it very firmly. After planting, fix the tree with a few nails and shreds, and, to further settle the soil, give a watering. Watering should be attended to as often as required during the summer.

If not already done, take protection from trees that was put on to protect the fruit-buds in the winter; prune out superfluous wood, leaving in sufficient to cover the wall without crowding after the leaves are developed, and at the same time do whatever nailing is required.

By "semi-trained"—a term used above—I mean trees trained in their early stages to a wall, and afterwards allowed to extend their growth without training, but kept within limit by pruning. I know of several large trees grown in this way that bear crops of fine fruit in the majority of seasons. The last few fine seasons have been particularly favourable to Figs. Varieties adapted for growing on walls outdoors are Brown Turkey, medium sized; Brunswick, very large; White Marseilles, medium; and Reuveler, small. There are large old trees of these at Walmer Castle, in Kent.

STRAWING DOWN STRAWBERRY BEDS.

I recommend doing this work early, for two important reasons—it acts as a mulching in preventing the escape of moisture should the weather be dry in the early part of the season, and also the work of putting on the straw-litter can be done so much more easily now the young leaf-stalks are short than when they have grown to their full length and the trusses of bloom have grown a considerable length.

There is nothing better for the purpose than straw-litter after being used in stables and placed in a large heap outdoors for some time to ferment and to kill grass seed and Oats that may have become mixed with it from fodder. If put on fresh, an undesirable crop between the Strawberry plants may follow. It is also a convenient means of making a second use of litter that has been used for a winter covering of frames and the protection of Globe Artichokes.

G. NORMAN.

The Gardens, Hatfield House, Herts.

INDOOR GARDEN.

CAMELIAS.

THE best time to pot Camellias is just after the young growths have ceased to lengthen and the new leaves are losing their softness to the touch, the roots being then active and full of vigour, so that they ramify into the new soil at once without allowing time for it to get sour, as it sometimes will through an overdose of water when potting is done directly after flowering—the time, by the way, which is most often advised for the work. Big, old plants that occupy large pots or tubs rarely stand in need of being shifted on, and the length of time that such plants can be successfully grown in a pot-bound state, provided they are never allowed to go short of water and get plenty of help from the manure-tub, is astonishing. Therefore I do not advise any disturbance of the roots or shifting the plants on, except in cases where the

need for more room is palpable and in the case of small plants which are wanted to grow on quickly. The soil which they most enjoy is one composed of two-thirds greenhouse peat, one-third loam, and a good dash of silver sand. More loam may be used if thought fit, but an increase of this will affect the colour of the foliage, which will not be of that dark green colour produced by a blacker soil, though flowering will be just as good. On turning out the plants from the old pots prick round the ball with a pointed stick, for even if this means damage to a few roots, it leads to freer rooting later on. Drain the pots well and pot firmly. After potting, shade the plants lightly and syringe frequently until all fear of flagging is over.

GENISTAS.

When flowering is over, cut the plants back into shape and fairly hard, better growths being made from firm wood than from the attenuated young shoots which have been made under warmer conditions than the plants like. When the plants commence to break again into growth re-pot them, and grow them under cool conditions until it is safe to stand them outside in their summer quarters.

SOFT-WOODED PLANTS.

Fuchsias and many of the soft-wooded plants that have to be grown on quickly should never be allowed to become pot-bound before they reach their final shift, so when the roots have reached the sides of the pots and are in sufficient quantity to hold the balls of soil together, they should be potted on. The Coleus is another plant that requires frequent potting, or, at least, not to be allowed to become pot-bound. These are best grown freely in a somewhat humid atmosphere and without shade, having their heads always well up to the glass, as this will bring them into good colour. Ferried Solanums may be again stopped, as the more bushy the plants can be made the better effect they will have, and as it will not do to continue the stopping much longer, the earlier this bushy habit is formed the better. Capsicums of the decorative type may now be sown. These are very ornamental plants when grown to be at their best in the late autumn and early winter, but when sown early in the year—a very common mistake—they come in at a time when they are not needed.

CAPE PELARGONIUMS.

These are best when confined to rather small pots as compared with the size of the plants; consequently they require feeding when approaching the flowering stage. Alternate doses of weak liquid manure from the stock-yard and weak solutions of guano are excellent stimulants in combination. These plants, too, are well suited with almost any of the concentrated manures sold for pot plants when not overdone. Before the flowers show colour the plants must be fumigated two or three times in succession to get rid of aphides, which are most disgusting.

J. C. TALLACK.

Shipley Hall Gardens, Derby.

CHRYSANTHEMUMS.

THE principal batch of these which are intended for producing blooms of high quality should by this time have recovered from the check they would naturally have received when shifted into 6-inch pots, and should be removed from the cold frames to an outside position in some sheltered spot where they can be safely protected against frost and cold cutting winds. On no account must the plants be overcrowded; it is far better to err in the other direction. Sufficient room should be allowed between the rows and individual plants for air and light to reach the foliage and wood without hindrance, and the plants should be stood on boards. Attend to the tying of the shoots, using strong pieces of bast for this purpose, and allowing plenty of room for the growth to swell. Carefully remove any superfluous shoots, leaving the three strongest breaks which are most evenly placed near the top of the plant. Such varieties as Vivian and Morel, Charles Davis, Lady Hanham, and Viscountess Hambleton, which are persistent in showing flower buds, should be cut down to about 1 inch above the soil; these will invariably then

break away freely with a strong growth, which will produce blooms of superb quality.

Any novelties which in all probability could not be purchased in time to receive the same treatment as the bulk of the collection, also those of more delicate growth, should yet be retained in cold frames, but admitting all air possible in favourable weather, putting on and propping up the lights during heavy rains to prevent the soil from becoming saturated. It should always be borne in mind that, though the Chrysanthemum is a moisture-loving plant, far too often are many of the less robust kinds ruined owing to an excess of water being given. Scarcely two kinds require exactly the same treatment in this respect, and the importance of this detail cannot be too strongly impressed on those in charge of the watering. Each plant should be carefully tested before being watered, and, as I have pointed out before, it is injurious for the plants to suffer from want of moisture at the root at any stage of their growth. This, however, can to a certain extent be remedied, but when once plants become over-saturated the soil becomes soured, and very rarely indeed will they recover themselves. During hot, dry days the plants will be much benefited by a slight sprinkle of tepid water four or five times a day with a syringe.

See that the plants are kept clear of all insect pests. Green and black aphid are bound to make their appearance sooner or later, and the points should be constantly dusted with tobacco powder during the evening, and thoroughly washed out in the early morning. Watch carefully for the leaf miner, which often does considerable damage by eating its way between the tissues of the leaves. These can be easily removed with a sharp-pointed stick.

Rust, a comparatively new enemy to the Chrysanthemum, is unfortunately, according to the reports which have reached me from many sources, much on the increase, and will probably cause a considerable amount of trouble during next autumn. Though there are many suggested remedies for the eradication of this pest, I know of none which have proved to be effectual except hand-picking and isolating the affected plants.

Trained specimen plants should now be potted into 8-inch pots and grown on in cold frames, but by no means allow them to become coddled; a free circulation of air is absolutely necessary. Continue to stop and train until the requisite number of shoots are obtained. High quality both in the foliage and flower should be the aim of the cultivator of these rather than large, ungainly plants with poor, woody flowers.

Summer-flowering Chrysanthemums for blooming in the open should be planted without delay on rich and well-prepared ground. A good border of these, when a proper selection has been made, is one of the most interesting features in the garden during the closing days of summer and early autumn.

E. BRACKETT.

Aldenhurst House, Elstree.

NOTES FROM IRELAND.

THE visit of Her Majesty to the shores of the Emerald Isle has resulted in widespread enthusiasm. Decorations are being used in every suitable opening. Although the only natural work discernible is evergreen wreathing, yet in many quarters, principally in the suburbs, several private entrances are draped with natural flowers, whilst Kentias are utilised with fine effect. Of the many bouquets presented to Her Majesty, the one given on her landing at Kingstown was very effective: it comprised Orchids, notably Cattleya Mendeli and C. Schroederiana, Odontoglossum crispum, and Cypripedium in variety, and interspersed through them were flowers of Rose General Jacqueminot, Lilac and Lily of the Valley, the foliage being Asparagus plumosus and Adiantums, tied with art green ribbons. It reflected credit on Messrs. Ramsay, Ballsbridge, for the artistic way they executed it. The natural embellishment of the Alexandra College on the visit of the Royal Family was a novel one; the halls, &c., were clothed in Daffodils, the variety maximus being well to the fore. A large portion of the flowers were generously given

by Mr. Hartland, The Nurseries, Cork, and in one of the class-rooms, Miss Currey, Lismore, displayed a large collection of Narcissi, the varieties staged being mostly of the rarer types. When the Royal Family entered, H.R.H. Princess Christian was presented with a simple but very effective bouquet, whilst its appropriateness cannot be gainsaid, being composed of Shamrocks and flowers of that rare Narcissus cernuus, Colleen Bawn. The silvery white sheen of the flowers was enhanced by the dull hue of the Shamrock. It was freely admired, owing to its simplicity, and was produced by Messrs. Jameson, of Sandymount. One must not forget the bouquet presented by the Hon. Mrs. Barton, of the well-known Straffan Gardens at Kildare.

A. O'NEILL.

NIGHT-FLOWERING CACTUS IN CAPE COLONY.

I SEND you a photograph of the Night-blooming Cactus (*Cereus*), which I photographed a few



NIGHT-FLOWERING CACTUS GROWING OVER A ROCK IN CAPE COLONY.

mornings ago, and which may be of interest to your journal. The group sent is part of a lot growing over a rock. There were six flowers on one stem. Another lot was growing a little further along, and the combined flowers on the two amounted to upwards of 200. I have taken a photograph which had eighty flowers on it, but it is so small that it would be of no use for reproduction as an illustration. The Cactuses are growing in the graveyard of St. Mary's Church here, and for the thirty years I have been here I have never seen such a splendid display. In the immediate vicinity are one or two Stapelias, also several of the common Aloe, and at the present time the plant looks very gay with its orange-red flowers. One is completely grown over with a sort of wild Passion Flower runner with the Cactus growing over the lot. W. SCRUTTON.

Port Elizabeth, Cape Colony.

WORKERS AMONG THE FLOWERS.

REMINISCENCES OF AN OLD FLORIST AND HORTICULTURIST.

FROM the time that I first grew Mistletoe, now many years ago, I have loved parasitic plants. Theirs may appear a low and lonely life, effortless and obscure. In general they possess no goods and chattels as evidences of respectability, no leafy wardrobe, no bank account in bulbs. Dependent upon others for board and lodging, they live on vegetable charity; and, like the wan garments of the wayfaring tramp, their thin clothing of bracts along a stem is of those sad and neutral tints that may have been anything when new. I have had the Toothwort (*Lathraea squamaria*) so far reclaimed as to grow under a Lilac bush, and, happily, there is a plant of the Bird's-nest Orchis (*Neottia Nidus-avis*) under one of our large Beeches in the garden grounds, but those that grow under Hazels in the wood across our trout stream are more vigorous.

A favourite group are the Orobanches, and the showiest I have is *O. speciosa*, parasitic on the common Bean. All goes well with the Bean, until suddenly in July there appears an upheaval of the earth around, and sturdy downy heads as of some strange Asparagus push through. These grow to various heights up to 2 feet, with numerous Orchis-like flowers, variously marked with dullish violet on a creamy primrose ground colour. The Orobanche has just time to ripen its seeds before the trustful Bean is bankrupt, with "no assets."

It may be that some gentle soul will think there is a cruelty in thus doing a poor helpless plant to death, somewhat as caterpillars and pupae of butterflies have their bodily substance assimilated by indwelling larvae of the ichneumon flies. Let my only principle of reply be that set forth in Thomas Hood's amusing sketch, "Isaac Walton redivivus," wherein he makes a neophyte pupil "Viator" remark to his expert tutor "Piscator," "Would you say, then, that there is any manner of cruelty in the practice of our gentle art?" "Verily," quoth Piscator, "I know not but that there may be such in other methods of taking fish, though not in our own, seeing that Nature hath plainly provided these membranous months, and these delicately fringed gills for us to entangle our hooks in."

However, if an Apple tree be thought too good to afflict with Mistletoe (which I do not quite think), it will thrive upon any Pyrus, especially Mountain Ash, or on the hedgerows of Hawthorn. I have only once succeeded with it on the Oak, from seeds rubbed on upon the underside of the newest wood. The seeds are very visible, so I always disguise them in a "khaki" of brown dust or ashes to make them less a mark for tits and finches. Much to my disgust, some lean souled "worker among the

flowers? has since cut away the Oak bough that had the Mistletoe. Of course, since the plant is deciduous, there must be several growing about to secure any berries. It flowers insignificantly in the very bitterness of "ethereal spring," but the pollen is very volatile and far-reaching.

By the way, anyone conversant with the exact habit of this plant will perceive that no artist on the illustrated papers, chromolithographs, or Christmas cards, whereon Mistletoe is represented, seems to know where the berries ought to be put! Where I have looked for accuracy on this important point I have found none. The "aesthetic" berry is at the extremity of the twig, and conventionally between a pair of terminal leaves. In Nature this is an impossible position. There never was a real berry of Mistletoe so situated. The plant, with foliage neither more nor less deciduous than that of any other evergreen, sheds its old leaves while still quite green during the summer, and these have left behind them the berries that will be ripe by Christmas. The fall of the Mistletoe leaf is very sudden, but not before the young pairs are advanced enough to fulfil leafy offices in the economy of the plant. When these have attained maturity, there is nothing between them at the end of their twig except embryo buds of the flowers and leaves for the following season. The ripe berries are left at one stage back at the joint from which a pair of leaves last fell. Often there are berries two joints back, for if not picked off by birds they will remain a second year upon the plant. The same vicious inaccuracy may be detected in jewellery designs on brooches. There is a pearl, meant for a Mistletoe berry, cosily ensconced between two gold or silver leaves!

As soon as I could, I sought a country curacy in a fair and fertile part of my own home country. It was sweetly agricultural then, but I left it a place of coal-pits and a great ironworks, which thrive immensely through some booming years, and then failed, being now completely gone from the face of the earth. What was then a village is now an ugly town of some magnitude, having its own M.P., and among the other beneficent institutions its own gaol!

Some narrowness of means in garden ground followed me even here, for I could only rent a farmhouse garden, where I had some difficulty in keeping out the various familiar farmyard fauna, the pig in the paddock and the ever inquisitive cow, hoping to find the gate ajar—lows, of course.

Until, however, I had a settled home I did not indulge in any glasshouses with heat, and the first was a lean-to for tropical plants. It became a sort of live groceries store, which I thought might interest my village parishioners. So I grew tea, coffee, and, of course, tobacco, sugar, rice, arrowroot, ginger, cotton (of which one villager said he had "thought that grew on sheep's backs"), black pepper, and a few other things, which, like the plants of chocolate and mahogany, had to be kept within bounds. My live groceries, however, did not meet with much appreciation, chiefly because they did not smell of what they were, as does the racy Onion or the aromatic Mint. Then I thought of Orchids, and the lean-to began to lengthen for their sake.

For some years the house and the plants took it in turns to increase, till either the house was not full enough of plants, or the plants were too many for the house. It stands now at a length of 100 feet and breadth of 12 feet. Most of this space is occupied by such Orchids as require the well-known warm and the inter-

mediate temperatures; and a cooler-to-cool division is filled with a company of other favourite plants, *e.g.*, a number of blue-blood Amaryllis (*Hippeastrum*) seedlings of my own growth, and of great beauty, interest, and quality. Rather roomy are the large Crimms, but fine things. The best I have are Kirki, Moorei, and Powellii. The yellow Callas Elliottiana and Rossi do better here than in any warmer department; they rather "draw" in the Cattleya portion. So does *Hæmanthus Katherineæ*, far the noblest of its race, and vastly superior in all but dwarfness to *H. Kallyeeri*. On a stately stem, very handsomely spotted, it bears a most glorious head of many scores of flowers, with long scarlet stamens that rise amid a charming network of petals, salmon-pink, and more evident than in any other *Hæmanthus* I know.

It is a mistake to flower it in higher than a cool greenhouse temperature, in which the flowers will attain their proper size, and wait for each other till there is a sumptuous head of scarlet and gold. It should not be judged from the first few outside flowers. Wait ten days or a fortnight, and then—!

Among other old favourites in the more temperate regions of the Orchid range is *Strelitzia Reginae*, which seems one of the neglected plants of the day. It blooms from time to time with apparently no particular attention to the time of year it may happen to be, and its crest of violet-orange and deep blue flowers, that stands up like the head-gear of a cockatoo, is very effective.

Here are also the long and tufted reeds of the *Papyrus antiquorum*, grandest of the Cyperaceæ, growing to 10 feet and over; they require some care and guidance to prevent them breaking their graceful necks against the glass. The plant is simply majestic where it can have root-room and space over head, but is not necessarily aquatic so long as it can have a thorough wet soil.

I reverence it for its ancient reputation; and there is the old Biblical prophecy (Is. xix., 7) that, under the heading of "The burden of Egypt," set forth that "the Paper-reeds shall wither" . . . "be driven away, and be no more."

I believe it has now left some of its ancient habitats, and Egypt may not now commercially need her mighty reed, on whose paper (but I speak in ignorance) may have been inscribed, among richer records, the love letters of the age, or the ancient equivalent for "A cheque will oblige."

FRANCIS D. HORNER.

(To be continued.)

POLEMONIUM CONFERTUM MELITUM.

To Messrs. Jackman and Sons, Woking, is due the honour of first flowering, and thus bringing into greater prominence, this charming plant. A pan filled with fine-flowered examples was exhibited. This plant, despite the fact of its having been variously described as the same colour as the type, deep blue, &c., in hardy plant lists, is a pure white flower, into which the golden anthers introduce a pale lemon shade on account of the proximity of the latter to the petals. The plant is a beautiful addition to the rock garden, and in such districts as that of Woking, or in similarly sandy soils, a good border plant also. I was informed by Messrs. Jackman's representative that the exhibited plants were hardly twelve months old, having been raised from seeds, which are abundantly produced. The plants are perfectly hardy at Woking, those recently seen at the Drill Hall having been lifted from the ground the day before the last meeting. The plant comes from the Rocky Mountains, but is said to inhabit a lower

level than the type, and for this reason may be found generally more amenable to the British low-land climate. In any case the past winter has been a sufficiently good test of hardiness, and, seeing the plants are already well in flower, proves that they possess that quality. The flowers are borne in the same terminal heads as the type for the most part, the difference being an evident tendency to elongate. Whether this would be any improvement is doubtful.

It may be well to warn growers of this plant to avoid all manures. This is almost essential, if not absolutely so, in the typical species, as I found many years ago, while the unqualified success at Woking in the sandy soil there points to a similar liking in the case of the variety *Melitum*. Such beautiful alpinæ merit all praise, and cannot too widely be known and enjoyed by the large number of garden enthusiasts ever ready to add a really good plant to their collections.

E. JENKINS.

IMPROVEMENT OF HARDY PLANTS BY HYBRIDISING.*

By CHARLES STUART, M.D.

AQUILEGIA STUARTI. In May, 1880, having plants of *Aquilegia glandulosa* (Grigor, of Forres, N.B.), as sent out in 1848, also *Aquilegia Witmanni*, in pots and in flower, at the same time, I fertilised a flower of that species with pollen from *A. glandulosa*. A ripe pod of seed was gathered in less than a month and sown at once. Seven plants lived, to be planted out on a sheltered border in the autumn. I had almost forgotten their existence, till in the end of May in the following year a floral friend who was staying here on looking round before breakfast came on the first open bloom on one of the plants. He asked me where the plant had come from, as the flower was the finest he had seen of the Columbine family. Before referring to my note-book I could hardly tell him, but that they were crossed seedlings I knew quite well. The seven plants all bore flowers identically the same, the top blooms measuring more than 4 inches across. The following season I took up a quantity of the blooms to a meeting of the Berwickshire Naturalists' Club, and showed them to the late Professor Balfour, of Edinburgh University, and the late Mr. John Sadler, then curator of the Botanic Gardens, Edinburgh, and many other competent judges, who all considered *Aquilegia Stuarti* a first-rate novelty, and it was there and then named by Professor Balfour. The original *A. glandulosa* I have grown on and off for forty years. It is a notoriously shy flowerer, and we used many years ago to consider it a triumph to get it to display its beauty at all. All I claim for *A. Stuarti* is that it is an improved form of *A. glandulosa*, refined in colour, free flowering, very large and attractive in appearance. It is perfectly hardy, and flowers three weeks before other Columbines, always coming true from seed. It does not, however, succeed in every place, and I know persons who tell me they cannot flower it. After several years' experience in growing and rearing the plant I recommend that a bed be trenched 2 feet deep and well enriched below, the bed raked smooth, and the seed newly ripened sown thinly in rows, the plants being allowed to remain where they are to flower. The plants, if necessary, may be thinned to a foot between and the same distance between the rows. In process of time the fine foliage will come to cover the entire bed, and there will be abundance of blooms on moderate sound stems. With a little rotted manure as a top dressing in the autumn the plants improve in vigour every season, and a three-year-old bed with thousands of blue and white flowers is a sight to see. The specimens sent to the editor of THE GARDEN were taken at random from a bed of the character described, and the beautiful illustration in the number of that journal for October 13, 1888, was drawn from these specimens.

*Extracts reproduced by kind permission from the Journal of the Royal Horticultural Society containing hybrid conference report.

HYBRID TROLLIUS.—Everyone is acquainted with our native *Trollius europæus*, or Globe Flower, with its beautifully imbricated coloured calyx, which it unfolds to the sun and closes at night, the Luckan Gowan of Scotland, and one of our most beautiful native plants. From its symmetrical shape and general hardiness I thought a cross with the higher-coloured American form might yield some improved varieties. A few years ago, with that view the stamina in an immature state were clipped from some blooms of *Trollius europæus* and the flowers marked, and having placed some blooms of *T. americanus* (?) in a sunny window, I succeeded in getting plenty of pollen, which was applied to the pistils of our native plant. From the complete natural covering of the flower, insects, as a rule, find some difficulty in both entering and getting out of the blooms. Hence when the pollen of *T. americanus* is dusted over the stigmas there is less chance of interference. The seeds matured and were sown at once, small, black, shining objects, which if not sown at once refuse to germinate. A goodly array of small plants appeared, and were pricked out into boxes and pans, and ultimately planted in the open ground. They took two seasons to flower; indeed, it was the third season before they became good flowering plants. A large proportion of the seedlings showed the effect of the cross, displaying the orange florets of *Trollius americanus*, with improved size of flower and colour in the calyx, all mostly of a vigorous habit of growth. The corollas of the British form never show anything but a pale yellow shade; but when that plant is crossed, most of the seedlings, but not all, demonstrate the influence of the pollen of the other species. The best seedling of the whole, lost from over-kindness, was of a brilliant orange colour, twice the size of *T. Fortunei*, beautifully imbricated, but seemed delicate in habit. The *Trollius* family is among herbaceous plants one of the finest in its season of flowering, and well worth the attention of the hybridist in trying to produce both size of bloom and colour also.

PRIMULAS. The *Primulaceæ* exhibit an anomaly in their reproductive organs which puzzled many hybridists till the late Mr. Charles Darwin elucidated the cause. He found some *Primulas* with short stamina and long pistils, and others with long stamina and short pistils. He also, by experiment, proved, in order to get fertile seeds, it was necessary to have pollen from plants with the same length of stamina and pistils. Besides, the size and colour of the pollen grains varied, and was another cause of infertility. The infertility which occurs in various dimorphic and trimorphic plants when illegitimately fertilised, that is, by pollen taken from stamens not corresponding in height with the pistil, differs much in degree, up to absolute and utter sterility, just as in the same manner occurs in crossing distinct species. Florists who have worked to improve the *Polyanthus*, I mean the gold-faced show variety, must all have observed the great difficulty of obtaining good fertile seed. When the stamina occupy the centre of the flower or corolla, florists denominate the condition a thrum-eyed, and is the true form, other things being equal. When the pistil protrudes in the centre, then pin-eyed is the name applied. It is no use to apply pollen from a short-stamened flower to the protruding pistil of the pin-eyed flower, but with pollen from a long-stamened flower a cross can be obtained that will produce

good flowers from fertilised seed. This is exactly how florists work in obtaining new varieties. A pin-eyed flower of fine lacing and trussing habit is chosen for the seed-bearer. The pistil is dusted with pollen from a good show flower, which must be thrum-eyed and with long stamina, and, other things being favourable, good reliable seed is the result. No flower has given worse produce than the show *Polyanthus*, simply from the fact of the ignorance of the raisers, till Mr. Charles Darwin proved by his own experiments the reason why and solved the problem. In following out his theories and practice, I have during the last few years tried to get the bright colour of some of our alpine *Auriculas* infused into the *Primula Auricula* of the Alps and mountains of the Tyrol, and I do not despair of getting the hardy free-growing *Primula marginata*, with its beautiful foliage, to reciprocate a cross with the pollen from some of its high-coloured relations. As it is, *P. viscosa*, *P. integrifolia*, and *P. ciliata* have already fur-

way of treating it as a slope planted with suitable bushy growths.

Such a bank is shown in one of our illustrations covered with *Cotoneaster*, a most suitable dwarf shrub, but only one among the many that can be used in like manner. Such a bank planted with *Savin* (*Juniperus Sabina*), an evergreen of deep, low-toned colour, that accords with the most dignified of masonry, would always, winter and summer, clothe it well and be pleasant to see. The late Dutch *Honeysuckle*, though not evergreen, is also a capital thing, for its masses of growth, interlacing in a kind of orderly tangle, are by no means unsightly in winter. For banks of large size there is *Pyrus japonica*, the free-growing *Roses*, and the double *Brambles*. For hottest exposures there are the *Cistaceæ* (*Cistus* and *Helianthemum*), while some of these and other



COTONEASTER ON SLOPING BANK AT LINTON PARK, MAIDSTONE.

nished me with encouraging results, which in another season I hope to improve upon.

SLOPING BANKS IN GARDEN GROUND.

No feature is more frequent in gardens, whether large or small, than a change of level necessitating a flight of steps. The nature of the steps, whether of wrought stone with balustrade, as in the more important cases, of brick or rougher stone in those of lesser calibre, need not now be discussed; they must follow the style and treatment of the garden and near buildings.

The change of level, if not retained by a wall, usually has for its fate the steep turf-bank, unbeautiful, awkward to mow, and in all ways a very "bad second" to the better

sun-loving plants, such as *Phlomis*, *Rosemary* and *Lavender*, can be used in mixtures. A beautiful combination is of the common *Berberis* (*B. Aquifolium*) and *Forsythia suspensa*, the yellow bloom of the free-arching *Forsythia* coming while the *Berberis* is showing its own yellow bloom, and still holds its leaves of winter red-bronze colouring. *Ivy* and *St. John's Wort* are obvious plants for such use, but their monotony makes them less desirable than the more interesting treatment with shrubs of low or spreading growth. *Scotch Briers* are also excellent for this kind of planting, while if the bank occurs in a shady spot or has a cool exposure, it will be a good place for the hardy *Ferns*.

Index and Editorial Notices will be found in our advertisement columns.

THE KITCHEN GARDEN.

LETTUCE FROM MAY TO OCTOBER.

MANY will agree with me that there is less difficulty in having an ample supply of Lettuce at the season I have named than to get a supply from December to May, and, in spite of good advice in these pages, there is no great success. To get Lettuce in quantity even at the end of May the plants must be grown under glass to begin with and the seed sown in March. On the other hand, by growing such kinds as Golden Queen or the older Commodore Nutt, I have obtained plants fit for use in a little more than two months from the date of sowing the seed. These small, quick-growing Lettuces are very useful for early supplies, and, being of a light green tint, are more valuable for the salad bowl. Even for open ground sowings in March the varieties named are useful, but we adopt both plans, as those sown in the open give a succession to those grown under glass.

It is most annoying to lose all one's early spring crop during the early part of the year—I mean the autumn-sown plants—as many have no conveniences to grow these plants under glass, and with the greatest care as regards sowing, planting, and shelter there is a poor return, as so many plants die or damp off during the winter months. It is an easy matter to sow in heat early in the year, but even then the matter of space often presents a difficulty, so many things needing room and attention.

There can be no doubt that boxes are best for an early supply. These should be filled with light, rich soil, and placed at the front of a vinery or Peach house just started. The boxes may be placed on the pipes, as the small quantity of heat passing through these is just the amount required for the seedlings, and as growth increases the boxes may be removed to cold frames to finish growth, but in their early stages an excess of heat or moisture is injurious.

Seed sown in the open ground will give an early June supply, and at this sowing I would recommend a small bed of the Perfect Gem. This is a rich, deep green Cabbage variety; indeed, all the kinds I have named are of this type, as they grow more quickly than the Cos. I am aware some persons prefer Cos Lettuce. For early use the best I have yet tried is Sutton's Dwarf Perfection, which compares favourably with the best of the Cabbage varieties, and being a dwarf quick grower is a splendid forcing variety. This, sown under glass about the 1st of February, may be cut in May if grown in a frame, and is of excellent quality, as its leaves fold in and need little tying to blanch the hearts.

I would advise sowing twice in April if a large supply is needed, as it is far better to sow a little and often than large quantities at a time. For April sowing there is a wide selection, few being superior to the Intermediate Cos, Hick's White Cos, and Superb White, whilst in the Cabbage section Favourite and Lorthois are among the best. Scarcity from drought often occurs in July and August, and for that period the land must be heavily manured to retain moisture. At the May sowings I do not advise sowing broadcast, as this necessitates transplanting, which is difficult in dry, hot weather. It is better to sow very thinly in drills, or, what is better still, drop a few seeds at distances of 9 inches in the drill, and thin when large enough. For summer use, two sowings in May,

early and late in the month, will suffice, and the best drought and heat-resisting kinds I have yet tried are Continuity and Marvel, both Cabbage kinds and red-edged, but which remain good longer than other kinds before running to seed. The same Cos varieties advised for earlier sowing will be good for this also. In June the same advice holds good as to varieties and culture, though, of course, other varieties may be selected. It is well to make two sowings both in June and July. In August one sowing will suffice, a larger one, the seedlings being transplanted for October use. For this purpose Hick's Hardy Cos, Bath Cos, Winter White and Green, and, in the Cabbage section, Lee's Immense, All the Year Round, and Satisfaction will give an autumn supply. G. WYTHES.

Syon House Gardens, Brentford.

AUTUMN AND WINTER CABBAGES.

As most growers are aware, to get good material from October to January, preparation must be made some six months in advance, and during May is a suitable time to sow for the crop. For some years I have written against the practice of leaving the spring bed of Cabbages for nearly another year to produce



ST. MARTIN'S CABBAGE.

sprouts. I admit the sprouts are useful, but when autumn and winter Cabbage can be grown in six months there is less strain on the soil, less trouble in keeping it clean, and, I consider, a much better outlay for space cropped. I know many good growers are of a different opinion, and it is well that we should not all think alike, but there can be no question whatever that as regards quality the autumn and winter Cabbages are specially good. Take the Rosette Colewort, one of the most useful autumn vegetables; few of the Brassicas can beat it as regards flavour, and this also applies to the autumn Cabbages, of which St. Martin's, the St. John's Day, and Christmas Drumhead are types.

I have mentioned that May is a good time for sowing, and it is important to sow thinly and plant out early, and unless this is done I would advise sowing in June in preference to leaving the seedlings starving in the seed beds. I am well aware it is an easier matter to give advice than act upon it, as often the land is occupied by a crop and the seedlings must wait. Cabbage culture is so simple, that there is no need

whatever for me to dwell upon it, but I fear we do not make the autumn and winter varieties such great favourites as the spring, as at the last-named season green vegetables are not plentiful. At the same time the autumn varieties are most valuable, and the three varieties named being so hardy are not readily affected by severe weather.

The variety illustrated is the result of crossing the Rosette Colewort with the Christmas Drumhead Cabbage, and though the Colewort type is in a large measure retained with its mild flavour, the plant also has the advantage of the shape and sturdiness of the Christmas Drumhead Cabbage, which is valuable for its hardness and lateness also. There can be no question as to the value of the autumn Cabbage for winter use where quantities are needed, and the varieties I have named do not complete the list. Favourite is a fine autumn variety, as is also Little Gem. The latter is most valuable for use from September to the early part of November, and as it remains solid a long time, having but few outer leaves, it is not readily affected by climatic changes. Favourite is a larger variety than Little Gem and even harder, and well suited for June sowing for late autumn supplies. Doubtless many of the summer Cabbages sown in May and June would turn out well, but for late use I prefer the three described above. Though the newer variety has so far only been at Chiswick on trial, it was much liked, receiving an award of merit as an autumn variety in October, 1899. A great feature with winter Cabbages is that they prolong the season and bridge over the period when Cabbages are none too plentiful. W.

CORRESPONDENCE.

(The Editors are not responsible for the opinions expressed by their correspondents.)

EPIGLEA REPENS.

[TO THE EDITOR OF "THE GARDEN,"]

SIR, You may be interested in my experience (and inexperience) with regard to *Epiglea repens* (the Mayflower of New England and Canada). I wrote about two years ago to *Country Life*, asking whether anyone could tell me how to procure plants of it, as the great seedsmen I applied to seemed on the whole rather proud of their ignorance. The children of America go a-maying for it, and they say (not the children) that it takes the place of the Primrose—as if any flower could do that! Still, I thought it would be interesting as an additional tie between our countries if I could naturalise it. A kind man in Canada read my letter, and sent me forty plants of it by Montreal; they must have been three weeks on their journey. He told me that when a boy he used to go to the edge of a wood in November and brush off the deep snow till he came to the plants; then he took the buds, that would not otherwise have flowered for more than five months, and placed them in water in a south window. They were always in flower by Christmas Day. They called them their Christmas Roses. With more zeal and kindness than knowledge he sent them to me in April, and the dear things passed their time in their wooden box (I fear it was a coffin) by coming into bloom. They were nearly all in full flower when I saw them, but most of them perfectly white instead of pink. The fragrance was most delicious; but I could hardly bear to look into the mouths of my little gift-horses, feeling sure that they were doomed. Some of the sprays I gathered, and they lasted for a week. Happily, a bed had been prepared for the weary travellers on the edge of a little Pine wood looking north; they went to it at once, and were copiously, and I

may say perpetually, watered during our very dry summer. Some Buttercups benefited much, and are thriving vigorously thereupon, but only three Mayflower plants are alive—just alive, no sign of a flower-bud, only a few green leaves. I made the bed of wood-ashes, peat and leaf-mould. I had heard that they always grew best where there had been forest fires. When our heavy snowfall came, I rolled 4 feet of snow on them, which did not melt for six weeks. I think the weight of the big snowballs may have crushed out the little life there was in them; only three on the edge are alive, and they look most unhappy. Do you think they could be raised from seed? But where can seed be procured?
 THOMAS CONSTABLE.

Buried, Sussex.

[We have never seen *Epigea* so well grown in England as at Mr. Wilson's at Wisley, in damp wood-soil and part shade, and at Mr. Anthony Waterer's nursery at Knaphill, Woking. In the latter place the soil is sandy peat, with water about 18 inches below the surface. We doubt if seed is to be had in England.—Eds.]

[TO THE EDITOR OF "THE GARDEN."]

SIR.—I think the essentials in growing *Epigea* repens are vegetable soil and some moisture. It grows well at Oakwood, both in shade and exposed to a good deal of sun.
 GEORGE F. WILSON.

THE FEATHERED OR FRINGED CYCLAMEN.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Having seen several strains of these lately, I quite agree with your leaderette. True, as you say, some of these additions are beautiful, but somehow they seem almost as much out of place as a false note in a perfect harmony or double-flowered Cyclamens, which are little better than monstrosities. Your description of some of the fringed and more or less crested leaves, as looking as if they were attacked by some sap-disturbing grub or scalded by boiling water, is vividly true to the life of some carefully noted varieties. The devotees of the new strain may answer, with some truth, that these are but good fringed Cyclamens in the making; but a prior question may arise in many minds whether the new forms are worth making. Undoubtedly two of the chief attractions of the Cyclamen bloom are its unique form and its smooth finish. The feathering or fringing go to the distinction of both. There is still ample room for further improvement in three directions: Colour of the flowers, mottling of the leaves, and the preservation and increasing of their fragrance. Complaints are becoming more frequent that, with the recent great improvements in culture, our Persian Cyclamens have lost much of their sweetness. An effort to make and keep them all more fragrant would be better than to ruffle their smooth surfaces or mar their normal forms through making them all more or less fringed.
 D. T. F.

SUCKERS ON PEACH AND NECTARINE TREES.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—I took charge of some gardens in December last, and have one early and one late Peach house. In the early Peach house there are three Nectarine and one Peach tree (very large trees). On both back and front trees are innumerable suckers like the enclosed specimens, which I have forwarded to you for your opinion as to cause and prevention of same. I believe that these suckers are very detrimental to the welfare of the trees, and being a long subscriber to your valuable paper, I thought you would favour me with a reply. Do you think the mischief has been caused by cutting with a spade?
 CYMRO.

[Many fruit trees make suckers in this way, especially if worked upon the Plum or Mussel stock. In your case the roots must have been left very much alone, or they would never have made such growths as those sent. The suckers should have been pulled out each year as they came through the soil, and they are very detrimental to

the growth of the trees and should be removed. At this late period, if the trees are forced it would not be wise to cut them low down in the soil, as by so doing you may at the same time destroy good roots. By no means use a spade, as appears to have been done previously, but when the leaf begins to fall, carefully fork away the surface-soil and preserve all small roots, then you will find these gross sucker roots on the main roots of the trees. Remove them by making a clean cut with a sharp knife, and give some new soil to encourage new ones near the surface. Treated thus, you will not be troubled much in future. Evidently the trees need food, as the sucker roots rob the soil greatly.—Eds.]

LILIUM GIGANTEUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—The communications of the Rev. C. Wolley-Dod are invariably interesting, and his observations on the gigantic Lily of the Himalayas on page 283 of THE GARDEN are characteristically attractive. I am glad to learn that he has been so successful with the perpetuation of the king of Lilies from seed, though the process must be somewhat trying to ordinary human patience, and the results, I should imagine, somewhat unimpressive. In my own garden, as I have previously indicated, this Lily is perpetuated entirely from offsets, of which seven were produced from one parent bulb last year. The flowering stem was fully 10 feet in height, and the massive flowers were followed by large seed-pods, each of these entailing a great quantity of seeds. Several of the offsets I gave to a neighbouring blacksmith, who has been very successful with the culture of Oriental Lilies, climbing Roses, and herbaceous flowers. This cottage during the summer and autumn months, with its miniature gardens on either side, is highly picturesque, and greatly admired by visitors to this parish.
 DAVID R. WILLIAMSON.

Manse of Kilmartin, Wigtownshire, N.B.

NEW AND RARE PLANTS.

ODONTOGLOSSUM CRISPUM THE EARL.

This is a distinct variety, the flowers in shape approaching some of the forms of *O. Wilkeanum*. There are almost solid blotches of bright brown, margined and mottled with white in the centre of the petals, and the pointed sepals are toothed on the margins, white, with several brown spots in the centre. The lip is white on the margins, a large brown blotch in the centre and yellow on the disc. The plant carried an eleven-flowered raceme, coming from the collection of Mr. W. Thompson, Stone, Stafford (gardener, Mr. W. Stevens). The plant was exhibited at the Drill Hall meeting of the Royal Horticultural Society on April 24. First-class certificate.

ODONTOGLOSSUM CRISPUM VAR. VICTORIA REGINA.

This is a distinct form, with flowers 3½ inches in diameter, the sepals white on the outer margins and becoming suffused with rose through the centre. There are several large purple-brown spots through the centre and smaller purple spottings on the remaining surface. The petals are lighter than the sepals, with irregular purple suffusion reflected through from the back. There are about half a dozen bright purple spots in the centre and some smaller ones on the white margins. The lip is white, shading to yellow on the disc. In front of the disc there is a large brown blotch in the centre and some smaller ones on the sides. The exteriors of the sepals and petals are suffused with bright purple. The plant with an eleven-flowered raceme came from Mr. W. Thompson, Stone, Stafford. First-class certificate, Royal Horticultural Society, April 24.

ODONTOGLOSSUM ANDERSONIANUM COOKSONI.

This is perhaps the finest yellow ground form of this hybrid we have seen, the flowers being nearly 4 inches in diameter. The sepals are pale yellow, thickly covered with large brown spottings, the petals similar in colour, but the spottings are smaller and denser. The lip is yellow, with one large blotch of brown in the centre, and white in front of the yellow disc. The plant, carrying a thirteen-flowered raceme, came from the collection of Mr. S. Cookson, Oakwood, Wylam-on-Tyne (gardener, Mr. W. Murray). It was exhibited at the Drill Hall on April 24, and was awarded a first-class certificate. This we understand, was one of the first *Odontoglossum* Mr. Cookson purchased.

DENDROBIUM WARDIANUM (FIR GRANGE VARIETY).

This is a grand form with flowers 4½ inches in diameter, the sepals white, with a reddish purple tip. The petals are 1½ inches across, of good substance, with a broad blotch of purple on the apex. The lip also is unusually large, purple in front, white in the centre, and yellow through the hollow portion, and having the usual maroon disc. The plant

carried two racemes of twenty-six and eighteen flowers respectively. The peculiar colour of the lips was most attractive and distinct. It was exhibited by Mr. W. A. Bilney, Fir Grange, Weybridge, at the Drill Hall on April 24 last. Award of merit.

ODONTOGLOSSUM WENDLANDIANUM (CRAWSHAY'S VARIETY).

This is an interesting and pretty variety, the ground colour of the sepals being yellow, suffused with purple, and thickly covered with deep brown spottings through the centre area. The petals on the apical portions are similar to the sepals in colour, but on the basal area in the centre the ground colour is white, densely covered with bright purple markings. The lip is creamy white, the whole surface being thickly covered with miniature purple spottings. The small plant carried a six-flowered raceme and was exhibited by Mr. De B. Crawshay, Rosefield, Sevenoaks, at the Drill Hall on April 24. Award of merit.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.
 FLORAL COMMITTEE AT CHISWICK, APRIL 26, 1900.

The collection of early-flowering Tulips growing in the much-discussed Chiswick Garden of the Royal Horticultural Society just now is well worth a visit from anybody interested in this class of spring-flowering bulbous plants, as it affords an excellent opportunity of becoming acquainted with the height, form, and colour of the flowers. The collection is an extensive one, as it comprises upwards of 200 different kinds, which represent every section or group of this popular flower, and will continue to be a great attraction for several weeks. The range of colour is, as may be imagined from such a rich collection, very great, and ranges from pure white and yellow, through subtle shades of pink, rose, purple and scarlet, to deep crimson, &c. The Tulip is a sun-loving plant, but the day (April 26) upon which the floral committee inspected the early-flowering group very little sun was evident, consequently the flowers were not seen at their best, but they were sufficiently expanded to show considerable beauty and enable the committee to deal with them satisfactorily. They occupy all the beds about forty between the Paxton house and the council room chamber on the north side of the longinery, as well as nearly the whole of the beds on both sides of the centre walk leading to the biginery. Much might be written about the Tulips at Chiswick, but we propose only to refer to those which were honoured with "C", signifying highly commended, on the date referred to.

Mons Trosar, from Messrs. Hogg & Robertson, Dublin. This is a grand variety of dwarf, sturdy habit, with large beautifully formed flowers with round petals, the colour being rich golden yellow.

Onion d'Or, from Messrs. Hogg & Robertson and Mr. H. J. Jones, Lewisham. Although this has golden yellow flowers, it is quite distinct from the foregoing. It grows 6 inches high, and its large globe-shaped flowers are borne on very stout stems. Grand for edging.

Leu Juteless, from Messrs. Hogg & Robertson and Mr. H. J. Jones. This grows about 7 inches high, and is very telling when seen in a mass. The silvery pink flowers are edged with white, and stained with bluish white on the exterior of the petals.

Mars, from Messrs. Hogg & Robertson. Undoubtedly this is the best scarlet-flowered bedding Tulip, and when it becomes better known is sure to be planted extensively. Its height is 8 inches, and the large bright scarlet flowers stained with purple on the outer petals create a brilliant picture in the mid-day sun.

Pothbakker White, from Messrs. Hogg & Robertson and Mr. H. J. Jones. Here we have a good white-flowered variety nearly 1 foot high. Its large, white, well-shaped flowers, with a green centre, are carried on stout stems.

Beechus, from Messrs. Hogg & Robertson and Mr. H. J. Jones. This is an exquisite variety, 6 inches high, with bold, deep crimson flowers. It is well adapted for margins to beds, &c.

Proserpine, from Messrs. Hogg & Robertson and Messrs. J. Veitch & Sons, Chelsea. The adaptability of this variety for massing is well illustrated in some of the London parks, where it is used with excellent effect. It grows about 9 inches high, and bears handsome, bright rose flowers, touched with purple on the outside petals.

Vermilion Brilliant, from Messrs. Hogg & Robertson and Mr. H. J. Jones. For forcing purposes this variety is grown extensively in many establishments, as its medium-sized, excellently shaped, bright scarlet-rose flowers are very attractive. It is occasionally used as an edging to beds, a purpose for which it is admirably adapted, as it rarely exceeds 6 inches high. Its flowers are very substantial, and remain in good condition for a long time.

Eptaevnadas, from Messrs. Hogg & Robertson. This is perhaps a trifle taller in growth than the last named, and the rose-scarlet, well-shaped flowers have a decided flush of carmine, which is particularly beautiful when the sun is shining.

Katevskrona, from Messrs. Hogg & Robertson and Mr. H. J. Jones. Without doubt this is the most showy early-flowering Tulip extant. Its large globe-shaped red and yellow flowers are borne on stout stems, and a bed of it has a fine effect. It grows about 10 inches high, and is reasonable in price.

Faun de Noor, from Mr. H. J. Jones. This grows 8 inches high, and bears lovely violet-purple flowers. It can be well recommended for edging.

THE THIRTIETH FLOWER SHOW, MAY 23, 24 AND 25.
 For the thirtieth year in succession the Royal Horticultural Society will hold their great annual flower show in the

Inner Temple Gardens by the kind permission of the treasurer and landlady on May 23, 24 and 25. Every year the desire of growers to exhibit increases, and the officials of the society have a very anxious task in endeavouring to do justice to those growers who regularly support the fortnightly shows of the society held at the Drill Hall, and yet at the same time to encourage others also to come forward. The space is absolutely limited, by order of the Temple authorities; no more, or larger, tents may be erected. Hence every new exhibitor whose entry is accepted means entailment of the space allotted to previous supporters. A catalogue of the show is given gratis to every visitor, and will contain a notice of new and rare plants entered on or before May 15. It will also contain a programme of the music to be performed each day by the band of Her Majesty's Royal Horse Guards (Blues). The judges will meet at the secretary's tent at 10.30 a.m. on May 23, at which hour practically the tents will be cleared of all exhibitors and their assistants. The fruit, floral and orchid committees will assemble at the secretary's tent at 11 a.m. sharp, and the show will be opened at 12.30. All plants for certificate must be entered on or before Friday, May 18, addressed: The Secretary, R.H.S., 117, Victoria Street, S.W. They cannot be entered under any circumstances on the day of the show.

A HALL FOR THE SOCIETY.

At the general meeting of the Royal Horticultural Society on April 25, although the great desirability and even pressing need of a hall of its own was expressed, and numerous allusions were made to the failure of the last attempt to raise the needed £10,000 (£27,000 of which was it appears actually obtainable), the real reason of that failure found no expression, viz., the unfortunate Baring crisis which occurred at that juncture, and by its paralysing effect on finance generally nipped the hall scheme in the bud and caused it to be dropped.

Assuming that to have been the cause of the collapse and that the scheme was otherwise sound and practicable, why should it not be revived now that, save the unfortunate war, matters are in a flourishing condition? Since the Baring period the society itself has immensely increased its fellowship, and consequently its sphere of influence. At that time its period of misfortune dated back but a few years, and hence these subsequent years of increasing success and demonstration of increasing utility all combine to justify the scheme now far more than then. The site then in view may now be occupied, but surely there are others. There is, I believe, a projected extension of the Embankment westward of the Houses of Parliament, where in all probability a particularly eligible site might be secured on far more moderate terms than on the old Embankment so much nearer the city. The Government owes a far greater debt to the Royal Horticultural Society as a practical, beneficial, educating and elevating factor in the country's progress than it does to the Royal Botanic Society, which is practically subsidised liberally by its tenure of part of Regent's Park. Would it not be possible to bring this fact home to the notice of the powers that be, and thereby possibly obtain a concession of part of the land to be newly created either as a free site or at any rate on specially favoured terms?

Such an acquisition or concession would simplify the project enormously, and once in prospect would greatly facilitate the acquisition of the funds required for the building itself. The carrying out of the project would also form a far better method of celebrating the centenary of the society than the acquisition of new gardens, which, however useful they might be, would never attract the public so much, or touch them so much, as would a floral hall at the West-end with its periodical concentration of the best of the floral, fruit, and other developments for exhibition and easy appreciation. The hall is an absolute need, and a very present one. The new gardens are no such pressing necessity, seeing that there is still a twenty years lease to run of the old ones, with respect to whose fitness many remarks, drastic and to the point, at the general meeting indicated very opposite opinions, while as regards the hall there is absolute unanimity.

The revival of the hall scheme by the council would reflect in no way upon the wisdom of the resolution proposed by them and carried in principle at the meeting with regard to the acquisition of new gardens, that is a separate matter, except of course, in so far as it might mean an appeal to the Fellows and others for the needed funds, and so clash with the financing. I submit, however, that as regards the hall, and especially as regards the suggested site, time is a vital point, and delay would probably be fatal to any existing chance of obtaining it owing to prior distribution.

CHAS. DREYER F.E.S. A.M.H.

THE MIDLAND DAFFODIL SOCIETY

(BY ONE OF THE JUDGES.)

THE second annual exhibition of this now popular and progressive society was held on April 25 and 26 in the Botanic Gardens at Birmingham. Last year a very good show was held in dreaching rainy weather, but this year the days were fine and visitors as numerous as the flowers.

In the holding of flower shows one of the most important points is to secure a congenial site, and the Birmingham garden is an ideal one for the purpose. Just now the garden is a flower show in itself, and it was with a long journey and a short sea voyage to see it once again. The alpine or rock garden is in its springlike beauty, there are budding Magnolias and tender foliage, there on every bush and tree.

But even on wet days, or during ungenial weather, the plant houses at Birmingham are always interesting. Large Ferns are a speciality here, and one may look long at the towering Tree Ferns and at the massive Stag's horn varieties (Platycorms) without tiring of them. The Azaleas and Rhododendrons give great masses of colour, the Hebeas trans unfold their great crimson stars, and the charming groups of the elegant habit of *Cimmaria cuneata* or *C. stellata* varieties please one far more than the dwarf plants of *C.*

hybrida with garish colours, like aniline dyes, that have been so long in vogue.

For the curious botanical student there are many things to see—rare Orchids, both wild species and hybrids, insect-eating Droseras and Pinguiculas, Western Sarracenias and Eastern Nepenthes, Cacti and aquatics, all beautiful in their own way and in their own season. Later on in the open-air garden the Rhododendrons and Azaleas will be a mass of bloom, and their growth at Birmingham shows clearly that they are valuable shrubs even in the vicinity of smoky towns, provided the soil is deep and moist enough and free from lime.

A rather rare American plant thrives at Birmingham that is rarely seen healthy and vigorous elsewhere, viz., *Galax aphylla*, the leaves of which as imported, and often dyed purple, are now so much used in Covent Garden for wreaths and other decorations.

But enough of the garden; so let us return to the Daffodil show, of which Mr. Robert Sydenham is a most enthusiastic honorary secretary. Not being quite satisfied by all the beautiful handicrafts of the jeweller and goldsmith, this modern representative of Benvenuto, Cellini and George Heriot must needs solace his soul with the earth stars or living gems—the flowers. I am indeed pleased to think that his efforts in the interest of Daffodils and Daffodil growers in Midland England have met with so signal a success. But as a matter of fact, exhibits came from everywhere, north, south, east, and west; from Cornwall and from Ireland, from Holland and from the Channel Islands, as well as from other parts of Britain.

Every year the lovers and growers of the Daffodil flock more and more to the Birmingham centre, and amongst those noticed this year were the Rev. C. Wolley-Dod, Mylneher Simon de Graaff, of Leyden, Mr. F. W. Burbridge, of Dublin, and Mr. W. J. Grant, from gallant little Wales. The clergy were represented by Mr. Dod before mentioned, Mr. Bourne, and Mr. Jacob, all keen connoisseurs of the flower of spring. But one time-honoured guest was absent, and all regretted that Mr. G. H. Engleheart could not bring a selection of his choice and beautiful seedling varieties, which hitherto have been an especial feature at this show.

Last, but by no means least, on this occasion were the ladies, who give their gentle and bright allegiance to the Narcissus, even though fond of other flowers. Miss Ellen Willmott, of Great Warley; Mrs. Backhouse, Miss F. W. Currey, of Lismore; Mrs. Robert Sydenham, Mrs. and Miss Pope were only a few who graced the exhibition by their presence. And amply were they repaid by one of the finest shows of Narcissus ever seen. Not only were the naturally shown flowers superb in most cases, but artistic combinations of them in bowls and vases, bouquets and wreaths, and daintily arranged on dinner-tables were remarkably beautiful, and the writer is glad that he had not to decide on their precedence for the prizes offered. New seedling Narcissus appeared in quantity, and several were of such marked superiority in quality, that they obtained silver medals or certificates of merit. Miss Ellen Willmott, of Great Warley, Essex, was awarded two of these medals, the one for a dainty Daffodil named *Comtesse Grey*, having a soft white perianth and a tapering sulphur or primrose trumpet. So far as mere appearance goes, this seems to be a hybrid between some large trumpet Daffodil and *N. triandrus*, as shown by its size, and especially by its wax-like delicacy of colouring. A charming variety named Mrs. Berkeley also gained a medal for Miss Willmott, and is perhaps of the same, or a similar, parentage to the last-named.

Other new and distinct seedling Daffodils shown were *Queen Wilhelmina*, a large variety of distinct colour. The perianth is pale primrose, and the large filled trumpet of a rather deeper hue and of a crape-like texture. It is a promising variety, and was shown by Messrs. De Groot & Sons, from Holland. Another large seedling came from Messrs. Van Waveren under the name of *Waverens Giant*, or *Van Waverens Groot Hillezon*, and is in the way of *Glory of Leyden*, but larger. So far this appears to be the largest Daffodil yet raised, its blooms attaining a diameter of 6 inches, but it lacks form and quality so far as it has yet been seen. It is curious how size and coarseness of form seem to characterise most Dutch seedlings, though there are exceptions to the rule, one of the most notable being *Mme. de Graaff*, which is still premier in its own class or group of white or sulphur Daffodils.

Amongst the new Medio-Coronati, or Star Narcissus (incomparables), the finest flower was decidedly *Charles Wolley-Dod*, from Miss Willmott, a stately bell flower, somewhat resembling *White Queen*, or, to put it tersely, a white *Sir Watkin*. The perianth is soft white, with a sulphur chalice. There is an ivory-like delicacy of tone about this flower, and when plentiful it is sure of wide popularity like its honoured namesake. A large variety named *Comet* is likely to become a useful addition to the large trumpet bicolor class.

In the small-crowned group I noticed *N. poetans*, presumably a hybrid between *N. tazetta* and *N. poetans*. Its sepals are curved and fluted, and bear a crowded cluster of *N. biflorus*-like flowers. As a hybrid product it is of interest, but there is no refinement or good form about its flowers. The scent of it is like that of *N. biflorus*. Two very bright seedlings came from Mr. P. D. Williams, of St. Austell, viz., *Chadwick* and *Blood Orange*, the first-named securing for him the silver medal in its class. It is a whitish flower, with an expanded orange-red fringed cup. *Blood Orange* is a creamy flower, with a small orange-red cup, and though very effective it is not so refined a flower as *Chadwick*.

Much as the large and medium-crowned Narcissus have been improved, it is to the small-crowned group that we look just now for solid, shapely perianths and vivid colour in the cups. In this direction Mr. Engleheart and Mr. P. D. Williams have done much, from which our cut-flower trade of the future will benefit largely. Such sorts as *Firebrand*, *D. Bell*, *Chadwick*, *Blood Orange*, *Will Scarlet*, and others will prove most potent to attract both on the show tables

and in the market. The new varieties of *N. poetans* are far ahead of the old kinds, and there are already signs of even ornatus and poetarum being supplanted by earlier or later and better forms.

Of the older varieties of Daffodils shown on this occasion, there were lovely blooms from various localities of *Mme. de Graaff*, *Weardale Perfection*, *J. B. M. Camm*, *Hodscock Pride*, *Glory of Leyden*, and *Emperor*. Of the bicolor race were *Victoria*, *Empress*, *Horsfield*, *Grande*, *Bicolor*, and *Mme. Plémpé*. *Star Narcissus* in fine condition were *Duchess of Westminster*, *Dorothy Wemyss*, *Gloria Mundi*, *Lucifer*, *Queen Sophia*, and *Mrs. Langtry*, with its chalice tinted with primrose and elegantly frilled. *Dr. Fell* was very effective, as also the older *Lulworth*, and *C. J. Backhouse* enlivened several of the collections staged by its vivid colouring.

Two of the most fresh and attractive groups in the whole show were those of Mrs. R. O. Backhouse, of Hereford, and that shown in a trade group by Messrs. R. H. Bath, of Wisbech, Lincolnshire. Mrs. Backhouse's flowers were in splendid condition and artistically staged, and it contained by far the largest and most perfect flowers of *Weardale Perfection* yet seen either at Birmingham or elsewhere.

Messrs. Bath had large and effective groups of all the best kinds, such as *Mme. de Graaff*, *Weardale Perfection*, *Glory of Leyden*, *J. B. M. Camm*, and others of various sections.

Messrs. Barr & Sons, Messrs. Dicksons, of Chester, Messrs. Pearson, of Chilwell, Messrs. Hewitt & Co., Messrs. Pope & Sons, and Messrs. Hogg & Robertson, of Dublin, had important collections on view.

Miss F. W. Currey, of Lismore, county Waterford, also staged some excellent groups for competition, being first in the class for twelve trumpet Daffodils, as also in that for twelve Medio-Coronati or Star Narcissus, and she shared equal first prizes with Mr. H. E. Young in the small crown group. Everyone remarked the freshness, substance, colour, and stature of these Irish grown flowers, no other collections quite equalling them if we except Mrs. Backhouse's group from Hereford and Mr. P. D. Williams from Cornwall.

The exhibits from Miss Currey and those from Messrs. Hogg and Robertson seem to show that Ireland is becoming a bulb-growing and cut-flower country, notwithstanding its isolated position in the British Isles.

For boldness of form and rich colour no spring flower surpasses the Tulip, and of these Mr. R. Sydenham and Messrs. Hogg & Robertson had very large groups. Those shown by Mr. Sydenham were remarkably well grown in pots, and attracted much attention from visitors. Messrs. Hogg & Robertson's flowers were from the open air, and were the produce of bulbs grown on their bulb farms at Rush, near Dublin. Although their forms were coarse as compared with pot-grown examples from indoors, they possessed the advantages of greater substance in their petals and were of much more vivid colouring. From a floral decorator's point of view they were perfect, even although the florists of the old school might decry them. It is very interesting to hear that Tulip culture is now fairly established in both England and Ireland, and with every prospect of success.

No one can for a moment doubt that Birmingham is a capital centre for horticultural exhibitions of all kinds, and it has long been celebrated as a district full of ardent horticulturists and florists. Perhaps as one result of this we find to-day that no other English town or city is better or more cheaply supplied with fruits, vegetables, and flowers. Scarcely a street can be traversed without fruit and flower shops being in evidence, and in the main thoroughfares such shops compare favourably with those of London itself. In the great public markets it is the same—everywhere fruit, vegetables, and flowers of good quality at reasonable prices. One cause of this is that even the best of trade growers have discovered in Birmingham (as in other midland and northern towns) a market often better and more equable or reliable than those of London. Certainly I have never been anywhere else where good garden produce is so easily and cheaply obtainable.

A word may be said for the intelligent and hospitable management of the show by the honorary secretary, Mr. Sydenham, ably seconded by Mr. Pope, by whom every thought and consideration was extended to both judges, exhibitors, and visitors. The systematic smoothness of working at the show was much helped by Mr. Latham, curator of the Botanic Gardens, and by Mr. Richard Dean, of Ealing, who is a well-known expert and adept at this kind of work and organisation. A capital luncheon was provided for judges, exhibitors, and principal visitors, and tea was provided later in the afternoon. On the first night of the show many of the principal exhibitors, judges, and visitors were entertained to dinner by Mr. R. Sydenham and Mr. Pope, a very pleasant day being thus brought to a close. One cannot help regretting that hospitality of this genial kind is so often absent at so many of our London and provincial shows.

PRIZE LIST.

The following is the prize list: Class 1. Collection of Daffodils, 1. Mrs. R. O. Backhouse, Hereford; 2. P. D. Williams, St. Austell; 3. Rev. J. Jacob, Whitechurch. Class 2. Twelve varieties true trumpet Daffodils—1. Miss F. W. Currey, Lismore; 2. J. W. Grant, Newport, Mon.; 3. H. E. Young, Metherringham, Lincoln. Class 3. Six varieties—1. J. A. Kenrick, Edglaston; 2. L. Brown, Brentwood, and Rev. G. F. Eyre, Bewdley, equal. Class 4. Twelve varieties Daffodils (Medio-Coronati)—1. Miss F. W. Currey; 2. H. E. Young; 3. J. W. Grant. Class 5. Six varieties (ditto)—1. L. Brown. Class 6. Six varieties (Parvi-Coronati). Equal 1st. Miss Currey and H. E. Young. Class 7. Seedlings: Silver medals for Magni-Coronati (*Comtesse Grey*), Miss Willmott, Great Warley, Essex; Medio-Coronati (*Mrs. Berkeley*), Miss Willmott; Parvi-Coronati (*Chadwick*), Mr. P. D. Williams, St. Austell, Cornwall. Class 8. Twelve varieties Daffodils—1. A. J. Stiles, Spalding; 2. C. R. Bick, Harborne. Class 9.

Six varieties—1, C. R. Bick; 2, A. J. Stiles. Class 10: Six vases Spanish Iris—1, R. Sydenham, Birmingham. Class 11: Twelve pots of Daffodils, distinct—1, J. A. Kenrick; 2, J. Cooke, Shrewsbury; 3, R. Sydenham. Class 12: Six pots Daffodils, distinct—1, J. Sceaney, Harborne; 2, E. M. Sharp, Edgbaston. Class 13: Six pots Polyanthus Narcissus—1, J. Cooke; 2, R. Sydenham. Class 14: Six pots single Tulips—1, R. Sydenham; 2, J. A. Kenrick; 3, J. Sceaney. Class 15: Six pots Lily of the Valley—1, J. Cooke; 2, J. A. Kenrick. Class 16: Six pots Cyclamen—1, E. Impey, Northfield; 2, C. L. Branson, Coleshill. Class 17: Six pots Lilium Harrisii—1, J. Cooke; 2, J. A. Kenrick. Class 18: Four pots of Cinerarias—1, J. A. Kenrick; 2, J. Cooke; 3, A. F. Bird, Moseley. Class 19: Table decoration—1, Pope and Sons, King's Norton; 2, J. Cooke; 3, A. F. Bird. Class 20: Group of cut spring flowers—1, J. A. Kenrick; 2, A. F. Bird; 3, Rev. J. Jacob, Whitechurch. Class 21: Bouquet of Daffodils—1, Pope and Sons; 2, J. A. Kenrick. Class 22: Bowl of cut Daffodils—1, J. A. Kenrick; 2, Mrs. W. J. Grant, Newport, Mon.; 3, Miss R. Sydenham. Class 23: Group of cut Daffodils—1, Rev. J. Jacob; 2, J. Cooke; 3, A. F. Bird. Class 24: Three jars Polyanthus Narcissus—1, J. Cooke; 2, E. M. Sharp. Class 25: Three jars Daffodils—1, J. A. Kenrick; 2, J. Cooke; 3, J. Sceaney; 4, E. M. Sharp. Class 26: Box cut blooms—1, J. Mauzer and Sons, Guernsey; 2, J. T. White, Spalding; 3, J. Cooke.

BRISTOL GARDENERS ASSOCIATION.

THE second annual meeting of the association was held on Thursday, 26th ult. Mr. G. Brook presided over a large attendance. The report presented showed that the society is progressing, the present total membership being 129, with an average attendance of about 60. The financial statement also proved successful, the balance in hand, after all expenses were paid, being £5 2s. 3d. A letter of apology for non-attendance was read from the president, Mr. H. Cary Batten, who consented to continue in that office. The other officers elected were: Chairman, Mr. G. Brook; vice-chairmen, Messrs. Hancock and Binfield; hon. sec. and treasurer, Mr. W. Ellis Groves; assistant secretary, Mr. W. Haddon, and a committee of fifteen members.

During the evening Mr. W. Ellis Groves, the hon. secretary and treasurer, was presented with a handsome barometer. Mr. G. Brook made the presentation on behalf of the members, and in a brief speech spoke of the untiring energy which Mr. Groves had displayed for the benefit of the society and the able way in which he had carried out the duties connected with the position, and expressed a hope that he would continue to act for them. Mr. Groves, who was manifestly taken by surprise, thanked the members very sincerely for their great kindness, saying that he had simply done his duty as their officer and did not think he deserved all the generous things that had been said of him. He willingly consented to still act as secretary and treasurer, and would do all in his power to further the interests of the association. Prizes for two foliage plants were secured by Messrs. Shaddick, McCulloch, and Sutton, and prize for two flowering plants by Mr. Shaddick.

THE MIDLAND AURICULA SHOW

THE members of the Midland Auricula Society must be congratulated on their first effort. With the exception of some plants staged in competition by Messrs. Phillips & Taylor, of Bracknell, all were locally grown, and Birmingham is likely to become as active a centre for Auriculas as it is for Daffodils, Carnations, and Chrysanthemums.

Show Auriculas.—The best six plants were staged by Messrs. Phillips & Taylor, Bracknell, who had of green edges, Mrs. Henwood and the Rev. F. D. Horner; George Lightbody, grey edge; Marmion, white edge, and two selfs. Mr. A. R. Brown, Handsworth, came second. Acme and Heatherbell, white edges, with Black Bess, self, were his best plants. Mr. W. B. Latham, Edgbaston, was third. Messrs. Phillips & Taylor were also first with four plants, a very good quartette, consisting of Shirley Hibberd and Mrs. Henwood, green edges; Acme, white edge; and Miss Barnett, a refined dark self. Mr. J. Clements, Harborne, had John Bannafoed, a green edge, which shows a tendency on the part of the dark body colour to run into the green edge and flood it; white edge Heatherbell, and selfs John Spalding, dark, and Mrs. Potts, blue. Mr. J. Stokes, Harborne, was third. In the class for two varieties there were eight competitors, and Messrs. J. Stokes and R. Holding, Birmingham, were placed first, each having a green edge and a self; the former had John Bannafoed and Black Bess, the latter Mars and Heroine.

In the classes for single plants, the best green edge was Ossian (B. Simoni), shown by the raiser. It is a very striking variety, having a singularly bright emerald-green edge with a black body colour and white paste, revealing striking contrasts. Mr. A. R. Brown came second with Abbe Liszt, and third with Abraham Burke, a somewhat poor variety. With grey edges, Mr. Brown led the way with Beauty, Mr. Latham taking the second prize with Colonel Champsneys. The best white edge was Acme, from Mr. Brown, and he came second with George Rudi. The selfs were unfortunately overlooked. The premier stage Auricula was green edge Mrs. Henwood, shown by Messrs. Phillips & Taylor.

Alpine Auriculas. These were shown in good character. With six varieties, Mr. A. R. Brown came first, and he had in very good character Dean Hole, Mrs. Gorton, Mrs. Martin Smith, and J. J. Keen, golden centres, and Thetis, white centre. Messrs. Phillips and Taylor came second; their leading varieties were Mrs. Martin Smith and Mrs. Gorton, golden centres, and Perfection, white centre. Mr. Richard Gorton, Manchester, was third. With four plants Messrs. Phillips & Taylor took the first prize. They had Mrs. Martin Smith, Gladys, Perfection, and a seedling. Mr. A. R. Brown was second, his best two varieties, Charles Turner and Fred. Knighton. There was a class for two alpinas also. Mr. W. H. Twist, Small Heath, was first, and Mr. W. Cheshire, Edgbaston, second. The best single plant of a gold centre was Twilight, from Mr. Gorton, a dark shaded flower of very fine quality. Mr. Brown was second with J. J.

Keen. The best white centre was Mrs. Harry Turner, shown by Mr. Brown. Mr. R. Holding was second with Ethel. There was also a class for two plants for maiden growers. Gold-leaved Polyanthus were represented by one collection of four varieties from Messrs. J. Pope & Son, but all good sorts; they were Tribly, Tiny, and Mrs. Brownhill, black grounds, with Middleton Favourite, red ground.

In the class for a group of Primulaceae arranged in a basket, Messrs. J. Pope & Son were placed first with a good selection, prominent among them some fine blue Polyanthus and Primroses, P. intermedia, &c. Mr. Clements, Harborne, was second, and one or two other collections were staged.

BUTTERWORT.

(PINGUICULA VULGARIS.)

THIS strange little marsh growth is a pretty and interesting thing in the bog garden with its solitary Violet-like bloom, that has earned for the plant its alternative popular name of Marsh Violet. The flower springs from a rosette of a few pale leaves, thick of texture and greasy to the touch. Growing among sphagnum moss on spongy bog, the little plant could easily be lifted off, so small and slightly holding are the roots, while from late autumn till spring the plant, then looking like a small slender green bulb, seems to

tumble about without anything to anchor it to the ground.



BUTTERWORT (PINGUICULA VULGARIS).

TREES AND SHRUBS.

HARDY BAMBOOS AND THE PAST WINTER.

SINCE 1894-5 no winter season has tried the Bamboos out-of-doors so much as the one now past. The present is, therefore, a suitable time to review the behaviour and assess the merits of the now numerous species and varieties. The introduction and cultivation of many of them is so recent, that every season adds to one's knowledge of them. It may safely be said that a good many more seasons will have to pass before we can fully understand the vagaries of hardy Bamboos. We may be certain, however, that the hardest frosts ever likely to visit the south of England can do them no permanent injury, however much they might disfigure them for the time being. It is cold, dry winds that we have to dread more than merely low temperatures. It is curious to observe the peculiar behaviour of some species. During the hard frosts five years ago, for instance, the Bamboo that remained most fresh and green, and showed altogether the greatest indifference to the cold, was Arundinaria nitida, but during the mild winters we have had since then it has never kept its foliage so well. This year Phyllostachys Henonis and P. Boryana are the best, and it appears as if these, and to an almost equal extent a few others, are able to retain their leaves fresh and green throughout any sort of weather.

As the present time of year is the best to transplant Bamboos, it may be useful to mention those whose hardiness is most manifest. A walk round the Bamboo garden at Kew shows the following to be in best condition: Phyllostachys Henonis, P. Boryana, P. nigra, P. nigra var. punctata, P. Quiloi, P. flexuosa, and P. viridi-glaucescens. To those who contemplate planting Bamboos this

spring, especially in gardens new to their cultivation, these may be recommended as some of the best to commence the experiment with. They are all, however, somewhat similar in aspect, and for the sake of variety the following—which are almost, if not quite, as hardy—should also be grown: Arundinaria nitida, A. Simoni, A. japonica, Bambusa palmata, B. tessellata, Phyllostachys mitis and P. ruseifolia.

RHODODENDRON CAMPANULATUM.

THE reviving interest that is being taken in Himalayan Rhododendrons will probably lead to this species spreading in cultivation more than it has done hitherto. It has two strong recommendations. It is probably the hardiest of all the Himalayan species, and out-of-doors it is one of the earliest to flower. With regard to its hardiness, it may, near London at any rate, be classed with the ordinary garden varieties; and although in time of flowering it is, like most other things this year, three weeks or so late, it may in the majority of seasons be expected to flower during the first or second week in April. The flowers vary a

good deal in colour, as may be seen now by several specimens blossoming in the "Dell" at Kew. One of them is purple, but with a strong blue shade in it—in fact, as near an approach to blue as has yet been obtained among Rhododendrons. A second has flowers of a purer purple, whilst a third is porcelain white. All the forms of this Rhododendron have the lower surface of the leaves covered with a rich ferruginous felt. The trusses are of medium size and the shrubs themselves of spreading habit, the largest 8 feet or so high.

FORSYTHIA INTERMEDIA.

OF the three sorts of Forsythia now in cultivation the well-known F. suspensa is, on account of its long thin branches, the one best adapted for cultivating as a climber. The more uncommon F. viridissima is, on the other hand, a sturdy, erect, somewhat rigid shrub. F. intermedia may be accepted as the "happy medium" between the two. Whilst it avoids the straggling habit of F. suspensa, it is more graceful than F. viridissima. For growing as a shrub in the open and away from a wall or other support, it is indeed the best of the three. Its flowers are equal to those of F. suspensa in abundance and in their bright glowing yellow, and whilst somewhat later than that species in appearing, they precede those of F. viridissima by a week or fortnight. It is supposed to be a hybrid between the other two, a supposition its habit and time of flowering tend to confirm. Whilst this for general purposes may be considered the best Forsythia, it is hardly necessary to say that all of them ought, if possible, to be grown. The Forsythia season thus becomes much longer, and of all shrubs that flower in March and April, few indeed surpass them either in beauty or in easy cultivation and propagation.

SPIRÆA THUNBERGI.

FROM now up to the first frosts of autumn shrubby Spiræas of some sort or other may be had in flower. The one that commences the season is S. Thunbergi, a native of China and Japan. Not only is it distinguished by its earliness in flowering, its habit

and general aspect are quite distinct. It makes a round bush, 3 feet to 4 feet high, very dense and twiggy, and covered during the summer with masses of rich green, small, narrow leaves, so luxuriant, indeed, as to give a plume-like character to the branches. In early April the twigs become thickly studded over with tiny snow-white flowers, amongst which is intermingled the tender green of the young unfolding leaves. The best of the early Spiræas is the hybrid *S. arguta*, and it owes much of its beauty and all its earliness to *S. Thunbergi*, one of its parents. Both such find a place in all collections of the earlier flowering deciduous shrubs. B.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers. *The Editors intend to make THE GARDEN helpful to all readers who desire assistance in matters about the branch of gardening with which they are concerned. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITORS OF THE GARDEN, 25, PATRISTOCK STREET, COVENT GARDEN, LONDON.* Letters on business should be sent to the PUBLISHER. *The name and address of the sender are required in addition to any destination he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.*

Names of plants. *M. Ribes aurum.* J. T. R.
Amygdalus canadensis, or *Mespilus*, as it was formerly called.
Spiræa. The *Campytrelle* (*Narcissus odorata*). L. B.
Narcissus Barri conspicuus. E. Acutigan. *Osmothogalum mitans.*

FRUIT GARDEN.

Mulching Strawberries (PESFONE). It is not wise to lay down straw or litter mulches about strawberry plants too soon. One effect of doing so early sometimes is that the material gets saturated and retains moisture unduly, so that when white frosts prevail the harm done to the bloom is then all the greater. Usually it is soon enough to put down the litter when the flowers are well expanded, or but just before. Where it is desired to obtain early runners to layer into pots for forcing next winter the mulch is to put out early in the previous autumn strong young plants in rows 2 feet apart and to pinch out any flowers they may produce. Runners then come all the earlier. With respect to alpine strawberries, you can purchase seed, sowing it now in shallow pans or boxes under glass, you will get strong fruiting plants for next year. The St. Joseph Strawberry is very valuable as an autumn fruiter. In that respect it is very productive.

Fruit-tree planting (VIVIAN). We should not advise you to transplant any description of fruit trees now, as growth has practically commenced, and the shock given to the trees may be too severe. Better leave the transplanting until October and set about it as soon as the leaves fall. With respect to manuring young trees, be not too liberal in that respect, especially if the soil about them be deeply worked and fairly good. But it is always safe to place a mulch of long stable manure about the trees in dry weather, as whilst the manurial result is but moderate, its effect is to encourage root formation near the surface, which is an important point in fruit culture, and it keeps the soil over the roots from becoming excessively dry. A heavy dressing of manure forked into the ground tends to create strong, coarse wood growth that is always inimical to fruit production on young trees.

KITCHEN GARDEN.

Rhubarbs (E. S.). The new Rhubarb *Wright's Champagne*, you saw the other day at the Royal Horticultural Society's meeting is not yet in commerce. It will probably be some two or three years ere the stock is large enough to enable it to be so distributed. But you had better get from some firm of market-growers roots of the true *Hawkes' Champagne*, as that is the very best and richest coloured of all the old early varieties and is very plentiful. The new one excels it in giving much larger stems. For a later Rhubarb to pull outdoors, whether exposed fully or covered up with turfs in the spring, the best is *Victoria*. You should get a good stock of roots planted, and then you can hit some in the winter to force, and in that way have good Rhubarb to pull for use from the 1st of February on for a long season. No doubt when ever the new variety is put into commerce it will be advertised in our columns.

Early Dwarf Beans (ALPHA). To secure these excellent beans earlier than usual outdoors it will not do to sow extra early, as being so under the plants may greatly suffer from cold or be killed outright by a late frost. Your best course is to sow single beans in a large number of small pots, standing them in a frame or greenhouse close to the glass. Do that about the middle of April and you should then have numerous stout sturdy plants fit to put out on to a warm border in three or four weeks from the sowing. There is no better Bean for the purpose than *Ne plus Ultra*. Then outdoors early in May make a sowing of Long-podded Negro, and later ones for succession of Canadian Wonder, but if you are specially partial to

this class of Bean, make a sowing at once on deep rich soil of Tender and True climbing Bean.

Runner Beans (ALPHA).—If you wish to have a really fine crop of these Beans you must take some pains to prepare the ground by having a trench 20 inches wide and as deep opened. Then, having the bottom broken up, throw in some of the soil, add a layer of manure, fork that into the bottom soil, then add more soil and manure, filling the trench well and mixing it, then allowing it to settle down for a few days before sowing the seed. Draw two drills with a hoe 9 inches apart down the middle of this trench and plant the Beans 6 inches apart in the rows, then cover up. Leave a slight ridge of soil on each side of the trench to retain water if it be found needful to give to the row later. You will find no better type of Scarlet Runner than is a good stock of *Ne plus Ultra*, of which Best of All, Hill's Prize, and Exhibition are selections. Make the first sowing now and a successional one three weeks later.

Outdoor Tomatoes (AMATEUR). We can assure you that with a little knowledge and a warm position you will find the Tomato to be one of the easiest plants to grow and fruit outdoors. But position in ample sunshine is of the first importance, and if you have no sunny wall or boarded fence against which to plant, you can fix up some slats of corrugated iron running east and west and plant on the south side of this iron screen, training the plants to stakes. Failing this, then plant to stakes in the shelter of a hedge, as the warmth is much greater there than quite in the open. Get plants singly in small pots about the second week in May and plant them, half burying the stems. Let the soil be fairly good, but not too enriched with manure. In the row the plants may be 12 inches apart. As growth is made pinch out all the side shoots, leaving only the bloom trusses. Pinch the points out of the main stems when about 3 feet in height.

INDOOR GARDEN.

Propagating *Kerria japonica* (REV. T. C.). We have only tried them in a mild bottom-heat, in which case the cuttings should be made of half-ripened wood in July as a rule. But you might try them out of doors under a bell-glass in a half-shaded spot. In this case the cuttings would have to be somewhat more ripened, and August or early September the time to put them in.

Winter-flowering Pelargoniums (E. G. D.). We use the above word in preference to *Geranium* because the plants referred to are not *Geraniums*, the popular but improper name, but are really *Pelargoniums*. *Geraniums* are largely hardy border flowers and totally dissimilar, but they belong to the same order. There is no specially selected section of winter bloomers of the zonal varieties, any that flower freely in the summer will do so equally in the winter. Select at once nice clean young plants from the autumn propagation, or, as some prefer, from spring-rooted cuttings. Have them at present growing freely in 4-inch pots. When quite strong shift them into 6-inch pots, using a firm compost of three parts loam, the rest being old decayed manure, leaf soil and sand, with about a pint of guano per bushel of soil mixed in. Pot very firmly. The points of all shoots on the plants must be occasionally pinched in the sun on a firm bed of ashes about the middle of June. At the end of August cease pinching and let growth be free. Get them into a moderately warm greenhouse at the end of September, and the plants will bloom profusely all the winter. It is desirable to give some weak liquid manure occasionally.

Cyclamen seed (E. G.). It is yet time to fertilise flowers of *Cyclamen* species to save for seed. These plants are very free with pollen, and if shaken will shed it in clouds. For that reason the plants should be kept steady. You can, however, by using a camel-hair brush, obtain pollen from flowers on one plant and with it fertilise the pistils of two or three flowers on another, marking those with some wood or tape, and pinching all the rest on the plant. Later the seed pods will be found large and round, and the stems will curl down close to the soil. Watch these pods and, when ripe, gather them and place in a paper bag. Clean them up in August and sow the seed evenly on good sandy soil in small pots at the end of August or early in September, pinching out about twelve seeds to each pot. Keep in very gentle warmth, growth soon follows. Such seedlings will grow on coolly the following year will bloom profusely all through the succeeding winter in 6-inch pots singly.

Winter Pelargoniums (CROSFIELD). Plants of zonal *Geraniums*, of course, *Pelargoniums* intended to bloom in a warm greenhouse next winter should now be young plants well rooted in small pots. It is best to have them from cuttings made in February; still, some of the smaller of the previous autumn struck cuttings will do. When well rooted shift into 6-inch pots, keeping them still in a greenhouse or frame near the glass for a few weeks, then shift once more, potting very firmly into pots 6 inches over the top. When in these stand outdoors in a position where the sun shines for several hours and on a cool ash bottom. Pinching should begin about May and be continued up to the middle of September, no bloom being allowed to develop, and the shoots stopped to cause the plants to grow bushy. By the time started, get the plants into a greenhouse and cease pinching. They will bloom freely for four months at least in a gentle heat. From midsummer give weak manure water at first once and later twice a week.

OUTDOOR GARDEN.

Cactus Dahlias (PESFONE). Do not worry because the artist has not yet sent you ordered Dahlia plants. They are best with him yet, as he has them propagated from cuttings in heat now singly in small pots, and is hardening them in a cool house ready for sowing out. They will probably come to you carefully packed, pinned out of the pots, about a couple of three weeks hence. When you get them put them into 6-inch pots, using good soil, and keep in a frame or greenhouse for two or three weeks, then stand

the plants outdoors in a sheltered place to harden, finally planting them out where to bloom early in June. You will find if the soil has been well manured that growth will be rapid. Your selection is a fair one. If you like to do so yet, get *Starfish*, scarlet; *Mary Service*, mauve-shaded; *Britannia*, salmon; *Island Queen*, lilac; *Keynes' White*; and *Arachne*, petals white, edged with crimson.

Narcissus prince's tailing (G. H.).—This *Narcissus* is a collected plant, and objects to a certain extent to being brought into cultivation, and under such circumstances often produces sickly-looking foliage, as per sample sent. If the bulbs are taken up and planted in grass or in damper soil, they would in a year or two again resume their healthy green foliage.

Perennial Phloxes (ST. B.).—Although it would have been better done a month ago, it is not yet too late to make cuttings of some of the shoots now breaking up from the roots of your herbageous Phloxes, to insert them as cuttings 3 inches long moderately close together in 5-inch flats filled with sandy soil, water them, then to stand them in a gentle bottom-heat, when they will soon root. In that way, putting these rooted plants outdoors thinly later, you will have from them splendid single trusses that will be far finer than those borne by the old plants. Next winter lift your old roots, and dividing each one into several, replant some in fresh soil. That sort of treatment should be meted out to them every two years at least. Very many other good hardy herbageous plants suffer because not often lifted, divided, and replanted, the soil about the old roots becoming starved and growths too thick and weak.

Blue Salvias (R. H. S.). You can raise these beautiful flowering plants from seed, and once having a stock, can no doubt save seed yourself, as also the roots, which, like those of the *Bahia*, are tuberosous and fleshy. They are not sufficiently hardy to render it safe to leave them out in the ground all the winter except in favoured positions. We have found seed-production dependent on fertilisation of the flowers by bees and other insects. Some enter the flowers by the mouth, and thus carry pollen with them to fertilise the pistils of other flowers, and some bees perforate the tube close to the ovary, and thus do nothing to help fertility. The roots, after the plants have been cut down in November, should be lifted and put close together in a shallow box, the soil being placed about them, and kept from frost and in a moderately dry place for the winter.

GARDEN DESTROYERS.

Fungicide injuring plants (F. L.).—I am very sorry to find from your letter that the fungicide I recommended appears to have been too strong for your trees. Are you quite sure that you made it up in the proper proportions? I was afraid when I read your letter that I might have made some mistake in the figures, but I find I did not, and the recipes were those recommended by the best authorities in this country and in America. I do not know how you applied the mixture. It should have been in a fine spray, which would just moisten every part of the leaves. You speak of signs of discoloration where every drop had settled, so that perhaps you applied it in too other-wise a manner. I cannot account for the injury in any way, provided that the mixture was properly made. Great care should be employed in making up most insecticides and fungicides, and the quantities should be accurately measured or weighed, or the result may be disastrous. G. S. S.

Rhododendron leaves diseased (AL.).—These are no doubt injured by one of the so-called "shot-hole" fungi, and not by a leaf-eating bee or other insect. Many years ago I had some common Laurel leaves sent to me that were injured much in the same manner. The fungus belongs to the genus *Cercospora*, but I cannot be certain of its specific name. I have never seen *Rhododendron* leaves injured in this way before, at any rate not to the same extent. The bushes having suffered from last year's drought, and therefore not being in good condition, no doubt rendered them more liable to the attacks of fungi. It would be as well perhaps to pick off the clusters of leaves that are badly injured and spray the plants with *Bordeaux* mixture once or twice with an interval of a week between each spraying. The way in which these fungi destroy the leaves is very singular as the leaves have quite the appearance of having been attacked by some insect that had eaten portions of them away. *Geranium* leaves often suffer in this manner. G. S. S.

PRIMULA OBCONICA IRRITATION.

I should be much obliged if you can tell me anything that will prevent the stinging of *Primula obconica*. We have a large house planted out with the improved variety, and my hands are very painful and swollen after touching it. I should be sorry to give it up, as it is such a useful flower for cutting. Can the flowers be put into any solution or anything rubbed on the hands to prevent irritation? A. B. C.

CATALOGUES RECEIVED.

Crossing Roots and Supplies Stock of Trees, Shrubs, &c. H. P. Kelson, *Leaumont Building, Boston, Mass., U.S.A.*
General Catalogue. A. de Chery, *van Ghuseghem, 49, Chaussee de Gand, Lebbeke, Belgium.*
Roses. W. Paul & Son, *Waltham Cross, Herts.*

PHOTOGRAPHS AND NOTES. We shall welcome very much any photographs and notes sent to us, and hope readers who thus give practical assistance in making THE GARDEN interesting and useful will give their full names and addresses, and, not necessarily for the sake of publication, but to enable us to thank them for their kind co-operation in our work.

THE GARDEN.

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[MAY 12, 1900.

THE FUTURE OF THE ROYAL HORTICULTURAL SOCIETY.

WE publish this week (page 352) two letters of importance bearing directly upon the work of a society which upholds the dignity of horticulture in this country, a society which has gathered within its folds earnest workers for the advancement of an important industry, whether viewed from the standpoint of business enterprise or from that of a health-giving recreation. Mr. Arthur Sutton's carefully considered letter should be read by all members of the Royal Horticultural Society as concerning a phase of its practical work, and recommending, what no one will dispute is desired, a hall of horticulture; and in the other letter from our correspondent, the merits of the site selected by the council as likely to provide excellent accommodation for the new gardens are strongly recognised, endorsing the reports upon the Limsfield situation made by Mr. Bunyard, Mr. G. Paul, Mr. Beckett, and Mr. Pompart.

But it appears to us that confusion is likely to become worse confounded unless the utmost sympathy prevails between the council and the Fellows, who are apparently at some variance as to the way the centenary shall be celebrated. The annual meeting, without a single dissentient voice, agreed to, as a means of celebrating the forthcoming event, new gardens or trial grounds in the country, and recommended that the council take the necessary steps for putting that opinion into definite form. This resolution was again decided upon, not so unanimously, but with a distinct majority, quite recently, and yet proposals are being brought forward by members present at that meeting utterly disregarding the previous decision.

The Royal Horticultural Society is passing through a critical stage of its not unchequered career. We now ask this question: Is it to remain a national organisation, an immense power for the advancement of horticulture, and a witness to a nation's enthusiasm for gardening in its varied branches, or is it to become a society for the holding of a series of exhibitions during the year, without any other justification for its existence, a kind of National Rose or Chrysanthemum Society, famous for its shows and the "cult" of a certain flower!

These are questions that must be asked. If the Royal Horticultural Society is to be simply a London show society, then will it cease to exist in a national sense, and we presume that a hall of horticulture will not be for the society alone, but rather a meeting place for all societies, each with a separate existence, much as the Church House is for the Church of England.

With patient forbearance on both sides, a thorough understanding may be surely arrived at without serious division, and we earnestly hope that Mr. Sutton will rejoin the council to which his great knowledge and practical advice are of untold value. Divisions tend to destroy, not to further good work at this period when the love of flowers and the economic requirements of a great nation increase amazingly every year. The society should steadfastly go ahead, and not restrict its work to a few shows and meetings.

We know that from well-nigh total obliteration it has risen to its present strong position; it has steadily grown in power and financial security; and we must not forget that Sir Trevor Lawrence and the Rev. W. Wilks have played no obscure part in this important result. By restricting its work to London only, there may be in time a hall, but there will be no gardens, because serious gardening at Chiswick becomes more impossible every year, and no horticultural school to satisfy an undoubted demand.

It rests with the Fellows to declare whether the Royal Horticultural Society is to suffer partial extinction, or to develop the practical work which we think has formed its basis, as was the intention of those good men who laid the foundation-stone. Its practical work was the only bright spot in that miserable South Kensington policy, which flung aside all horticultural considerations for the sake of gilded courts and gardens for nursery-maids and perambulators.

THE EDITORS' TABLE.

MR. BAYLOR HARTLAND, the well-known nurseryman at Cork, sends us flowers of twenty-two kinds of early Tulips which show how well the bulbs succeed in Ireland. The following were the chief kinds sent to us:—

Wouverman. Large, magenta-purple, yellow at base inside.

La Sature.—Small, white, bright yellow at bottom inside, bluish tinge on outside of segments.

White Swan.—Pure white flower, well shaped and borne on long stems.

Thomas More.—Tall, flowers shaded crimson at the base of segments and orange at the apex.

Duc de Malakoff.—Large and brilliant, the base and margin of the segments bright yellow, the remainder scarlet, dwarf habit.

Little Dorrit.—Smaller flowers, bright yellow, with somewhat indefinite red marking, more marked outside than in.

L'Immaenlé.—Small white flowers, yellow at base.

Bizard Verdict.—Rich crimson, yellow at the base and streaked with same at the upper part, small.

Colour Cardinal.

La Remarkable.—Crimson-lake, shaded off white towards the apex, yellow centre, rather large.

Golden Eagle.

Ophir d'Or.—Brilliant yellow, rather small.

M. Stanley.—Purple-cerise.

Rosa Mundi.

Keizerskroon.

Van der Neer.

Rose Gris de Lin.

Prince of Austria.—Vermilion-yellow centre, orange tinge on outside of segments, a very handsome Tulip.

Van Berghom.—Sweet scented, crimson-purple, yellow centre.

Pink Beauty.—Well shaped, crimson, shaded to white towards base.

Duchess of Parma.

TRIMARDEAU PANSIES.

FROM "M. L. W.," near Bath, come some blooms of Trimardeau Pansies, well shaped and well coloured, and $2\frac{1}{2}$ inches by $2\frac{3}{4}$ inches across, showing how suitable this fine strain is for small suburban gardens where they are well grown and cared for. These flowers have rich purple grounds with a large spot bordered with yellow.

EUPHORBIA WULFENI.

A SPRAY of a handsome Euphorbia (*E. Wulfeni*) comes from the Botanic Garden at Bath. It forms a large plant, and to judge from the one spray sent, which measures 12 inches by 7 inches, it must indeed be a striking object. This spray alone must comprise 200 or more of the brilliant green, shallow cup-like blooms. We hope to give later a more complete description and illustration of this plant, a most desirable thing for bold, pictorial use in the early outdoor garden.

CARNATION THE COUNTESS.

MAGNIFICENT flowers of this Carnation come to us from Mr. W. Stacey, the Nurseries, Dummow, and he considers it the "best all-round variety for the border or early forcing." We have never seen finer blooms of this variety, so large, broad in the petal, pure white, and deliciously fragrant.

WALLFLOWERS OF GOOD COLOUR.

MR. MOLYNEUX, of Swainmore Park Gardens, Bishop's Waltham, sends a delightful gathering of Wallflowers of fine colours and rich

fragrance, comprising the deep blood-red, intense yellow, and rosy purple, but we enjoy most thoroughly the pure self shades. Hardy flowers are much grown at Swanmore, and beautiful effects result from bold grouping of good colours.

BUNCH PRIMROSES OR BORDER POLYANTHUSES. Mr. J. CROOK, The Gardens, Forde Abbey, writes: "I am sending you flowers of my strain of Primroses and Polyanthuses, a strain I have been selecting and working at for upwards of twenty years. As you will observe, there is great diversity of colour in the flowers. I prefer the varieties of strong self colours, such as the white, yellows, reds, crimsons, lilac, &c., that have good heads and close compact bunches of bloom with a good eye. There is a border of these close by my cottage, about 70 feet by 5 feet, filled with mixed varieties, and it is a wonderful sight. I am now selecting the colours."

[Flowers of very beautiful colours, on strong sturdy stems. An excellent selection, and we hope Mr. Crook will go on selecting all that is good in colour amongst the Primroses and Polyanthuses.]

NOTES OF THE WEEK.

The Chilean Crocus in South Devon.—I have the blue Chilean Crocus growing in a little raised border under a west gable and carpeted with Selaginella. The bulbs are not deeply planted, and they withstood the frost we had and flowered well, and give promise of increasing.—C. M. B.

The rock garden at The Friars, Henley-on-Thames, the residence of Mr. Frank Crisp, is one of the finest in England, and when we were there a few days ago was full of colour from the masses of yellow Alyssum, Aubrietia, Gentianella, Arabis, and a host of other plants grown in large colonies.

The Bluebells at Kew are very beautiful in the arboretum and in the grounds surrounding the cottage graciously given a year or two ago by Her Majesty the Queen. This feast of Bluebells is one of the most charming sights near London, and in a quiet woodland disturbed by the song of birds and made blue with the fragrant flowers.

Tree Pæonies at Nice. Mr. Woodall, writing from Nice, says: "Tree Pæonies Sir R. Stuart-Low (flame red) and atropurpurea are two of the most startling colours I have ever seen. Leopold and Marie Stuart have the finest poppy-like black eye, and Souvenir de Ducher, a black-smoke-purple, is the biggest and stiffest flower and doer I know. They evidently love a calcareous and clayey soil."

Some plants in flower at Kew. A correspondent sends a list of a few flowers of especial interest at Kew. The list was made on May 5. In the small house near herbaceous ground: *Dodecatheon meadia* var. *alpina*, *Primula frondosa*, small rose-coloured flowers, *Muscari grandifolium*, *Mertensia pulmonarioides*, *Trillium grandiflorum*, *Gentiana verna*, *Brodiaea uniflora*, *Ranunculus amplexicaulis* and *Primula viscosa*. Especially interesting in the rock garden was *Camellia Donkeharri*, and in the temperate house, *Strelitzia Reginae*, *Echium callithyrsum*, *Rhododendron Comites* of Haddington and *R. griffithianum* (beautiful bushes). In the T range were *Saintpaulia ionantha*, *Seilla natalensis*, *Clivia miniata citrina*, and in the succulent house *Maria cerulea*. The arboretum is especially interesting just now, with its groups of *Spirea arguta*, *Prunus nanus*, early *Rhododendrons caucasicum pictum*, *Frances Thibetlon-Dyer*, *Lucombei*, *altaclarensis*, *Smithi coccineum*, and *russellianum*.

Wild Anemones.—The pretty illustration at page 281 shows how Nature groups her flowers by utilising a chance bare spot. In the battle for existence which goes on often without perceiving

it, what a boon an odd bare spot is to plants on the look-out for colonisation! A bare patch where weeds have been burnt is seized upon directly by the plant most at home in that locality, and so an individual expression is given. In one soil Heaths and Brooms, in another Anemones and Violets fight for the mastery, and he who would succeed in beautifying his wild garden will do it best by studying the wild flowers of his own district and adding their congeners, who are far more likely to succeed than would fresh casuals brought in for mere beauty apart from consideration of congruity or food requirements. The important thing in every case is to sow or plant broadly: not to insist too greatly on variety, or bold effects will be lost. In a wild garden it is not wise to aim at growing a little of everything.—E. H. WOODALL.

Polemonium confertum melitum.—I can fully bear out the desirability of growing the above plant, which Mr. Jenkins draws your attention to in THE GARDEN, May 5. I raised it last year from seed, and it is now flowering in my rock garden. One plant is quite white, another is a soft primrose colour, both with gold anthers. I find they stand frost well, as we have had some severe frost here this winter and spring, but they seem to enjoy a rockery in preference to a border, as they do well on my rockwork, but only poorly in the border. My soil is light, and climate rather damp. It is an advantage their flowering thus early, earlier than the other *Polemoniums*, and for many reasons therefore it is a decided acquisition.

Geo. DIXON,
Ishle Hall,
Chelford.

Leucolum (Acis) autumnale.—This is one of the daintiest flowers of the year, and very interesting when cultivated in pots. It may remain three or four years, and in the mean time save the seeds that are usually produced each year. A good stock will result. It is a plant scarcely known, and a little group in the rock garden is always interesting.

A remarkable Garrya elliptica.

This handsome winter shrub is so frequently recommended for planting against a wall, that an instance of its growing in bush form may be of interest. Until recently a couple of plants grew one on either side of the half-circular drive that approaches a villa residence in this district. For many weeks during the past winter the plants were a picture of beauty, simply a dense bank of 20 feet long at least, in the fullest of health and vigour and loaded with catkins. The interesting part of the matter is that for about thirty years these plants had grown into bush form and without the least protection. A short time ago the plants were some 10 feet high and about the same distance through. From the ground the short trunk is about 9 inches long and about 9 inches in diameter. Then the plant spread out into a fine bush with some eight or nine leading lateral branches, these varying from 3 inches to



LEUCOLUM (ACIS) AUTUMNALE.

3½ inches in diameter at the thickest, *i.e.*, the lowest point. In all these years the plants were never touched with knife or pruning scissors and have never been harmed by any frost, while the Portugal Laurel has suffered severely in the same period once or twice. It so happened that the snow resting on the branches bore them down slightly during the past winter, but in no way to disfigure them or even to injure their prospect of future beauty. The gardener who attends some two or three days each week thought differently, however, and obtained permission to prune the plants as he thought fit. Unfortunately, this enthusiast selected the hand-saw, and in a few minutes the growth and beauty of nearly thirty years of this precious *Garrya* were strewn around. I secured a portion of one of the limbs to show to the members of the floral committee of the Royal Horticultural Society, when it was generally conceded that the growth was well-nigh unique, so far as British inland gardens are concerned. The portion exhibited had a diameter of about 3½ inches at the thicker end, and about 3 inches and 2¼ inches at the thinner end, where also it was less uniform in thickness. Both plants had grown on a slightly sloping bank of very dry and very poor soil, where the drainage was perfect. This dryness at the root in no way militated against their success, while the vigour was well maintained to the end. In proof of this it has only to be stated that some of the young shoots of 1899 were 3 feet in length. This instance shows that this *Garrya* may be grown as a shrub in the open in ordinary lush form to a size much beyond that usually stated.—E. H. JENKINS, *Hampton*.

Anemone vernalis.—In all probability no member of the genus is less seen grown to perfection than this. The plant belongs to the group that includes the well-known Pasque Flower (*A. Pulsatilla*). The kind in question, the Vernal Windflower, though why this should be so called when so many are spring-flowering is not easy to say—is very distinct from the ordinary Pasque Flower by the foliage, and also the flowers. The latter are not easy to describe, they are so peculiarly shaded, and embrace so much variety which makes the plant very interesting. It is always a dwarf plant and one difficult to secure in really strong pieces, but where these possess a few fibrous roots there is hope of the plant becoming larger and more interesting each year. The chief obstacle is dryness, and the plant is not happy unless in cool and comparatively moist surroundings. On the rockery select such a spot, and plant the specimen in rich loam where its roots can run down beside a piece of rock or stone. This gives the coolness it loves, and in such a place progress may be regarded as certain. Keeping such as this in small pots is waste of time and valuable material.—E. J.

Kerria japonica flore-pleno.—This deciduous plant is not grown nearly as much as its merits deserve, not only for the shrubbery but as a wall climber. In the latter way it is extremely useful, growing so well and making such a brave golden show on a northern aspect in April and May. Growing in this way it can hardly be termed deciduous, as seldom does it lose all its leaves before another crop is formed. By planting in tolerably rich soil, keeping the branches and shoots closely fastened to the wall, a dense green covering is quickly obtained, to be followed in spring by its numerous orange-yellow blossoms, which have such a fine effect when backed up with the dense green leaves, which are so much larger and darker in colour when growing under the conditions described as compared to the miserable plants so often seen struggling in the shrubberies under the shadow very often of taller subjects, thus robbing the *Kerria* not only of its due share of moisture and manure at the roots, but excluding also the sun. Propagation is a simple matter; half-ripened cuttings in August dibbled in sandy soil under a hand-light quickly grew into serviceable plants.—E. M.

Narcissus King Alfred.—This handsome Ajax kind is among the finest of recent additions to the trumpet section. It is, I believe, a seedling resulting from crossing *maximus* and *Emperor*, but, whatever its parentage, it is the sort of flower that could be expected from this or a similar combination, for in addition to the noble

form there is that beautiful reflex of the mouth of the crown which is a charming feature of the maximus kind. Generally, however, King Alfred partakes of a highly-refined Emperor (with the reflex already noted), the colour deepening to the more uniform yellow tone given it from so rich and well-coloured a flower as *N. maximus*. The latter, however, is a very shy and uncertain bloomer, and we can only hope, assuming it is one of the parents of the new kind, that the vigour and freedom of Emperor will more than make up for the shortcoming of the other, for a Daffodil to-day is not much use in our gardens if it is not free-flowering; and while we have many fine things, we have yet to see the colour of maximus embodied in a free-flowering hardy and reliable growing Daffodil suitable alike to amateur and professional growers. E. J.

Saxifraga Boydii. Nearly all the best of the yellow-flowered Saxifrages, and particularly of the encrusted group, are of garden origin. What I regard as the two best are the above and the quite pale yellow *S. aretioides primulina*, both of which are of garden origin and of comparatively recent introduction. But it is with Boyd's yellow Saxifrage that we are now concerned. Not only is this one of the choicest of the alpine flowers now in bloom, but it also figures supreme among the members of its own race. The flowers are large, larger than is usual in many forms of Burser's Saxifrage, and clear yellow. Unlike Burser's Saxifrage, this kind has frequently three flowers to each stem, while the former has but one. Both kinds possess the same scarlet bud, and the peduncles have a similar tint in both plants. Boyd's kind, however, is a slower-growing plant, and generally (with me, at least) dwarfer in its flowering, but this does not detract from its beauty. It is certainly a most charming plant worthy of every possible care, though not coddling, which is now found by experience to be both unnecessary and harmful, except where employed with sound common sense and knowledge of the locality in which the things are grown. My plant of this Saxifrage has been fully exposed, and not even plunged winter or summer, and it is certainly a very charming object at the present time, and quite full of bloom.—E. JENKINS.

Garden Auriculas.—That well-known artist, Mr. Moon, seems to be the possessor in his St. Albans garden of a beautiful strain of pale yellow Auriculas. He showed me at the Drill Hall, on the 24th ult., flowers of very fine form and substance, as big as those of large Chinese Primroses; indeed, fully 2½ inches in diameter. These large flowers, Mr. Moon stated, were borne on stiff stems, and were very handsome. It is hoped that when abundant, so very fine a variety will find its way into commerce. The strain helps to illustrate what most gardeners get to know during their lives, that there are about in gardens many beautiful things that do not get shown in public, yet are so worthy of the fullest notice. I hope that, seeing how beautiful good clumps of these hardy Auriculas are in gardens, very much may yet be done to improve and popularise them. A. D.

Fritillaria aurea.—This Snake's-head Lily, like some others of the genus, is not so easily grown as the common *Fritillaria Meleagris*, and in several gardens of my acquaintance it fails within a year or two after being planted. I was thus much pleased to see a nice clump in full bloom in the garden of Mr. James Davidson, Summerville, Dumfries, the other day. This clump, originally only one bulb, has increased considerably, and there were thirteen flowers fully open upon it when I saw it. It was very attractive indeed with that number of large yellow bell-shaped blooms in capital condition. The plants were in the herbaceous borders, and have thriven in the rather heavy loam which is the basis of the soil. This beautiful Fritillary does not seem to make much headway in most gardens. In my own it is not a success, which I attribute to the dryness of the subsoil. The varieties of *F. Meleagris* are more accommodating, as also are several others of this interesting, if not showy, genus. *F. aurea* is, however, brighter than many others. S. ARNOTT.

TREE PÆONY. (PÆONIA MOUTAN.)

OF the many good plants we have had from China none is of more importance than the Moutan or Tree Pæony. The old kind with double pink flowers has long been established in English gardens, and sometimes attains a large size, when as a single bush in some sheltered corner of the lawn it is a beautiful and important object.

But of late years our gardens have been greatly enriched by a quantity of new kinds, and the range of tints from pure white through flesh and salmon-rose to deepest claret colour in one range, and from the faintest blush of cold pink through the amaranth to strongest

lising themselves, but if a bee, or a fly, or the wind carries pollen from other individual flowers on other plants they do so very readily, and resultant hybrids are common. The dainty white form, called Constance Elliott, is a most exquisite lamp-light flower, and charming for a sheltered nook or sunny gable.

Philadelphus mucronatus. This is one of the rarest and sweetest of all the so-called Syringas, or Mock Oranges. Its straight amber-coloured shoots grow from 4 feet to 6 feet high, and flower the second year. The flowers are axillary and generally solitary, ivory white in colour, and one variety has a purplish rose blotch at the base of each petal. It is now and then seen in old Irish gardens, and may generally be detected, even at night, by its exquisite spice-like odour. It is known in Ireland as the Rose Syringa, and our plants come from Mount Usher.

Punica granatum.—This is the well-known Pomegranate tree, so much grown in pots and tubs throughout Southern Europe and Asia Minor. The plant is fairly hardy on dry warm soils, and the plant has flowered and fruited on a wall at Kew. The young growths are of a glistening red colour, and the flowers are vivid coral-red or scarlet. There are double and dwarf varieties, but none more beautiful than the common kind. Pomegranates, Myrtles, and Sweet Verbenas are all most worthy of being planted out in sunny and sheltered courts or enclosed gardens everywhere, even if they have to be sheltered during bad weather. They are fairly hard south of London.

Rhodochiton volubile. This is a Mexican plant of the Snapdragon family, resembling the genus *Lophospermum* or *Maurandya* in habit, but the pendulous tubular flowers have a widely expanded or umbrella-shaped calyx spread out above the flowers. It is easily raised from seed, and though really a perennial, it may be grown from seed each spring as an annual. It grows to a height of 6 feet to 12 feet in a season, and is very distinct and effective as seen dangling from a pergola or from Colletias on a wall.

Rhynchospermum jasmuinoides. Some of us remember this being grown as a warm greenhouse or stove plant for exhibition years ago, but it is quite hardy grown in peaty compost with a north-western aspect. It is a neat and pleasing plant when healthy and covered with its sweet Jasmine-like clusters of white flowers. I first saw a specimen outside in the Jardin des Plantes, and more recently several in Devon, Cornwall and Wicklow, so that if well and properly planted at the right time there is but little doubt of its doing well in sheltered places.

Rubus deliciosus. I never think that this plant looks its best on a wall, but as a bush or trained to snakes like an espalier fruit tree it is very fresh



A TREE PÆONY BUSH.

magenta-purple in another, affords a wide choice in the way of colouring. Tree Pæonies enjoy a sheltered place in strong soil.

SOME OF THE RARER CLIMBING AND TRAILING PLANTS FOR WALLS AND PERGOLAS.

Passiflora caribea. The blue Brazilian Passion Flower deserves mention for large sunny wall areas, and is so handsome in leafage, flower, and during the autumn and winter, when its orange egg-like fruits hang amongst the old leaves on the vines; but there is a secret about its fruiting. A solitary plant rarely ever does so. If two or three individuals are grown together or near each other they often fruit very freely. Dr. Masters told us long ago of the Passion Flowers rarely or never ferti-

and beautiful. It grows more compact and bush-like and is less spinose than most of its allies, and its large white flowers have a most delicate crape-like texture, each petal being crumpled like those of its first cousins, the Roses. The plant was named by a hungry and thirsty traveller, it is to be supposed, since its fruits are rarely produced in our own climate are far from being a delicacy.

Scyphanthus chrysan.—This is an annual plant belonging to the Loasa family, and in general aspect is similar to the elegant yellow *Tropeolum aduncum*, or Canary Creeper. I first saw it in the then wonderful garden of the late Mr. Joad at Wimbledon, trained up wire netting to a wall. Seed is offered by Mr. Thompson, of Ipswich, and others, and the plant is distinct and well worth growing.

Smilax rotundifolia.—A very handsome large-leaved Smilax with shiny foliage now and then met with as *S. laurifolia* or *S. latifolia*, from which, however, according to Mr. R. Irwin Lynch, of Cambridge, it is distinct. All the kinds of hardy Smilax form handsome leaty creepers for walls, but in our climate they rarely produce the rich clusters of red berries that often render them so attractive abroad.

Sollya heterophylla. This is the dainty little Australian Blue-bell Creeper, and belongs to the shrubby Pittosporums, growing from 2 feet to 6 feet in height. It was formerly much valued as a greenhouse plant in the old days of the "balloon-trellis"—surely a "false ideal," and one of the very ugliest ways in which graceful climbers could be grown. But even in that way this *Sollya* and the dainty little tuberous-rooted kinds of *Tropeolum* used to be extremely fascinating to man in habit, such as *S. parviflora* (*S. Drummondii*), *S. salicifolia* (*S. heterophylla*), and *S. angustifolia* or *S. linearis*, also a form of the last-named.

Stauelia pseudo-Camellia. A rare and very beautiful flowering shrub now seldom seen in even the best of gardens. It is a native of Japan, the flowers being ivory white and perfectly cup-shaped, somewhat like a single white Camellia. *S. pentagyna* comes from North America, as also *S. virginica*, but the first-named is the finest and is worth a good deal of trouble to grow well. Planted in loam and peat and sand at the foot of a sunny and sheltered wall, the flowering shoots may be preserved intact during the winter.

Triensipularia hexapetala. A very distinct and beautiful evergreen shrub, perhaps better known as *Crinodendron Hoopii*. It is a native of Chili, and grows 5 feet or 6 feet high, its stiff branches set with dark, shiny ovate leaves. The flowers are neatly globular, very fleshy, more so than are those of the *Clematis coccinea* which they facially resemble, and they are of a rich crimson-red or cherry colour. In both Co. Wicklow, at Mount Usher, and at Salerno, Co. Dublin, this rare shrub is very luxuriant and beautiful. It grows well in deep, rich, moist loam or in peaty soils, and propagates readily by layers laid down under stones.

Veronica hulkiana. This is one of the gems of a genus at home on the Alps of New Zealand. It is a favourite of mine and does well here and elsewhere, though my friend Mr. T. Smith, of Newry, who has a soil that practically suits everything, tells me it is there an exception to the rule. It is not a long-lived plant, but is easily increased from cuttings. It fills a space on a low wall of say 4 feet by 4 feet, the upper part of the plants being in April (and May), a mass of feathery

sprays of soft lilac or lavender-coloured flowers. No other *Veronica*, and there are many, is quite like it, and at its best it is the most beautiful of all I know. Where the climate is too severe for it, plants in pots bloom well in a cool greenhouse.

Wistaria sinensis.—As seen at its best around Paris and London, to say nothing of its wondrous beauty in Japan, there are few, if any, wall or pergola climbers to rival the *Wistaria*. Very old specimens are still existent at Chiswick and at Kew. The lilac and white varieties of *W. sinensis* are lovely as seen together at Hampton Court and elsewhere. *W. multi-juga* and one or two others may be tried, but all are rather slow growers in our climate. The *Wistarias* like warm loam or gravel and are increased by layers laid down under large stones.

F. W. B.

ALPINE GARDENING.

We have witnessed during the last twenty years a most interesting evolution in the gardening art. For several generations the traditions that *Le Nostre* inherited from the Italian Renaissance had been followed, but of late landscape gardening has been seeking inspiration from the laws of Nature, has been saturating itself with her influence and striving to repeat the echoes of her sonorous voice. The change took place first in England, then in Germany, where in the last century Goethe planted the wonderful Belvedere Park at Weimar, resolutely breaking the bonds of the old practice, and making natural gardens, while we children of the Latin races were still following in the old groove.

So, instead of straight lines and rectangular forms, graceful curves came into use; instead of rigid and monotonous borders we have artistic groupings and harmoniously designed garden pictures. Instead of bare dug earth, stiffly shaped into conventional patterns and bordered with edgings of clipped Box, we have substituted

the velvet surface of verdant lawns. But it was carried still further because people soon wearied of a voiceless harmony, and it came to be understood that in this picture representing Nature, life and movement and the sense of *being* were wanting. Then it was that water was introduced, to run in streams that should murmur their delicious music, and to tumble in falls and cascades that should utter the noble language of the natural elements. And then it was that the pictorial aspects were introduced, and that the rougher grass of the pleasure grounds had its plain groundwork of monotonous green enamelled with many flowers, and especially with those of bulbous plants.

Rocks were also introduced, with their own special qualities of charm and their own way of appealing to our imagination; for the great rock masses (if my words seem not paradoxical) have their own beauty and grandeur and poetry. I love the tender melodies that seem to spring from the ancient rocks that have stood for ages, fretted and corroded by fierce sun-heat and lashing beat of storm-driven rain; melodies audible to minds attuned to Nature's poetry that steal with a sense of gentle intoxication into the willingly receptive brain. The Muse gladly haunts the garden that encloses some stony masses, for with these she has special bonds of sympathy and intimate understanding. She has sung of lakes and seas, of rivers and mountains; the great woods, the glaciers and even the marshes have had their enthusiasts. But who has ever sung the beauty of the rocks? And yet the artist and the poet could scarcely remain insensible to their attraction, for though heavy and massive of weight and bulk they often present the most delicate forms and the tenderest of colouring.

Let it be understood that I am speaking of those rocks whose surface has been wrought by



AN ENGLISH ALPINE GARDEN.
(From a photograph by Miss Willmott.)



PRIMULA VISCOSA IN THE ALPINE GARDEN.

wind and weather, and not either of common rounded pebbly lumps, or of stone freshly taken from the quarry to make an artificial rockwork.

Rightly used, rocks endue a garden with quite a special impression of pictorial Nature. They sound within its bounds the true tone of mountain poetry such as we should do well not to overlook. For after all what should a garden be if not a place of repose and of delight: a place where the mind comes into touch, not so much with the work of man as with that of the Creator, and with the voice of His great Nature.

It appears to me that the gardens of our cities and of our suburbs, with their painfully well-brushed trimness, with their stiff flower-beds traced with the compasses, or looking as if they had been punched out of the green carpet, whether of one or many patterns, of a single colour or of a variety, are far from presenting such a type as I dream of for my garden ideal.

The true garden, to my mind, is such an one as my friend Wilson has made beneath the great Oaks at Wisley; the simple garden pictures that Miss Jekyll has drawn at Munstead, and such an *alpinum* as Miss Willmott has made at Warley, conceived in a style which most nearly approaches or suggests some relation to the larger work of Nature. For when one speaks of a true garden, one means a place of refreshment, of relaxation, of repose of mind, of communion between Man and Nature; some form of idealised culture.

And this is so true, that when God created man, desiring so to place him that, surrounded by delights, he would find happiness. He put him in a beautiful garden. And it is this Eden, this paradise that still haunts the imagination of all peoples of whatever race or religion, that ever seems to be the perfect type of a garden. Now this departed splendour, of which humanity has retained an ever-living, though scarcely defined, remembrance, can neither be represented to us in a style of motley garishness nor one of conventional stiffness such as would be offered by the ordinary garden-maker. It should be, on the contrary, a careful assembling together of some of the earth's beautiful living

things; in form a harmonious composition, in colour a loveliness of many tints.

In modern gardens, on the contrary, we most frequently find only a repetition of the errors of taste that are so often to be found within our dwellings, for they are often filled with undesirable absurdities that recall the worst faults of the draperies with which our rooms are filled. This is called *mosaiculture*, a lamentable invention which demonstrates only a sort of cleverness on the part of the gardener, but is absolutely without imagination or poetry, which wounds our artistic sense and practical taste. What a strange aberration, what a false conception of art or good taste are these gardens, gaudy as Chinese potteries, whose sole object seems to be to exhibit the ingenuity of the gardener. The kindly solicitude of Nature is there unseen, for these gardens, when they contain flowers, only have them as coloured masses, like misplaced dabs of paint upon a picture rather than as things that have life and should contribute to our happiness.

I read lately, I think in this very journal, a protest against the absurd conception that leads our seed growers to produce dwarfed novelties, showing neither stalk nor foliage, and covered with a mass of flower. I have long raised my voice against this depraved taste and protested against this manner of mutilating the lovely plants that God has given us. Eleven years ago (in 1889), at p. 216 of my book on Ferns, I stood up against this detestable maltreatment, and there said: "To read the catalogues of some seedsmen who desire to outdo each other, one would think that the highest point in art or science was to succeed in producing ball-like plants wherein the flowers should smother the foliage." Since then these matters have progressed so rapidly that we have arrived at having scarcely any foliage, and the perfection of the style appears to be to produce a mass of one colour, shapeless, without outline, without elegance, but—showy! To be showy, that is the object; to outdo one's neighbour, that is the thing desired. Not long ago I received a visit from a German lady who came to see our

alpine garden with a view to procuring some extremely showy plants such as were not possessed by the other inhabitants of the town where she lived. "But, madam," I said, "alpine plants are not nearly so showy as, for instance, Geraniums or Begonias. If you wish for what is gaudiest, there are the Oriental Poppies and Peonies, whose glory is as brilliant as it is ephemeral." "Oh, no," said the lady in question, "my neighbours have these plants. What I wish is that all who pass by my garden or who see it from their windows shall see that I have got plants that they have not, and I wish the plants to show at a good distance!"

What flowers could one suggest for the gratification of such unworthy sentiments!

The garden, as I understand it and as I would have it, is a living picture or rather a world apart, where the mind is refreshed and forgets the vexations of life, and acquires new strength by contact with what is beautiful and great and true. "Man does not live by bread alone"; he needs also happiness and sweet scents and flowers, and he needs something even greater than these—the true voice of Nature. As for this great and powerful voice, the garden does not reveal it to man unless his own mind is capable of receiving the true reflection of wild Nature; and this is why, besides flowers, besides trees and shrubs and flower-enamelled meads, he needs the sound of falling water, the cavern's voice of hidden mystery, the flowery thicket where dwells the spirit of poetry, the rocks whose outlines are blunted by many a storm, and the flowers of alp and mountain which enrich the whole and animate and enliven the landscape.

The alpine garden, that product of modern days which owes its initiation to my illustrious fellow-citizen, M. Edmond Boissier, with its rocks arrayed with fullest bloom, its lawns set meadow-like with flowers, its perfumed sunny slopes, he showed in the best of modern taste. It was a little space of the mountain heights; a portion of the beloved alp, that he detached and carried home decked with all its bright blossoms and giving forth the poetry of the mountains.

But of late years what errors have been committed by the wholesale manufacturers of so called alpine structures, which, instead of being true reflections of Nature, are often only absurd parodies.

One who knows the Alps cannot see without wailing and gnashing of teeth the abominations that are perpetrated in this department of gardening. Have I not seen one of these so-called alpine gardens besprinkled with tropical plants and purely horticultural varieties of plants with double flowers and variegated leaves. A great French landscape-gardener, whose practice is largely in this way of gardening and who makes the mistake of failing to study Nature in her own home, advised someone a few years ago to plant in his alpine garden everything that he thought had the look of a mountain plant, including common border annuals. Such an arrangement is a piece of pure artificiality; it is not truth.

An alpine garden must be right and true if it is to be approved by those (and their numbers are daily increasing) who are well acquainted with alpine nature. Let it have for its yet lifeless structure or skeleton a quantity of granitic or calcareous stones, but do not mix up the two kinds of stone, as is so often done. There are whole chains of limestone mountains and others that are all of granite. Each has its own nature, its special stamp, a physiognomy that belongs to it alone. And if you would cultivate the two floras, for there is

the limestone flora and that of the granite (and the two do not combine willingly), devote one part of your alpine garden to the plants of the calcareous mountains and the other to those of the granitic. Be very careful that all the fissures, all the striations, the openings and the points of junction should be laid in the same direction, in order to avoid suggesting—what is the impression usually given by an English rockery—of a lot of stones heaped up only to enclose the plants. Mountain plants do not want to be framed round with stones, but both stones and plants should be so placed as to form one harmonious mass, and present a faithful picture of alpine plant life. They should be well bonded together; the alpine or rock-loving plants should be wedded to the rock by such harmonies of line and colour that the whole should seem like a piece of landscape cut out of Nature and carried into the garden.

In order to do this rightly it is necessary to study alpine Nature, to comprehend her and become master of her secrets. Even the grassy spaces should be composed of the herbage of the heights sown in place with all that the alpine turf comprises of flower and delicate greenery. And in this little alpine world there is room for a quantity of lovely, graceful and interesting little growths that belong either to the Alps proper or to other mountain chains.

With the first fine days of February the small spring Crocuses, those with white, lilac and deep purple colourings, pierce through the turf—the earliest flowers to deck the pastures after the melting of the snow. Then appear the Soldanelles in wide well-lighted niches of the rock, or even in the case of the mountain heights where the air is moist in the turf itself. These come directly after the Crocuses or even at the same time. Snowflakes (*Leucjum*), Snowdrops (*Galanthus*), Erythroniums, all bulbs of the mountain regions, enamel the alpine turf, while among the rocks the first Primulas of the *Auricula* group are in bloom at the same time as those of the Himalayas. There are also the Anemones of the *Pulsatilla* group, *A. vernalis* being the earliest, Androsace *Laggeri*, *Draba aizoides*, *Arabis* and others.

The flora of all the mountains of the world, provided that it represents the vegetation of the snowy zones, and that it shows the mountain character, finds a natural place in the alpine garden. But such alien plants should not have the supremacy, for then it would no longer be an alpine garden, but rather a general rockery of mountain plants, such as would have a certain charm, but would not be in accordance with the true alpine character.

For it is quite another thing to have a general rock garden: some sort of rocky construction for the purpose of growing all kinds of stone-loving plants, but this is not an alpine garden. The true *alpinum* demands a special knowledge of the nature of certain rocks, torrents, flowers and herbage.

HENRY CORREVOX.

Jardin Alpin d'Acclimatation, Geneva.

THE ROSE GARDEN.

HYBRID TEA ROSES.

PERHAPS the greatest proportion of this group are nowhere seen to greater advantage than under glass. Whether as pot plants or planted out, the sturdy erect growths so characteristic of the tribe, crowned with bold handsome blossoms, make them very valuable either for conservatory decoration or for cutting. I find it best to pot up early in autumn strong dwarf plants budded on the Briar. I grow them outdoors for

twelve months, when they are fit for forcing if required. If such plants are pruned rather hard the first year some sound new growths result, and the foundation is laid for a shapely plant. Supposing some such plants were potted last October and have been plunged out-doors in coal ashes, the pruning should be done at once. Cut the growths back to plump dormant eyes about 5 inches or 6 inches from the top of the pot, always taking care that the topmost eye of each shoot looks outward. Preparation should be made to cover the plants at night as soon as new growth commences.

A few thatching rods bent over the beds upon which to stretch a length of thick shading or mats will be ample protection, but this is useless unless put over the plants every night. When all danger of frost has passed, plunge the plants in a more open situation where they may obtain all the sunlight possible, but the plunging material now must not cover the pot as heretofore. By thinning the growths so that one or two only are left on each shoot, syringing in the afternoon on warm days, and careful watering, some splendid blooms may be had from these plants in June and July. By the autumn one may have a grand lot of well-ripened plants, the pots full of roots, a circumstance so conducive to their future good behaviour in the forcing house. There are at least twenty first-rate varieties of Hybrid Teas well adapted to this mode of culture. I will not name them all, but I may say that of the following seven, no one will regret having as many of each as they can find room for. These kinds are Mrs. W. J. Grant, Caroline Testout, Marquise Litta, Mme. Abel Chatenay, La France, Clara Watson, and Kaiserin Augusta Victoria. The steady increase of novelties among these Hybrid Teas will make it the class of the future. There seems to be an extraordinary vigour about most of them. That beauty, Mme. Abel Chatenay, grows so vigorously, that one could make a hedge of it if so desirous. Three new varieties that promise well are Mme. Eugène Bouillet, Duc Engelbert d'Arrenberg, and Souvenir de Mme. Ernest Cauvin. All these are real acquisitions to this important group. Possibly Mme. Cadeau-Ramey would take the highest position for form. It is splendid, the high-centred creamy coloured blossoms reminding one of Golden Gate in tint, but of Souvenir d'Elise Vardon in shape. This season the continental raisers promise us some Hybrid Teas as brilliant as the richest crimson Hybrid Perpetuals. I heartily hope that such may be the case, for this colour and some good yellows seem to be all that are wanting to make this beautiful section complete.

PHILOMEL.

SINGLE AND SEMI DOUBLE TEA AND NOISSETTE ROSES.

ARE we about to have yet another delightful feature added to our Rose gardens in the form of single Tea Roses? Signs are not wanting that such is the case. When Roses are cross-fertilised on a large scale there are sure to be a number of single flowering kinds that merit a better fate than to be thrown on the rubbish heap. There is probably no single Rose more beautiful than the Copper Austrian (*R. punicea*), which has been known in England some 300 years, but its season of flowering is a very short one. Gustave Regis is admired by everyone on account of its charming elongated buds, but it also has many admirers of its superb almost single expanded flowers, which are nearly white in colour, making a great contrast to the canary yellow buds. How very lovely Roses of this character would be if their large, almost single flowers were of the delightful colours we are now receiving from raisers at home and abroad. A pure yellow single Tea Rose would be highly appreciated, judging from the praises accorded the single Austrian (*Rosa lutea*), if such a kind were produced with large shell petals rivalling Gustave Regis in size. It once a good strain of single Teas were obtained, the various tints would quickly follow. Raisers of Roses find a very large percentage of their seedlings are single, and it is always a painful task to be compelled to throw away many lovely gems simply because they are single. Much curiosity has lately been aroused regarding Rosa

gigantea. In the new house at Kew the growth resembles an immense hedge Briar. I do not think such Roses are worth troubling about if their flowering is so uncertain, and I am confident equally large single Roses can be evolved from *Rosa indica*.

P.

"IN A SMALL WAY."

NOTES FROM AN OBLONG GARDEN.—VI.

THE *Chionodoxa gigantea* are, alas! just over. They have been lovely, and, beginning with the ordinary Crocuses, have far outlasted them. The tone of colour is exquisite, the white centre very showy, and the price so little more than that of the much less attractive *Chionodoxa Lucilia* that I shall plant yards of them this next autumn. They take no notice at all of snow and east winds, and will open without sunshine, each vividly blue star being as big as a florin in outer dimension. *Puschkinia libanotica* is now in full swing; it has come up very unevenly, the bulbs apparently travelling apart a good deal after planting, which was performed in close clumps in the sunny border; but every bulb has bloomed, and the close-set, firm little spikes of whity-blue, like very double elongated Squills, each rising out of its two neat very dark green leaves, are decidedly pleasing. The white *Pyrus japonica* is generally admired; it cannot compare with the red and pink ones in size of bloom, as far as my specimen is concerned, but it is most profusely covered with blossoms set all along its branches to the very end. It is the only shrub I know so utterly indifferent to the sun; it brought out its first blooms all obstinately turned towards the wall and away from his majesty's glance. The Wallflower bed close by, designed to throw up this white-flowered shrub with the pinky-chamois blooms of Wallflower Salmon Queen, is a disappointment. Three weeks of blizzards and cutting wind have defaced the leaves, and the plants look pinched by the want of geniality just when they started growth and bud.

I have made new enemies in the blackbirds, who dive their yellow bills savagely into the winter mulch not yet removed from parts of the garden where choice bulbs are pushing their noses through. The said mulch, a light one, was of old hotbed manure, and why the birds, having ignored it until now, should suddenly find it attractive I know not; but they have broken a number of bulbs off, and are anathema. This garden feels the drought so much in summer, that I mean to leave the mulch on where needed, sifting a little fine soil over it, and stirring the surface under it with a small fork so as to prick it in a little.

Have any flowers so gallantly aggressive an approach as Peonies, I wonder? Their great red Rhubarb-like points are intensely vigorous, and though the soil here is too light for their liking, I have ordered them a thick mulch of cow manure, and they are responding to its stimulus eagerly. There is a little scrap of rock border in the very hottest spot of this sun-baked area which has been rather a puzzle to me; it is almost 18 inches wide, and is backed by a bit of glaring smooth wall.

Zauschneria californica and *Helianthemum*s share the border, and what can I put on the bit of wall? Some Constance Elliott Passion Flower shoots come round a corner on to it, but do not cover it. I think of *Thunbergias* here; they love sunshine, and do not make much root, for which there is not room. Their buff and white flowers with black throats have an exotic charm, but they always look as if they smelt sweetly, and it is a disappointment to find them scentless. "What will you do," asks the voice of the "Drag on the Wheel"

(possessed by this household, as by most others), "when you have crammed every square inch of the garden!"—it is not far off it now. "You will have nothing to do, and nothing to scribble about then!" But did a woman who is really fond of gardening ever listen to counsels of moderation so long as one square inch remained unfilled and there was a penny in the purse? "I shall begin taking up all the commoner things and putting in the rarest and dearest instead," I jubilantly reply, and prudence subsides into silent disapproval. I have begun on this plan already by sacrificing some Pyrethrums that had not passed a happy winter and looked struggling, owing to having been planted out too late: they took up a piece of the best border where the soil is very rich, though light, and where there is abundance of sunshine. Their place is now occupied by *Polygonum baldschuanicum*, with a triangle of bean sticks, in which it can, if it only will, form a pyramid; *Michauxia campanuloides*, of which Miss Jekyll speaks so affectionately that everyone must wish to try it; *Incarvillea Delavayi*, and a big clump of *Sanguinaria canadensis* in the forefront. If they will only be kind and pleasant, this piece of border ought to be a joy, though it will certainly be a scrap of the dot-about system we are told is so vicious. In an oblong, however, a certain amount of breadth may be sacrificed to variety, though I have tried as far as possible to give at least 1 yard of ground to plants of a sort, and have my dotting-about done in clumps.

Bathwick Hill, Bath.

M. L. W.

FLOWERING SHRUBS AND TREES IN SOUTH CORNWALL.

ALTHOUGH one hears on all hands accounts of the lateness of the season, and many of the deciduous trees in this last week of April show scarcely a sign of swelling bud, gardens in the neighbourhood of the southern Cornish seaboard are bright with a variety of flowering shrubs. In a little triangular plot hardly 50 yards in length, close to the harbour wall in the town of Falmouth, two fine young trees of the Snowy Mespilus (*Amelanchier*) are in full beauty, and a like number of *Prunus triloba* are bearing their pink blossoms. The Pearl Bush (*Exochorda grandiflora*) and *Magnolia Lennei* are also in bloom, as are a fine bush of *Berberis Darwini*, *Cytisus praecox*, Paris Daisies that have passed through the winter unscathed, *Pyrus japonica* and *Rhododendrons*. Other noteworthy subjects in the same little garden are a good specimen of the Fan Palm (*Chamaerops excelsa*), an enormous shrub of *Garrya elliptica*, a large *Aralia japonica* about 8 feet in diameter, several specimens of *Draecena australis*, *Phormiums*, *Cistuses*, *Arundo donax* and *A. conspicua*, and a lofty and thick bush of *Escallonia macrantha*. On a house wall not 100 yards distant the Ivy-leaved Pelargonium *Mme. Crousse*, threading through a climbing Rose, is already commencing to expand its salmon-pink blossoms. This plant is one of the most effective wall-climbers of the south-west, sometimes draping houses to the very eaves in a mantle of delicate colour. Hard winters, however, usually cut it back, and it was therefore a pleasant surprise to find that it had, in one case at all events, survived the past somewhat trying season. In other gardens in the neighbourhood, amongst plants in bloom are *Acacia verticillata* and *A. longifolia* (*A. dealbata*), which is largely grown in South Cornwall, is now out of flower, being at its best in the month of March), *Grevillea rosmarinifolia*, *Edwardia macrophylla*, *Leptospermum baccatum*, *Ribes speciosum*, *Viburnum rugosum*, now very handsome with its large white-flower-panicles, *Cytisus racemosus*, *Ceanothus Veitchi*, and the *Camellias*, which grow like Willows in Cornwall, often commencing to flower in November and remaining in bloom until May if the winter is fairly open. This week I had the pleasure of seeing several plants of the New Zealand

Forget-me-not (*Myosotidium nobile*) in flower in the garden of the introducer of these splendid herbaceous subjects into the county of Cornwall. Both the blue and the rare white form were represented and appeared in the best of health. It is needless to say that in this short note the names of many plants now in flower have been necessarily omitted.

S. W. F.

THE KITCHEN GARDEN. MAIN-CROP PEAS.

THERE can be no question whatever as to the value of the main-crop Peas recently introduced, as they have a strong haulm, and, if given ample space and deep cultivation, they give a splendid return. The variety illustrated—Veitch's Maincrop—is one of the best, and has now been grown sufficiently long to test its merits and prove its worth. It is not right to grow any new variety a single season



PEA VEITCH'S MAINCROP.

and form one's opinion as to its merits, as seasons vary so greatly, and soils also. The past two seasons in the southern part of the country were anything but suitable, the hot, dry summer checking growth. Even under such conditions Veitch's Maincrop was among the best, and showed what a grand Pea it would prove itself under more favourable circumstances. I had two opportunities of testing the merits of this variety, as in the north there was less heat and crops did not suffer from drought. Here Maincrop proved itself a very valuable addition to the late summer Peas, and I can strongly recommend it, as it appears to do well in most soils and localities. It is a robust grower, thrives in a hot season when weaker kinds fail, and is rarely affected by mildew. This dwarfier type of Pea is very useful in gardens where room is limited, and if given ample room for the haulm to grow and develop, the plant gives an equal return to much taller varieties which are more subject to insect pests. The plant possesses all the

good qualities of the Marrow, the flavour being splendid.

In addition to this variety there are others equally worthy of mention, one of the best being Laxton's Gradus. This is a fine-flavoured Marrow and earlier than the Maincrop. As regards crop and quality it has few equals, and is also liked for its dwarf, sturdy habit and well-filled pods. I have now grown Gradus for some years, and so far it gains favour yearly, being a delicious Pea and very prolific.

Many who exhibit give preference to the well-known Duke of Albany, and doubtless they value it on account of its size, but the crop is so quickly past, that I prefer the newer kinds, the crops of which last longer. As regards the latter point, Peerless Marrow has few superiors, and is a recent introduction. Peerless is well named, being about 3 feet high, of grand quality, and a very heavy cropper, having from nine to eleven Peas in a pod. It is very free from mildew, which renders it a grand late summer variety. It branches out freely, so that it needs plenty of room, and, having deep green pods, will become a great favourite with exhibitors. Much the same remarks apply to Magnum Bonum, a variety a few inches longer in the haulm, and a splendid main-crop variety. The new Eureka, a 3-foot variety, given an award of merit in July, 1896, is certainly one of the most productive Peas I have grown, far superior in my opinion to the Duke of Albany, a continuous cropper, and of high quality. It is one of the best main-crop Peas we have, and of very free growth.

G. WYTHES.

BORDER CHRYSANTHEMUMS.

THE warmer weather of late reminds us that the time has arrived when the claims of the early and semi-early Chrysanthemums for brightening the outdoor garden should be considered. It is only in recent years that this type of the autumn queen has attained notoriety, the patient work of the few enthusiasts of earlier days now receiving the acknowledgment they undoubtedly deserve. An impetus to their culture was also the result of the trial in the gardens of the Royal Horticultural Society in 1897, the brightness of the display made by some 141 stocks of Chrysanthemums in the autumn of that year convincing many of the value of the plants for outdoor work during August, September, and October. As a rule at that time, especially during the latter half of the three months, the hardy flower garden is not so pleasing as most gardeners would like it to be, but by the free use of September and October-flowering Chrysanthemums the whole aspect of the garden may be altered and the dull months brightened by their welcome display of blossoms.

In most gardens, more particularly those situated in and around large towns and in cold and bleak positions, it has been proved over and over again utterly futile to plant in the outdoor border the mid-season or November-flowering kinds. The impure atmospheric conditions prevailing at the time work against successful results, so that it becomes almost a waste of time to attempt the culture of the later kinds for border displays. In country gardens, where the atmosphere is pure, and where borders in a warm aspect and nicely sheltered too may be utilised, the later varieties can be flowered successfully, and a valuable addition to the supplies of cut flowers they prove. But as a general rule, and for the greater number of growers, the early and semi-early Chrysanthemums will be found the more serviceable and reliable.

Pompon sorts which may probably be familiar to many readers of THE GARDEN have in the past received a fair share of attention, but I fear many of the very best varieties have rarely attained the prominence they deserve. At one time what were termed "summer-flowering Chrysanthemums" were grown by a large number of persons, but

blossoming, as they did, during July and early August, they compared so unfavourably with many hardy subjects flowering at the same time, that they very soon were discarded. As regards the quality of the plants and flowers, they were of the poorest description. The September and October-flowering pompons, however, form a striking contrast to the earlier ones, embracing plants of a perfect branching habit of growth and developing innumerable blossoms of the most dainty and pleasing kind, and also in a wide range of colouring.

The most satisfactory and pleasing feature of these early displays is that the Japanese sorts now largely predominate. The fantastic form of flower peculiar to this section provide novelty rarely met with in other subjects in the hardy border, and in this way the character of the display is somewhat unique. We are much indebted to M. Simon Delaux, who in 1891 distributed no less than 125 new varieties, many of which are now largely grown, and which completely transformed the lists of Japanese sorts. In subsequent years, too, from the same raiser and others novelties were forthcoming, until it is now quite an easy matter to compile a selection of most suitable kinds, and one calculated to surprise those who know little of the merits of these plants.

During the declining days of April and the earlier

pale rose colour, and the spreading lip deeply veined with rosy-purple.

Miltonia Repullii var. *citrina*.—In this form the sepals are yellow and the lip rather smaller, with more white, and the upper part of it shaded with rose colour.

Miltonia Colquhounia.—In this flower the sepals are deep purple and the lip rosy-purple with a white blotch at top.

Laelia Perrini.—A rather thin flower with rosy-purple sepals, and a white throat with deep purple lip.

Laelia Perrini vars. *irrorata* and *alba*. The former very pale rose colour shaded with white, with fringed lip and white throat, the latter pure white with a shaded yellow throat.

Laelia leucopetra.—A medium-sized rosy-purple flower with a white centre and deep rose-coloured lip.

Cattleya bowringiana.—A bunch of medium-sized deep rosy-purple flowers with a white throat and deeper shaded upper half of lip.

Cattleya bowringiana labiata. A much larger flower than the last, of much the same colouring, save that the lip is fringed and of a deep shade of rosy-purple, and the throat instead of being white is greenish.

Cypripedium chumburlainianum.—A curious and not very beautiful variety in which green.

cultivation. It is a native of Hindostan, Java, Ceylon and Malabar.

Odontoglossum crispum var. *papillon*.—A pretty variety with white flowers and deep chocolate spots all over the petals, but by no means so fine as many other sorts of this well-known and beautiful family.

The April number of "Revue de l'Horticulture Belge" has portraits of the following plants:—

Two new varieties of *Typhelia*, named respectively *T. immaculata alba*, an absolutely pure white flower without any kind of spots or markings whatever, and *T. immaculata lutea*, a pure yellow, which might be correctly described as a form of *T. conchiflora* without its spots. Both of them are very beautiful, and well worth adding to any collection.

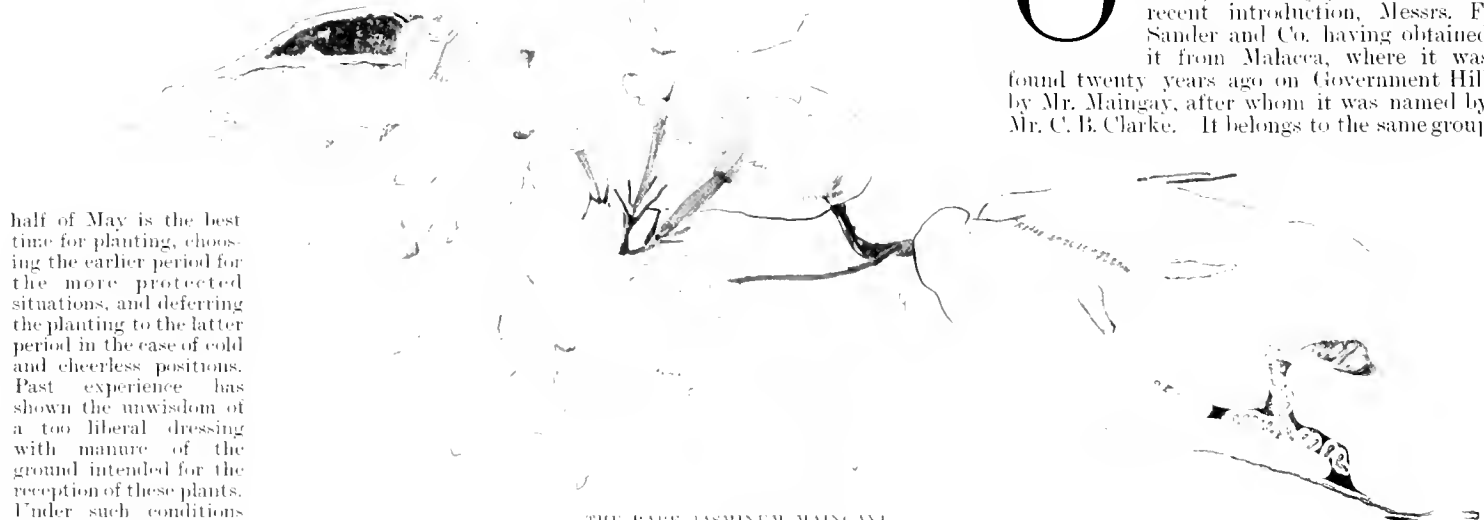
Salvia patens.—This is the old blue *Salvia* of our gardens, now far too seldom seen, as it is one of the most beautiful blue flowers that exists, and should be in every well-stocked garden.

W. E. GUMBLETON.

AN ARTIST'S NOTE-BOOK.

JASMINUM MAINGAYI.

OF the forty or fifty species of *Jasminum* found wild in British India, *J. Maingayi* is the most recent introduction, Messrs. F. Sander and Co. having obtained it from Malacca, where it was found twenty years ago on Government Hill by Mr. Maingay, after whom it was named by Mr. C. B. Clarke. It belongs to the same group



THE RARE JASMINUM MAINGAYI.

(From a drawing by H. G. Moon, made in Messrs. Sander & Co.'s nursery at St. Albans.)

half of May is the best time for planting, choosing the earlier period for the more protected situations, and deferring the planting to the latter period in the case of cold and cheerless positions. Past experience has shown the wisdom of a too liberal dressing with manure of the ground intended for the reception of these plants. Under such conditions the growth is too rank to be satisfactory. Ordinary garden soil

answers very well, and most excellent results have been got from ground which had been used as a playground beforehand, but which had been deeply tilled some little time before planting. Firm planting is most essential. So, too, is ample space for the development of the branching growths. Some of the best of the Japanese sorts make plants 3 feet to 4 feet through, and the charming little pompons about 2 feet to 3 feet. When planting it is a good rule to give a space of 3 feet or more, according to variety, between each plant, and the same distance between the rows, reducing the spaces by about 1 foot for the purpose. Most important of all, allow the plants to develop naturally, and do not disbud except in the case of one or two varieties where the buds are too thickly developed, and the result should surpass all expectations.

D. B. CRAVIE.

RECENT PLANT PORTRAITS.

THE March portfolio of the "Dictionnaire Iconographique des Orchidees" contains portraits of the following fourteen species and varieties:

Maschkealia toarcensis. The well-known pure white variety.

Miltonia Repullii. A medium sized flower, the five sepals of which are white, faintly shaded with

purple and dark brown shades are curiously distributed.

Cypripedium aureum var. *Edipe*. A handsome variety, the result of a cross between *C. spicerianum* and *C. nitens* var. *Sallieri*.

Acantholobos grandiflorus. Like a small *Angraecum*, with pale yellow and white colouring.

Laelia Cattleya elegans var. *blanchinensis*. A fine large flower with rosy-purple colourings and handsome fringed lip of a deeper shade of colour.

The fifth part of the fifteenth volume of "Lindenia" contains portraits of the following four species and varieties of Orchids:

Cattleya Triana var. *majestia*. A most beautiful variety, with flowers of large, most symmetrical shape and great delicacy of colouring.

Panda amssiana. A beautiful variety, with upright spikes of white flowers with deep purple lip.

Rhynchostylis obtusa (also to many better known as *Saccobolium*). A handsome variety, with long pendulous racemes crowded with small white flowers with a deep rosy-purple lip. It seems to be best known as *Saccobolium Blumei*, but has been described by different botanists under no less than seventeen names, some making it out to belong to the family of the *Sarcanthus*, others to that of *Aerides*, others to *Limodorum*, and others to *Epidendrum*. This plant was known to Linnaeus, and was one of the first Orchids introduced into

as the beautiful and well-known *J. pubescens* (*hirsutum*) cultivated by Miller 150 years ago, and still one of our best stove-flowering shrubs, but it differs in its larger leaves, which are also glabrous, and in having longer petioles than is usual in *Jasminum*. The leaves are 5 inches by 2 inches, coriaceous, and the flowers are star-like, an inch across, pure white, in panicle cymes. It is likely to prove a useful climber for the stove.

W. W.

PYRUS MALUS ANGUSTIFOLIA

FL. PL.

THIS beautiful flowering tree was shown recently by Messrs. W. Paul & Son before the Royal Horticultural Society, and the drawing by Mr. Moon is made from one of the sprays exhibited. The many charming flowering trees and shrubs are far too little known, and there is a wealth of beauty in the *Pyruses* alone, and this variety should certainly receive consideration. The flowers are very large, double, and soft pink, not entirely of this colour, but touched with it, a very delicate effect being the result. At this time, when the *Pyruses* and numerous other flowering trees

and shrubs are in full bloom, one may well draw attention to them by an illustration of not the least important of the race.

BOOKS.

The Art and Craft of Garden Making.—This promises to be a useful book. The author, speaking as a garden architect, views his subject in the main from the architect's point of view, but he is neither narrow nor dogmatic, and we read with pleasure his clearly written and well illustrated chapters.

In his preface Mr. Mawson laments the decay of garden design as a fine art, and adds: "How much this has lost to garden art, and, therefore, to the country generally, it is impossible to say; but the garden designer, desirous of doing something worthy of his aims, is plainly aware how much his studies suffer from want of precedent. After he has done his best, his work lacks that harmoniousness which he naturally expects his subject to yield, and thus his education as a garden architect has to be very much a matter of experience, his best lessons being very often the outcome of his own failures."

After passing in critical review the methods of some of the 18th century landscape-gardeners and of their successors down to the middle of the 19th century, the author says:—

"The revival of interest in, and the study of architecture and the allied crafts which has taken place during the last twenty or thirty years—a revival which although not always wisely directed is increasing in volume and strength—could not be without its effect on garden design, and one of the advantages has been a deeper inquiry into the principles of the three schools of garden design, each of which has been championed with a force and a scholarliness which do credit to their respective exponents. It is not necessary to state that the outcome of these discussions has been a greater appreciation of the English garden. There is, however, no fear of a return to the dull monotony of the chess-board garden or the extravagant topiary work which under Dutch influence made so many of our old English gardens ridiculous. What we are returning to is the truthful simplicity of the older work—a garden which will be all the more charming and lovable, by having its borders filled, and shrubberies and plantations diversified with the many beautiful flowers, shrubs, and trees which have found their home amongst us.

"The old garden idealists, if judged by results, worked on the most solid basis, and their methods are worthy of our earnest study and consideration; but, on the other hand, it must also be allowed that naturalism has, under certain conditions, its legitimate use and place in the creation of garden and park effects, and that a

compromise between these two opposites, or a combination of the two, is at times the only method we can obtain anything like an effective whole.

"To avoid any misunderstanding of the term, some further explanation of what is meant by idealism in the garden and park may be advisable. Briefly, it is man's conception of beauty expressed by the aid of stone, wood, land, shrub, greensward, and gravel walk, emphasised and enhanced by the flowers. It is a happy union of things which are allowable, because they are necessary, useful, or agreeable in themselves, arranged so as to form a pleasing whole. J. D. Sedding says: 'A garden is man's report of earth at her best.' But, notwithstanding all that the foregoing implies, it does not include the whole truth nor the whole art, for to be successful a garden must respond to and satisfy man's longings for the beautiful. An idealist's garden must, therefore, be the outcome, and embody the purpose of his own conception and forethought, and it is just as much an invention as a house or other architectural structure, and the fact that in carrying out his invention he takes Nature as his handmaid does not rob him of the credit of skill and discernment; neither can it be the proper function of art or craft to make it appear otherwise, nor to endeavour to hide the resources which have produced it. A park or a garden is therefore an invention in a different sense to that of a merely utilitarian erection, being, in fact, dependent to a large extent upon beauty for utility. In speaking of idealism, it must not be forgotten that our individual ideas may be grotesque and totally unfit for reproduction; also, in approaching the subject of park and garden designing we should remember that the requirements of to-day are not necessarily the same as those which had to be incorporated in the old gardens, and that we have now a wealth of material entirely unknown to the old garden designers. The conditions under which we live are continually changing, and this change must necessarily influence garden design."

These quotations give a clear idea of the author's general view of his subject. The succeeding chapters deal in full with the subjects of choice and treatment of sites, gates, fences and carriage drives, terrace and flower garden, lawns and walks, summer-houses and other details of garden appurtenance, glasshouses, treatment of water, kitchen gardens and orchards, arrangements as avenues and otherwise of trees and shrubs, and plantations for landscape effect.

These are followed by chapters giving lists with rather full description of trees, shrubs and conifers, Roses and climbers, and other hardy plants for all purposes. Mr. Mawson has some happy suggestions to make about that usually unsightly construction, the greenhouse or conservatory:—

"When a glass erection takes the form of a conservatory attached to a residence, it should be distinctly architectural in treatment, for nothing can be more annoying and disappointing to an architect than to see a stock pattern conservatory, highly ornamented with cast iron cresting and finials, set up against a house which he has designed with great care, and perhaps some success. Even when carefully designed I am by no means inclined to think that a conservatory is always an improvement to a residence."

The author makes a strong point of the desirability of having the kitchen garden with its many interests near at hand:—

"To my mind, no garden pleasure exceeds that of being able to wander round a good walled-in garden, enjoying the fragrance of the fruit blossoms in the spring, watching the setting of the fruit, and its various developments through the successive seasons until the ingathering. To cut off such a source of delight, or to arrange it so far from the house as to preclude the residents or guests from regularly visiting it, is to rob them of a source of pleasure and instruction."

Some designs at pages 175 and 176 for treating small irregular spaces are excellent and should be most helpful, and some of the original garden designs, such as the enclosed tennis court with arched summer-house, described and shown at page 180, are very happily conceived.

The book contains some rather frequent examples of disregard of customary rules of botanical orthography, and we are puzzled by reading of *Lilacs*, *Syringas* and *Mock Orange*, sounding like three kinds of shrubs, whereas these names can only stand for two. *Quercus Austriaca Sempervirens*, for example, exhibits a redundancy of capitals not in accordance with botanical usage, but this has been corrected in the conifer list.

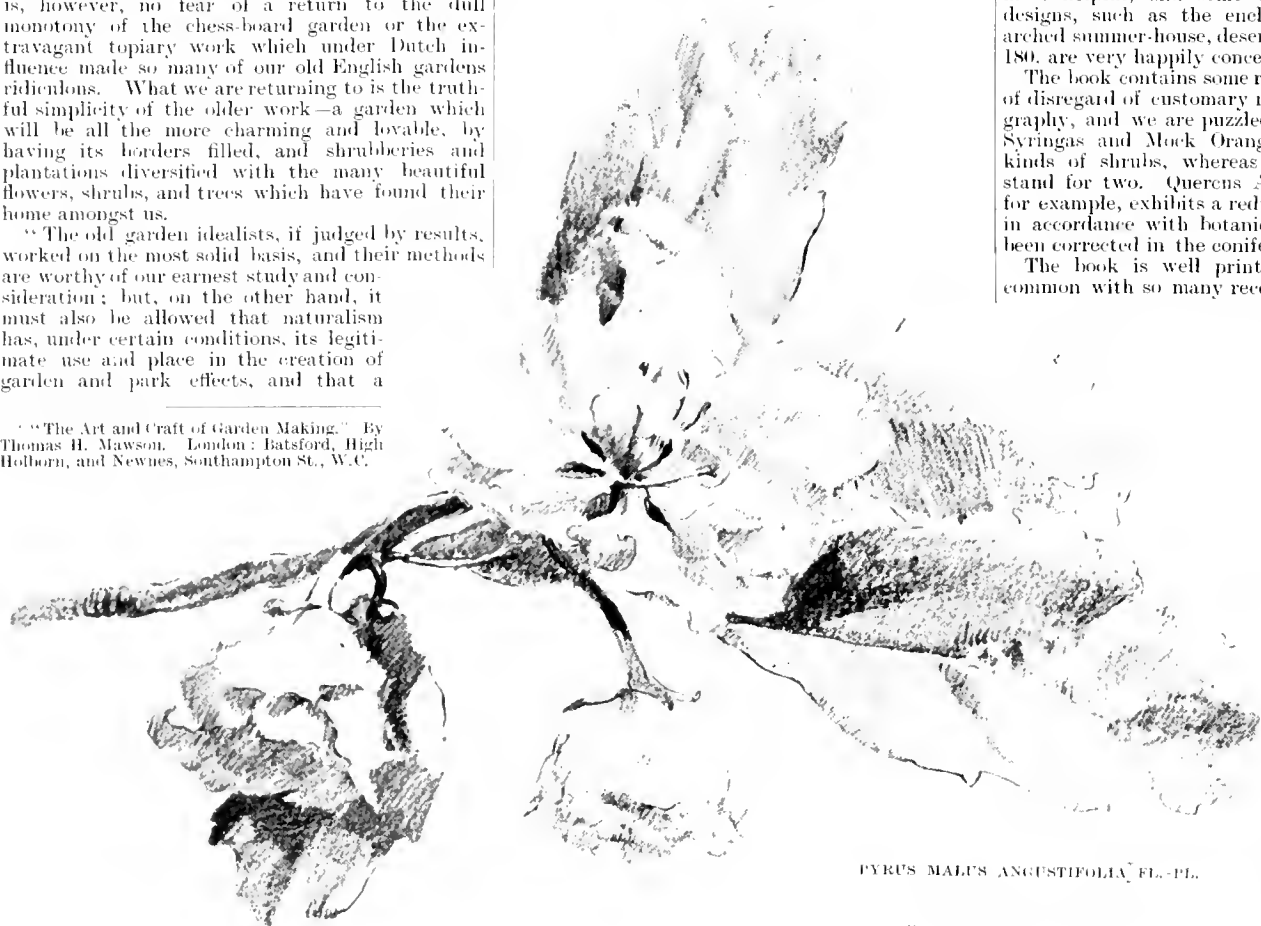
The book is well printed and got up, but in common with so many recent

illustrated books it has the discomfort of great weight. Those who are not very strong think that a book whose size is 13 inches by 10½ inches and only 1 inch thick should hardly weigh as much as 5 lb. 2 oz.

ACACIA OBLIQUA.

This is one of the Acacias suitable for growing into neat little bushes in small pots, and for this purpose it has considerably advanced in popularity of late. If stopped freely when young, it produces a number of clean straight shoots clothed with small, roundish, ovate leaves, and studded for the greater part of their length with

"The Art and Craft of Garden Making." By Thomas H. Mawson. London: Batsford, High Holborn, and Newnes, Southampton St., W.C.



PYRUS MALUS ANGUSTIFOLIA, FL.-PL.

(From a drawing by H. G. Moon.)

globular heads of golden blossoms. The individual clusters remain some time in perfection, and as a succession is kept up, a specimen of this *Acacia* is for some weeks an object of great beauty. It is a native of Australia, and, like nearly all the *Acacias*, is essentially a greenhouse plant. T.

BEST APPLES FOR BRITAIN.

REVISED LIST.

EARLY.

Dessert.

Devonshire Quarrenden. Irish Peach.
Lady Sudeley.

Cooking.

Duchess of Oldenburg. Grenadier.
Ecklinville Seedling. Keswick Codlin.
Golden Spire. Pott's Seedling.

MIDSEASON.

Dessert.

American Mother. Ribston Pippin.
Cox's Orange Pippin. Worcester Pearmain
King of the Pippins. (for market only).

Cooking.

Bismarck (particularly New Hawthornden.
for market). Stirling Castle.
Frogmore Prolific. Waltham Abbey Seed-
ling.
Golden Noble. Warner's King.

LATE.

Dessert.

Allen's Everlasting. Court pendu Plat.
Blenheim Orange. Duke of Devonshire.
Brownlee's Russet. Mannington's Pear-
main.
Claygate Pearmain. Sturmer Pippin.
Cockle Pippin.

Cooking.

Alfriston. Lane's Prince Albert.
Bramley's Seedling. Newton Wonder.
Dunmelow's Seedling New Northern
(popularly known Greening.
as Wellington). Norfolk Beautin.

I AM sorry to note in THE GARDEN'S revised list that the Golden Pippin is left out. It is small even on the Paradise, though the improved moult has done something to enlarge its size; but the flavour remains as superb and as unique, and its colour is always welcome at dessert, which it sweetens and enriches from November to May. In flavour not a few would place the Golden Pippin on a level with the Ribston, and as there is no longer any fear of either of them wearing out, it is hoped they will long occupy first places among our best dessert Apples. Some growers seem to think that Cox's Orange Pippin may well supersede the Golden Pippin, but each is so good, that there is ample room for both. But though larger than the Golden Pippin, its season is shorter from October to February. It is said to be a seedling from the Ribston, the other parent not being known, and it might be the Golden Pippin.

Most lovers and growers of Apples have been greatly interested in the selections of Apples and criticisms and objections made to varieties. I should like to put in a word for two of our earliest eating Apples—the Red and White Juneatings and the Red Margaret, which are almost the only ones known that may be had in most gardens fit to eat in June, July, and early August. I claim that they are about as good as the Worcester Pearmain, and several months earlier; and the sight, smell, and taste of mellow red streaked or pale, very fragrant Apples full of juice in June is something to be enjoyed by everyone who grows a few Juneating Apples as cordons on the Paradise stock or as bushes. A very few of them will perfume the entire house and garden. One more fine Apple should be included in the most select list of Apples—D'Arcy Spire. The late Mr. Thomas Rivers, of Sawbridgeworth, gave this old favourite Apple yet a fresh lease of life and popularity by

christening it the Spring Ribston Pippin, and few Apples deserve this name more, for the quality is almost on a level with the Ribston at its best, while it keeps sound and fresh from November to June, when the Juneatings on a wall or in sheltered places will be ready to do their part to girdle the year round with edible Apples.

On the whole I am prepared to accept your revised version as it stands with or without my very few suggested additions. I am specially pleased with the prominent place assigned to Devonshire Quarrenden and Keswick Codlin, the latter, notwithstanding Lord Suffield, still the best early cooking Apple we have. You are also wise to keep Worcester Pearmain for market, as nothing can hinder its beauty from making it popular and profitable there. But the reason for labelling Bismarck "particularly for market" is less obvious. One of my first descriptions of this fine Apple in THE GARDEN I think read somewhat as follows: "Bismarck, an enlarged Blenheim Orange." The majority of your readers will gladly welcome the high place you give to the Cockle Pippin among late dessert Apples. The name has done something to prevent the popularity of this crisp, sugary, golden-fleshed Apple in season from January to May. Its only synonym, so far as I am aware, is Nutmeg Pippin, which affords a cue to its rich aromatic flavour. The tree is a good grower and a profuse bearer. Court Pendu Plat in many gardens seldom blooms till June, is, therefore, as a rule a sure cropper, and continues in capital form from December till June. Though several of your distinguished correspondents seem disposed to drop the Wellington, I am glad you retain it, as I know no Apple that gives such perfect satisfaction to the *chefs* of the kitchen from October to April as this superb variety under one or another of its many aliases.

Of course, it would be easy to criticise omissions as well as selections, but the brevity of such lists proves the measure of their usefulness. The Irish Peach deserves all the praise bestowed upon it. Perhaps it is hardly fair to pit King of the Pippins against Cockle Pippin, as, of course, the latter is far superior in flavour. Margil also is objected to as lacking size. Cellini by one great authority is regarded as inferior in quality to Pott's Seedling and Grenadier, and cannot be grown by another because the wasps and birds are so fond of it. The New Hawthornden when cooked is said to be leathery by at least one great authority, and found flutty almost as a ball of flour by others. Norfolk growers of the Beautin will be surprised to find that it is written down as too small.

Scarlet or other Nonpareils do not seem much in favour, though they are exquisite in quality, and remain long in season. Manks Codlin is said to be too small for cooking, but it may be thinned into a good size, and is good to eat as well as to cook, and one of the surest croppers. In the main I agree with Messrs. Rivers and Hudson in their selection (p. 286), and also with "D. K.'s" high estimate of the value of such long-keeping Apples as Northern Greening and Hanwell Souring for reliable supplies of good crisp Apples till April or later. Lord Burghley is an excellent dessert Apple, keeping sound and in season from December to June.

At a recent conference of Nova Scotia fruit growers at Wolfville, Mr. Starr, a great colonial authority, recommended the selection of the following seven varieties, most of which are well known on this side: Gravenstein, Baldwin, Nonpareil, Golden Russet, Ribston Pippin, King's, and Ben Davis. Mr. Starr objected to the Blenheim Orange and the Tallwater, as they are prone to shed their fruit prematurely in the Dominion. It is well to note how the colonials, like the Britishers, seem bent on rigid selection and stern reduction of varieties.

D. T. F.

MR. T. ARNOLD, The Gardens, Cirencester House, says: I have been deeply interested in the various lists of Apples given in THE GARDEN under the heading of "Best Apples for Britain." I notice that Messrs. Dicksons, of Chester, have added three other names to the long list of varieties already given. Of the first name mentioned, Early Julien,

I have had no personal experience, but the two others mentioned, viz., Grenadier and Pott's Seedling, are both excellent in every way here. I think I may say, without fear of contradiction, that neither of these Apples has failed to bear a fair crop in these gardens once in ten years, and both are of excellent quality. Mr. Woodward, the famous fruit grower, also mentions several kinds, and I am pleased to be able to support him in his condemnation of Cellini. I have never been able to establish this or Lord Suffield, both making very poor and unsatisfactory growth. King of the Pippins is quite a second-rate Apple, bears freely, makes very moderate growth, and, as Mr. Woodward states, Cockle Pippin is far better. Margil is too soft and small here. Sandringham is one of the finest Apples I ever grew, makes moderate growth, bears abundantly, keeps till May, and is of the finest quality. This and Lane's Prince Albert are my favourites for winter use. The latter is a vigorous tree and an abundant bearer of the finest quality. Mr. Woodward mentions Lord Derby. I grow this, but shall destroy it next autumn for the reason given by Mr. Woodward.

Mr. Bunyard condemns New Hawthornden. It is fine in every way here. Golden Noble is a fine Apple, but not an abundant bearer. Mère de Ménage is a fine Apple in every way, but should be root-pruned to check its over-luxuriant growth and keep its roots near the surface. Worcester Pearmain requires a hot season with an abundant supply of water to bring out its best qualities. It is apt to be rather deficient in juice, but last season it was fine—certainly one of the best dessert kinds in these gardens. No one will complain that this is a shy cropper, and it forms a fine bush.

There is one Apple I have not noticed in your long list, viz., White Transparent. This is the earliest and best cooking Apple I know, a most abundant cropper, and of good constitution. When cooked this Apple is perfectly transparent and delicious. I hope to be able to send you a sample for your opinion. Cox's Pomona is fine here; so is Cox's Orange Pippin and Ribston Pippin. Mr. Gladstone is fairly good, and should be grown as a bush.

Good Apples are so numerous that one does not know where to stop. Let it be understood, please, that the remarks I have made refer to these gardens, and are not intended to convey the general opinion even of this neighbourhood, for Apples behave very differently even in a neighbouring garden a couple of hundred yards distant.

THE importance of the subject of British-grown Apples can be gauged most easily by the amount of correspondence you have already published, and which to the practical fruit-grower has been most interesting. One cannot, however, fail to be struck with the continually extending list of sorts, both cooking and dessert, that is given by each succeeding contributor. The matter seems to resolve itself into the question, first, what class of grower is likely to benefit most by the excellent advice given; and, secondly, how is reform to be brought about? Take, for instance, a garden already furnished with good, healthy, and fruitful trees having an extensive list of kinds, many of them being good, others medium but useful, and some that answer neither description. Even should there be greater variety than is desirable, the difficulty would be to know where to begin to curtail and how best to do it. I know, too, there are employers and owners of gardens who would object to their trees being either removed or headed down for grafting. The advice appeals most strongly to intending planters of orchards or new gardens, and to such it cannot be other than most helpful.

Each spring for the past seven years I have been engaged in reducing and improving both Apples and Pears in respect to variety without recourse to planting, except in a few cases. Over forty trees have been already grafted, and although the cost of grafting fairly large trees compared with the planting of young ones is much heavier, results are much quicker and the uniformity of the garden is less disturbed. With some a partial crop is given after two years, and

in three seasons the trees in some cases are equal to their original state. I may say that there are here over sixty sorts of Apples and forty or more of Pears, and though there are among these the very best, there are others which do not satisfy in all respects; and thus by grafting a few annually good sorts are added, newer ones introduced, and worthless ones discarded. By adopting this course no very unsightly gaps are made in the tree rows and no large sacrifices made in the annual crop.

It is impossible for a gardener to estimate correctly the merits of a large collection of Apples and Pears on being recently placed in charge. Soils vary so, that a good kind in one garden may be almost useless in another. It is only by constant observation that kinds most suitable to any particular garden or district can be ascertained and instituted either by planting new ones or regrafting others. The latter is the best in the hands of successful workmen. W. STRIGNELL.

Wills.

NOTE FROM NORTH WALES.—MR. J. ROBERTS, of Tan-y-bwlch, writes: "I think that your list is an excellent one and quite long enough. Those that do most satisfactorily are here Irish Peach, Mr. Gladstone, Blenheim Orange, King of the Pippins, Margil, Barnack Beauty, and Fearn's Pippin among the dessert kinds, and of the cooking kinds, Cellini Pippin, Keswick Codlin, Stirling Castle, New Hawthornden, Tower of Glamis, Warner's King, and Alfriston. Many of the others canker badly."

THE GARDENS OF INVERARY CASTLE.

It is interesting at this time to write about the place which was loved so deeply by the late Duke of Argyll. The castle itself is one of

the most celebrated in Scotland, and is picturesquely placed, as our illustration shows. The Campbells have been great tree planters, and the woods at Inverary are as famous almost as the castle itself. It has been said that while their neighbours were yet cattle-lifting and raiding they were laying out gardens and grounds, and developing the beauty and richness of their great estates. Inverary is placed before a beautiful arm of Loch Fyne, and the magnificent trees are perhaps its chief attraction, but the whole country is a setting for the great castle and its charming gardens. The planting of woods, like the formation of the pleasure grounds, was due in large measure to John, second Duke of Argyll. He saw that the region about him was mainly bare, and he planted large masses of Silver Fir, Larch, Lime, Sweet Chestnut, and other coniferous and deciduous trees, which now invest the place with a delightful sylvan charm. But there were grand trees already in the valleys, and those in the magnificent avenue of Beeches—many of them 16 feet or 18 feet in girth—near Loch Dhu are probably of older date than the Beech woods of Wotton, near Dorking, which the brother and predecessor of Evelyn planted over 270 years ago. The gardens at Inverary are very attractive and adorned with many noble specimen trees. The covered walk or pergola affords delightful shade in the summer days, and another walk is very characteristic with its solemn Yews. There are many interesting commemorative trees in the grounds. Her Majesty the Queen planted a Cedar on September 25, 1875, and there are other trees planted by Gladstone, Bright, Dean Stanley, Livingstone, and many others.

GARDENING OF THE WEEK.

ORCHIDS.

ONE of the most useful, and perhaps one of the best, of the winter-flowering Orchid species is *Laelia anceps* in its varied white and dark varieties. In the London area, where fogs are prevalent during the late autumn and winter, it is practically useless to attempt to cultivate them, but outside where the air is clearer little difficulty is met with in their successful culture. They require an abundance of strong light, and if sufficient ventilation can be afforded there is no need whatever to provide root shading. The whole of this section of Mexican *Laelias* are best accommodated where a division can be set apart for their culture, so that the plants may be treated according to the different conditions required in their growing and resting season. Where this cannot be provided, the plants are best cultivated under the same conditions as those required by the *Cattleyas*, but they should then be suspended near the roof or placed in such a position that they may obtain the maximum amount of light. At the present period, just before the plants commence growing, they emit new roots, and under these conditions it is desirable that any potting or top-dressing that may be required should be done without delay, for it is a difficult matter indeed to deal with the plants after the roots get well away from the growth without their being damaged. The compost should consist of equal parts of fibrous peat and chopped living sphagnum moss, to this being added a liberal sprinkling of broken crocks. Plenty of drainage should be afforded, as the plants require an abundance of moisture during the growing period, and every care must be taken to avoid stagnation. After the plants have been repotted,



INVERARY CASTLE. ACROSS THE RIVER.

water thoroughly with soft rain water, keep the plants slightly shaded for a few days until the roots begin to get hold of the compost, after which, providing there is plenty of ventilation, little shading will be required. Syringe the plants overhead once or twice in the morning when the weather is bright, and again in the afternoon when shutting up. Close early so that a warm and humid atmosphere may be obtained, and avoid the use of fire-heat as much as possible during the summer months.

Importations of *Lælia anceps* are now being introduced. It is always desirable to procure freshly-imported plants for two reasons. The first is that the imported plants are generally the most vigorous, and succeed better than when plants are procured that have been many years under cultivation, although even the oldest varieties known are suitable for cultivation where favourable conditions can be provided. In the second place, by purchasing imported plants one never knows what the particular variety is until the first flower has expanded, and there is therefore a considerable amount of interest to be derived in watching the plant in its different stages as it advances towards the development and expansion of its flowers. The imported plants should be potted up as soon as received, using receptacles only sufficiently large to contain the plants comfortably.

There is one of the Mexican species, which is best known in gardens as *Lælia majalis*, that is generally found difficult to flower when grown under ordinary conditions. It has been well termed the vinery Orchid by some of our enthusiastic amateurs, for there is no doubt the vinery supplies the proper conditions for its successful cultivation. The plants should be placed in well-drained, shallow pans or baskets and suspended from the wires near the roof, to which the shoots of the Vines are secured. Treat them in every way as the Vines both during the growing and resting period, with only sufficient warmth in winter to exclude frost. Very little water indeed will be required during the cool winter months, but a liberal supply must be afforded as soon as growth commences and continued until maturity is reached.

H. J. CHAPMAN.

THE FLOWER GARDEN.

SUMMER BEDDING.

IS a very short time bedding operations will be in full swing in most parts of the country, and strict attention should be paid to hardening and preparing the various subjects which are required to embellish and make beautiful that part of the garden which is set apart for flowers. Where spring bedding is carried out it generally means the middle of June before this can be accomplished, especially in late seasons like the present one, as many of the spring plants will be at their best during the first fortnight in June. Every inducement should be afforded those plants which have to succeed them by keeping them growing so that an immediate effect can be produced.

Fortunately, at the present day bedding is much more pleasing and interesting than it was a few years ago, when *Calceolarias*, *Geraniums*, *Verbenas* and *Lobelias* formed the principal objects in a designed flower garden, and I think hardly any one will dispute the change now generally practised. Many of our semi-hardy plants, such as *Pentstemons*, *Montbretias*, *Pansies*, summer-flowering *Chrysanthemums*, *Lobelia cardinalis* (scarlet *Lobelia*), &c., are now often employed with pleasing effect, and these are easily protected during winter and brought forward with the aid of a cold frame. Then we have the *Fuchsia*, and few plants are more generally admired during summer and autumn than these when a good selection is made. Either massed in beds, used as standards, allowing plenty of room for each plant to develop, and carpeted with some suitable low-growing subject, and also grown into specimens and dotted about on the grass, plunging the pots to the rim, in a sheltered part of the grounds, they are always admired. Abundance of water at the roots, both clear and in a liquid manure form, is absolutely necessary to ensure success, also the foliage damped

in the evening during hot, dry weather. Among the most suitable varieties I have found for outside culture are *Mme. Cornéilsson*, an old variety, but quite one of the best; *Wave of Life*, *Lyc's Own*, *Lyc's Favourite*, and *Mrs. Marshall*, and the two old hardy kinds, *Riccartoni* and *globosa*, are both admirably suited for this purpose and give but little trouble. *Begonias*, too, both tuberous and fibrous-rooted, are used extensively, and are invaluable. Unfortunately, these are very tender, and will often require protection during early autumn when in full beauty, as the slightest frost will injure them.

The fibrous section, I feel certain, has a great future before it, and the plants are easily produced from seed if sown in early spring, and will continue to bloom profusely the whole season. Each of the varieties introduced by Messrs. Sutton and Sons are of much merit, but the most charming of all, in my opinion, is *Fairy Queen*, a perfect gem. Overcrowding must be avoided, or their true beauty will be marred.

Double-flowering Ivy-leaved *Geraniums* have also been much improved of late, many of them being very showy and perpetual, either pegged down or trained pyramidal, and for vases nothing can surpass them.

SUB-TROPICAL BEDDING.

Sub-tropical bedding is now one of the most important features of a good garden, and if possible a sheltered spot facing south should be selected for this. Many and varied are the different kinds of plants which are admirably suited for this style of gardening. One important rule to observe is to avoid overcrowding, or the large leaves and stately growth of many of these will be robbed of their true character. The ground should be deeply trenched and heavily manured, and the first or second week in June will be quite early enough for planting.

E. BECKETT.

Abraham House Gardens, Elstree, Herts.

FRUIT GARDEN.

YOUNG FRUIT TREES

that were planted during the last planting season should now onwards be given an occasional watering in spells of fine weather. To reduce the labour of watering to a minimum and to keep the soil about the roots of trees evenly moist, a mulching of decayed manure spread as far as the roots extend is of great assistance. Young newly-planted trees should not be allowed to bear fruit the first season after planting. If the bloom was not pinched off and fruit has been allowed to set, they should be taken off. If left on to ripen they would be almost valueless, and will hinder the trees from being so strong at the end of the season as they otherwise would.

PEACH TREES.

being so favourably retarded by the weather, and with no frost to harm them while in bloom, have set freely, and the young unfolding leaves look healthy. Now they are set, nets or other protection that was fixed over them before coming into bloom may be removed, but where movable protection was employed it may remain in position a little longer, ready to let down or draw over the trees in case of a frosty night, which we may hope will not occur.

Green-fly has been in evidence in spite of having taken the precaution of syringing with insecticide immediately before blooming. For its eradication since the fruit has set syringing has again been done. In places where it has not been done, it should be without delay. Young Peach leaves in the spring are invariably attacked by green fly, and if timely measures are not taken to destroy it, such as syringing with insecticide or dusting with tobacco powder I prefer the former, great damage will follow; leaves and young shoots will be killed, damaging the crop partially or wholly for the current season, and permanently disfiguring the trees.

After the fruit is set is the time for disbudding, which should be done with care on about three occasions, allowing several days to elapse between each, so as not to allow the shoots to become unduly

crowded, and not to take so many off at one time as to give the trees a check, or to expose the fruit entirely to the mercy of the weather. The first time of going over them take off the foreright shoots, one where there are two at a node, and a few others misplaced. At other times thin out the shoots according to judgment, leaving the base shoot, on the upper side preferably, and the leading shoot on the previous year's wood. Sometimes, for the purpose of filling up the places where branches have died, more than one shoot is required from the base as well as from the previous year's wood. Young shoots start from what have been dormant buds on old branches, which in many instances must be retained for covering the wall between the large branches, also tending to give the tree a furnished appearance from near to where it starts from the stock.

Thinning of the fruit should be done early, so that there is no waste of the strength of the tree. When they have grown to the size of Hazel Nuts they should be looked over for the first time, taking off one when there are two on a node, all from between branches where there is not room for them to swell to their full size without being squeezed out of shape, and all small surplus fruit, leaving one or more to a shoot, according to its length, so placed that they have freedom to swell to their full size. When the remaining fruits have decidedly increased in size, again go over them and reduce them to the number required for the crop, taking off the smallest and the worst placed. The number of fruit to be left on a tree for a crop should not be too great—about 1 foot per fruit, more or less according to size when ripe. Nine inches is enough for Nectarines. If many fruit are left on beyond these they will neither be fine in appearance nor in flavour.

In hot weather a thorough syringing in the afternoon with clean water, warmed by exposure to the sun, is very beneficial. Water should be given to the roots as often as required, and the surface of the soil mulched to keep in the moisture to a distance of at least 1 yard from the wall.

APRICOTS.

Stop side shoots at three or four joints to form spurs, and lay in young leading shoots and others for filling in open spaces. Thin the fruit about the same as recommended for Nectarines.

Hatfield House Gardens, Herts. G. NORMAN.

KITCHEN GARDEN.

BETROOT.

A good sowing should be made in deeply-dug land, well manured for a previous crop. Fresh manure will have a tendency to cause the roots to fork and to make them coarse. For main crops few if any varieties are superior to the *Cheltenham Green Top*, its only fault being its size, as if sown too early or in freshly-manured land it is inclined to be coarse. *Dwarf Red* and *Blood Red* are splendid kinds, being medium growers, and do well in most soils. For shallow land the *Turnip-rooted Beets* are valuable. The *Crimson Ball* is an excellent variety.

VEGETABLE MARROWS.

Some time ago I advised a small sowing to be made for early use, and these should now be planted out. Of course protection is necessary for a time, and often a frame that has been used for Potatoes or salads may be planted. It is necessary to give proper attention at the outset in the way of shade and moisture, and care should be taken that the seedlings are free from green fly or red spider, as either of these pests will arrest growth. If at planting the plants are at all weakly, shade well for a time, damp overhead as the sun declines, and close the frames or handlights, and, as growth is made, water with liquid manure and give more ventilation. The present is a good time to sow seed for planting in the open a month hence, and plants raised as hardy as possible will give the best returns. I do not advise sowing in pans and then potting up, but it is better to put a couple of seeds in 4-inch pots. These should be placed in a warm house till germinated, and then removed to a cold frame near the glass. At this date any variety that is liked may be grown, and should there be

lack of room to raise plants they will germinate in the frames; but when grown thus water must be very sparingly given at first, and the plants should be planted out as soon as they make the second lot of leaves. They do not thrive well under the shade of trees.

SCORZONERA AND SALSIFY.

These two vegetables are by no means popular in the majority of gardens, but their value is great in such a season as this when green vegetables are none too plentiful. If sown too early the plants run to seed and are useless. From the first to the middle of May is a good time to sow, according to the soil and locality, and this will give nearly six months' growth, as the plants grow very late in the autumn. There are not many varieties, the Mammoth Salsify being the best, and the new large Russian is a great improvement on the older type of Scorzonera. The last-named, being a deep-rooting plant, needs deeply-dug and well-manured soil, and does best when the land is prepared in the autumn or early winter months. Salsify forks badly in recently manured land, and we find it does well after Celery. Sown in drills 18 inches apart and the plants thinned to half that distance in the row, will give good store roots, and these keep well into the spring in a cool place.

CELERIAC.

another excellent vegetable for use from October to April, should be sown now, treated somewhat like Celery at the start, and then when large enough planted in drills, not trenches, 2 feet apart and 9 inches between the plants. It delights in a rich soil, ample moisture and feeding, and the best varieties are the Large Prague and the Apple Celeriac.

G. WYTHES.

Spou House Gardens, Brentford.

INDOOR GARDEN.

CLIMBERS.

Most of the plants used under glass as climbers are rapid growers, and as these are now in full growth, they will need frequent attention to keep them tied into position and to prevent them from getting into tangled masses, the liberation of which is sure to do much damage to the leaves and tips of the shoots. This especially applies to the Lappagerias, Myrsiphyllums, Ipomaeas, Thunbergias, and others which have a great tendency to twining round anything they can reach in the way of supports the growths of which are of a tender nature. For the useful Myrsiphyllum there is no better plan than training each strong growth to a piece of thin string in an upright direction, as the strings and growths may be cut together, and the former easily drawn out without damage. Dipladenias do much better trained in the same way near the roof of the stove, and only taken down and tied to the balloon trellises when the flower-buds show. The Stephanotis is also much easier managed when thinly trained to wires or strings and put on the more ornamental trellises simply to flower, as when less crowded the wood gets better matured, and at the same time mealy bug, the pest of this plant, can be dealt with more readily. The Hibbertia looks best when trained upright to pillars, and is not quite such a rank grower as some of the others mentioned, but it requires frequent attention to keep it free from thrips, which seem to have a particular liking for this plant. Taken as a whole, climbing plants are, perhaps, the worst section of all to keep free from insect pests, for they nearly all are particularly liable to one or the other of them, and unless kept clean they are not the ornaments that they should be.

ALLAMANDAS.

Plants intended to flower in August should now have the points of the young growths pinched out, and when the shoots have again broken into growth, manure water, weak at first, but increasing in strength as growth advances, may be given with advantage, and nothing of this kind is better for producing healthy dark foliage than cow manure and soot water given in a clear state. Young plants struck this season should be potted on as fast as they fill their pots with roots, and should be pinched two or three times during the season's

growth, but potting and pinching should not take place simultaneously. This applies to plants intended for ordinary culture; those for pillar or roof work must be run on to a single stem until the required height is reached.

PLANTS AFTER FLOWERING.

Azaleas and Rhododendrons should have the seed-pods picked off directly the flowers have faded, taking care not to break away also the young shoots which are forming immediately beneath the flower-heads, as these will be the shoots to form the best buds for next year's flowering. Callas which have done flowering and are intended for early work next year may gradually have the water supply reduced, and be removed to a cold house for a week or two until they may be safely stood outdoors. All other forced plants which may be of service again must be attended to with water, and not too soon placed in out-of-the-way corners where they will be neglected. Freesias should be stood on a shelf where they will be under the full influence of

late Mr. G. W. Steevens tells us in his "With Kitchener to Khartum" (Blackwood), p. 315, there is still remaining the wreck of the hero Gordon's garden. And one likes to feel that—solitary prisoner though he was—at least his last anxious days were somewhat refreshed and solaced by his little garden. Indeed, as Steevens says in his book—

"But in this garden you somehow came to know Gordon the man, not the myth, and to feel near to him. Here was an Englishman doing his duty, alone and at the instant peril of his life; yet still he loved his garden. The garden was a yet more pathetic ruin than the palace. The palace accepted its doom mutely; the garden strove against it. Untrimmed, unwatered, the Oranges and Citrons still struggled to bear their little, hard, green knobs as if they had been full ripe fruit. The Pomegranates put out their vermilion star flowers, but the fruit was small and woody and juiceless. The Figs bore better, but they, too, were small and without vigour. Rankly overgrown with Dhurra, a Vine still trailed over a low roof its pale leaves and limp tendrils, but yielded not a sign of Grapes. It was all green, and so far vivid and refreshing after Omdurman. But it was the green of Nature, not of cultivation; leaves grew large and fruit grew small and dwindled away. Reluctantly, despairingly, Gordon's garden was dropping back to wilderness. And in the middle of the defeated fruit trees grew rankly the hateful Sodom Apple, the poisonous herald of desolation."

Some of us, at least, may like to keep this war correspondent's pen-and-ink sketch of Gordon's garden in our hearts.

F. W. BURBIDGE.



CAMPANULA MAYI AS A POT PLANT.

the sun, and no more water should be given to those which have lost their leaves from now until after they are again potted.

J. C. TALLACK.

Shipley Hall Gardens, Derby.

GORDON'S GARDEN AT KHARTUM.

All who know the Soudan agree in calling it one of the most wretched, waterless deserts existent on the face of the earth. It is a land of sunshine, but short of water. "Nothing grows green; only yellow Halfa Grass to make you stumble, and sapless Mimosa to tear your eyes; Doom Palms that mock with wooden fruit, and Sodom Apples that lure with flutulent poison." The Soudan is, in one word, the Nileless desert, a pitiless earth furnace of sand and moisture-licking sunshine, a land of noisome insects and of human squalor and abject misery. And yet even at Khartum, as the

A NEW CAMPANULA.

CAMPANULA MAYI.

We are pleased to give an illustration of this new Bellflower or Campanula, which is probably the result of a cross between *C. Barrelieri* and *C. isophylla*. Whatever its parentage, there are no two opinions about its beauty and importance. It will become a household plant, charming the window gardener with its vigour and abundance of flowers, and adding interest to the greenhouse and even the open-air garden. Possessing all the attributes which have made *C. isophylla* one of the most popular plants of the day, it has larger flowers of pure blue, and its adaptability for pot culture is well exemplified in the accompanying illustration. Mr. May, of the well-known nurseries at Upper Edmonton, raised this valuable plant, and has exhibited occasionally beautiful groups of it, on one occasion an award of merit being bestowed by the Royal Horticultural Society. It is a plant for everyone, and may be used in the same way as *C. isophylla*, namely, as a window-box decoration, in pots, as shown in the illustration, and in warm nooks in the rock garden. We have also a photograph displaying it in a hanging basket, and for such a purpose no plant is more suitable, but we prefer to illustrate it in the more unusual form of a pot plant. It is quite as easily grown as *C. isophylla*. We understand that Mr. May is now sending out this pretty novelty.

Index and Editorial Notices will be found amongst the advertisements.

CORRESPONDENCE.

STATICE LIMONIUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—In a short paragraph in THE GARDEN (p. 315) attention is drawn to *Iris fetidissima*. I should like to say a few words in favour of *Statice Limonium* (the spreading Sea Lavender), also a wild plant, but much more effective than the *Iris*, as in summer when in bloom it is very handsome with its large spreading branches of light mauve flowers, which when cut fade very little, and when dried is a most useful flower, like the *Iris* pods, for vases during the winter when flowers are expensive. Some twenty years ago Beer Head, a high cliff near this, was covered with this plant, but visitors year after year have hardly left a plant, if any. I am glad to say it does well in the garden here, and it will also thrive well inland, as I have grown many fine plants of it at Upper Norwood, but I have never tried it in London, though I intend to do so this autumn. Plants of *Iris fetidissima* I took up to London two years ago, and they are flourishing in my little garden in Kensington as well as on their native cliffs here. A. H. T.
Sidmouth, Devon.

WATER LILIES FOR TANK.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—I have a wooden tank lined with lead, 4 feet long, 1 foot 4 inches wide, 8 inches deep. 1. Would this be suitable for growing a few Water Lilies? 2. Would the lead lining be objectionable? 3. What sorts would be likely to do best? 4. Any particulars as to soil and depth of water would be valued. Your article in No. 1481 is responsible for the idea. I have no pond. Would a shady or sunshiny position be best?

L. FOSTER.

[1. If the tank in question has had water in it for some time, it should be very suitable for Water Lilies. 2. The lead lining would not be objectionable if it is not a new tank. 3. The two best sorts to grow in such a confined space are decidedly *Nymphaea pygmaea alba* and *N. p. helvola*. These are two of the smallest kinds; the former white, and the latter a soft pale yellow. Both are very free flowering and pretty. 4. The tank should have an outlet in the bottom in order to change the water when desirable. Over the bottom place about 1 inch of small rubble, then 3 inches of soil (stuffy loam and decayed leaves, the latter at the bottom). This will allow of 3 inches or a little more of water. In the winter, prevent freezing by drawing off the water and covering up with leaves, covering the tank to the depth of a foot or so, guarding at the same time against freezing from underneath. A sunny position is much the best. Ebs.]

JAPANESE GARDENING.

[TO THE EDITOR OF "THE GARDEN."]

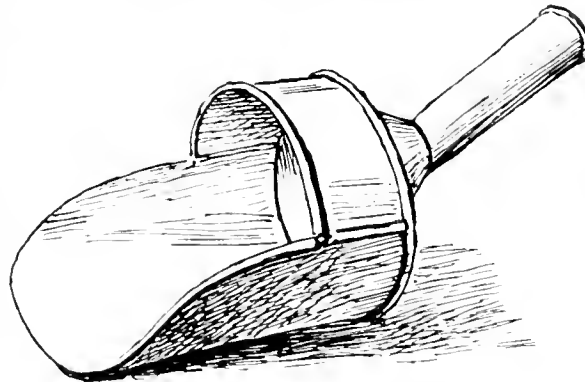
SIR.—If the picture of a Japanese garden given at page 305, certainly a beautiful work of art, fairly represents decorative gardening in Japan, I trust we may not have our gardening japanised. One impression derived from the picture is that vegetation is very sparse and much dwarfed, while artificial objects in stone or other material are especially prominent. Delightful as may be the intention, the decorative art displayed of a gardening nature seems to be undoubtedly poor. It was but needful to turn to page 313 and look at the picture, that charming corner in the grounds of Kelly House, Tavistock, to realise how much more natural and beautiful is our decorative gardening. Myriads of equally beautiful effects can be found in our gardens. One wonders why the Japanese should take such delight in dwarfing vegetables as is seen in the miniature monstrosities or vegetable absurdities such as were exhibited at the Drill Hall. It afforded excellent illustration of the sort

of madness in gardening taste some persons displayed there. I watched ladies handling these wretched objects and calling them such "dear little things." To me they were as attractive as a series of fossilised monkeys or toads—all force, beauty, natural growth and charm being starved out of them. Such forms of vegetable life may please a race of pigmies, but certainly they represent such violation of Nature's laws that no one having sense or judgment can admire them. Happily, there is no likelihood that such will be the case with us. We have far more that is natural and beautiful in gardens than many nations can boast of. A. D.

A USEFUL GARDENING IMPLEMENT.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—I enclose you a rough sketch of a tool, implement, or gardening appendage, for I hardly know how it can be best denominated, which found its way into my garden by chance some twenty years ago, and has proved more serviceable to me than words can say in all sorts of such gardening operations as are reserved for my own hands. It is nothing more nor less than one of the largest-sized tin shovels or scoops which grocers use in serving such things as coffee, rice, &c. These scoops have round bottoms as sold, but I flattened mine with a hammer on an anvil; this made it much more convenient, as it rests on the ground steadily, as shown in the sketch. I purchased mine in the first instance to serve as a scoop to bale the rain-water out of my punt, for which purpose it answered admirably, but it gradually began to make itself so very useful in the garden,



GROCER'S SCOOP FOR GARDEN USE.

that another smaller one had to be obtained for the boat.

Its uses are endless. Armed with this and a bricklayer's trowel, there is hardly any of the smaller operations, such as transplanting, dividing, sowing seeds or seedlings, &c., which are not greatly facilitated. It will carry a very large spadeful of manure or cocoa fibre for a mule, it carries the finely sifted mould, and the seed packets for sowing. It is a sort of small hand-barrow, handier than a basket for weeding or collecting dead heads, for which last purpose it is held out by the left hand, and catches the dead heads as they are cut by the scissors. After any transplanting work, if used with the trowel as a housemaid uses her dustpan and brush, it cleans up all the spilt earth in the tidest way. I also collected snails at night in it with a lantern. Indeed, the uses to which it can be put, as I said, are endless. It is essentially a tool for the amateur, and mine is kept with those other gardening implements which are reserved entirely and strictly for my own hands. These scoops can be bought for a small sum at any ironmonger's or tinsmith's.

Wallingford.

G. D. LESLIE.

LEAF CURL.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Your correspondent "A. D." in THE GARDEN of April 21, seems to be inclined towards the old-fashioned theory that the cause of leaf curl, or blister in Peach leaves, is the variation of tem-

perature in the early spring, when the leaves are just opening, and not a fungus, and suggests that Peaches grown under glass are seldom attacked in support of it. I do not see that this is any proof. I mentioned that "a sudden fall in the temperature after mild weather, during which the leaves have opened, being particularly liable to cause an attack." Of course trees grown under glass and carefully cultivated are not liable to these changes of temperature, and are not so likely to come in contact with the spores of the fungus, so that the fungus theory gains as much from this fact as the other. I also alluded to the benefit of picking off and burning all diseased leaves. I am afraid that I cannot agree with "A. D." that it is natural to infer that such varying conditions of temperature tend to cause the bursting of the leaf cells. Surely if the cells burst, the leaf would at once begin to decay. It is perfectly certain from the investigations of skilled microscopists that the leaves, &c., of Peaches are infested with the fungus before any signs of it are outwardly visible.

G. S. S.

IRIS RETICULATA.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—I hope that the recent notices of *Iris reticulata* in THE GARDEN will cause many more to grow this, one of the prettiest and most useful of our early Irises. They will also do good if they bring more prominently before your readers the value of the major form, which is worthy of the praise given it by Mr. Kelway and others. I think that your correspondent "S. W. F." cannot have the true *reticulata* major, whose flowers are certainly larger than those of the typical form. It is also taller, though I do not know if this is an advantage in the case of a flower which comes so early in the season. One still finds that the form known as *Krelagei* is occasionally sent to purchasers as the true *reticulata*. This form, valuable as it is because of its earlier blooming and its even greater fragrance, is not so pretty as that charming combination of colour given by the type or its variety major. In my own garden *Iris reticulata* does not grow with the freedom which characterises it in some others. This I attribute to the lack of moisture below and to the attacks of wireworm. I think the conditions under which it is grown by Mr. Crook are such as suit *Iris reticulata* well.

Carsthorpe, by Dunfriess, N.B. S. ARNOTT.

VERBENAS.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—Many of your readers have kindly and fragrant memories of the *Verbena*, so genially noticed in THE GARDEN lately. It was one of those bright and good things almost wholly swept out of many gardens in the reaction against the glitter and glare of bedding-out to excess. And yet it is not so very long ago since such popular sorts as *Purple* and *Scarlet King*, a good fragrant pure white *Boule de Neige*, *Nemesis*, *Lustrous*, *Tweediana*, *Melindres*, &c., were grown by the thousand in most large gardens.

And there are few gardens to-day in which a few hundred *Verbenas* would not be welcomed back as additional brightness, variety, and fragrance. Besides the change of fashion in flowers, perhaps the increase of rabbits has proved the chief obstacle to the growth of *Verbenas*, and specially those of *Melindres* type are the first plants in flower beds and borders to be nibbled off or stumped up, the special *Verbenas* being frequently preferred to the sweetest *Pinks*, *Carnations*, *Picotees*, or *Cloves*.

The cultural difficulties in propagating, wintering and growing *Verbenas* are not great, and seem to have been much exaggerated. Aphides and mildew are almost their only pests, and these seldom attack them unless the culture or treatment are at fault. All risks of either may be avoided by sowing the seeds in a mixture of sandy loam and leaf-mould in February or March in a temperature of 60°. Prick off and push on the seedlings to be planted out in May, and they bloom freely through the summer and autumn.

Few seedlings, except those of the *Melindres* species, will come true from seed. But, unless for purpose of massing, this is of little moment. And those who wish for *Verbenas* in plenty with the least labour can hardly do better than purchase a few packets of mixed seeds from a specialist every year.

Established or named sorts are easily propagated by cuttings in a close cold frame in August, or under a bell-glass or hand-light. The tips of the cleanest, healthiest shoots free from flower buds should be chosen. The cuttings may be inserted in pots or pans about 2 inches apart and remain near the glass throughout the winter in a temperature not exceeding 40° or 45°.

Others prefer potting *Verbenas* singly or three in a pot so soon as rooted, so as to get them well established before the winter. With careful watering and in cool quarters such plants pass safely through the winter free from plagues of mildew, aphides, rust, emaciation, and damping off. Then with a good lot of store plants, everything is possible by way of increasing *Verbenas* by cuttings through the spring months. The young shoots produced in heat strike like Couch Grass under bell-glasses in a temperature of 60° from January to May, and time and skill may produce *Verbenas* by the thousand with more ease than almost any other flowering plant. Another plan of adding the stock of the more creeping species of *Verbenas*, as *V. Melindres*, is to put up the rooted branchlets, and also lift, divide and pot up the root-stocks. Start them in a slight bottom-heat, harden them off as soon as established, and store for the winter the same as rooted cuttings. D. T. F.

HELENIUM STRIATUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—The change in colour in *Helonium striatum* is quite common, but I fear it will not be easy to arrive at a conclusion as to the true cause. I have taken advantage of many opportunities of seeing it in other gardens as well as my own, and while at first I thought the difference between the plants seen might arise from the degree of exposure to the sun, I feel less positive upon the point now than before. In one garden in which there are several plants, those which are partially shaded by trees are almost unmarked with the crimson streaks, while those in full sun have these quite distinct. In my own garden, however, a considerable number, indeed the majority, of the blooms come almost entirely dark crimson. I am now inclined to think that the colouring is more intense in dry soils than in those of a moister nature. This is, of course, only an opinion, and I should not like to say that it amounts to a conviction. S. ARNOTT.

NOTES FROM NURSERY GARDENS.

THE FLORAL FARMS, WISBECH.

ON the border of Norfolk, and about a mile and a-half outside the quaint town of Wisbech, are the floral farms of Messrs. R. Bath, Ltd., farms in the truest sense, and a most interesting spot for all who care for hardy flowers and bulbs spread out in great groups upon the stretches of flat land. Wisbech is in a fen country, and the wind sweeps across the farms in no uncertain way, but fruit and flower revel in the sandy loamy soil reclaimed from the Wash, and we were astonished to find such remarkable luxuriance.

A day may well be spent walking over the broad acres, divided by light hedges as a screen from the winds, and if one can choose a day when the sun, which seems always to shine here, opens out the Tulips, then a mass of colour will be seen probably unrivalled in the British Isles. There is an air of order and high keeping about the whole establishment. The trumpet Daffodils were almost over when we went over these farms, but we remember the many rare kinds shown by the firm at a

recent meeting of the Royal Horticultural Society, viz., *Mme. Plomp*, *Victoria*, *Weardale Perfection*, *John Nelson*, and *Mme. de Graaff*. At the time of our visit Grandee was magnificent. We have never seen finer masses of flowers, and even kinds of delicate growth elsewhere seem to make broad robust foliage sufficient to make the ardent horticulturist envious. Grandee is a thoroughly useful Daffodil. It has the handsome appearance of *Horsfieldi*, to which it may be compared, but is quite late.

Very beautiful were the fields of the *Poet's Narcissus* (*poeticus ornatus*), and the incomparabilis *Sir Watkin* had made a splendid display, in one group the bulbs averaging ten flowers apiece, and each of more than the normal size. This is evidence of the thorough way in which the farms are managed. One might write a small book about the Daffodils alone, which follow the earlier flowers of the year, the Snowdrops, and sweeps of *Chionodoxas* and *Scilla taurica*, but we must advance forward to the time of the Tulips, which we think are grown almost as largely as the Daffodils.

It has been our pleasant lot to feast the eye upon many rare pictures of Tulips, but nothing quite so rich as the beds of distinct kinds at Wisbech. Out in the open field, with nothing to overshadow or intercept the view, the Tulips are like some Eastern carpet, a carpet painted over the earth and dashed with brilliant colours; here a splash of crimson, there soft silvery pink, and again a group of absolute white. Bed after bed, a complete guide to the Tulip family; first the Dutch kinds, then the species and later forms which carry the season almost to the threshold of June. A few of the more conspicuous we noticed were *Canary Bird*, *Cottage Maid*, white touched with pink; *Proserpine*, *Rose Luisante*, deep rose; *White Joost van Vondel*, a splendid Tulip, pure white, and the intense double crimson *Imperator Rubrorum*.

Messrs. Bath grow *Tulipa retroflexa* largely. We noticed several great masses of it, and certainly for cutting no Tulip is more valuable. Its long slender stems support rich yellow flowers with pointed segments. Thousands of the strangely shaped Parrot Tulips are approaching flowering stage, and on looking through the rows very few bulbs could be seen without a bud. Many care much for this curious hybrid, for undoubtedly this is its origin, but it has an unhappy characteristic of absolutely refusing to bloom. It was pleasant to see these healthy beds of bulbs, and Mr. Leak, the manager, mentioned to me that about 80 per cent. may be expected to bloom. It is worth well a long journey to see these beds in full beauty, and feast the eyes upon mixtures or groups of distinct kinds, such as *Cramoisi Brilliant*, scarlet, or the golden yellow *lutea major*.

On every hand there is something to arrest attention, the luxuriant tufts of *Pyrethrums*, sheafs of *Delphiniums*, and clumps of *Paeonies*. The *Empress Pansies* are a feature of interest. We are pleased to know that this firm have not forgotten the quaint flowers of the old borders—the *Heartsease*, that seems to smile when one looks at it, and seen here in many varieties, some blotched, others self with well-defined margin. Of course, the Tufted *Pansies* or *Violas* are largely grown, also the *Auricula*, of which there is a delightful selection of good self colours, particularly of the soft yellow and lemon shades. We noticed a bank of *Miss Massey*, a deep crimson self variety with yellow centre, an effective and distinct kind. *Anemone fulgens*, *Wallflowers*, and, in truth, all the hardy flowers of any value find a place here.

The houses are filled with collections of *Carnations* (*Tree*, *Malmaison* and others), comprising all the newest and best of Mr. Martin Smith's seedlings, *Roses*, *Dahlia*s, ready for sale and planting out, &c., but it is impossible to mention everything in these few notes.

When visiting such a nursery as this it is possible to tell almost at a glance the flowers the public are at present interested in. We were told that the early-flowering *Chrysanthemums* were much sought after, and we remember last autumn the beautiful displays of this firm. The varieties of recent introduction have shown a

greater range of colours, and we are no longer compelled to possess rose or shades of it.

A visit to Wisbech is well repaid. The Floral Farms are well named, and crammed with interesting hardy and indoor flowers. Many separate notes have been made on things deserving distinct mention.

When the flowers have been seen, those interested in fruit will find much to occupy their attention. Tons of fruit, both of *Strawberries* and *Raspberries*, are sent to market daily in the season, and it is important to know that the *Strawberries* grown are *Royal Sovereign* and *Sir Joseph Paxton*, and of *Raspberries* four kinds, *Superlative*, *Norwich Wonder*, *Hornet*, and *Red Antwerp*. Mr. Leak told me that great faith was placed in *Hornet*, which has never seem to come to the fore. It is finer than *Superlative* in every way and of rich flavour. Acres of *Raspberries* are grown, and therefore the varieties are given a thorough trial. It will be well for fruit growers to make especial note of this kind.

SOCIETIES.

SCOTTISH HORTICULTURAL ASSOCIATION.

A PAPER upon "Hardy Perennials of Recent Introduction" was recently read by Mr. M. Chapman, of *Torbrey Nursery*, *St. Ninians*, *Stirling*. The lecturer took the last twenty years from 1880 till now. Few new species had been introduced during the period, but hybridisers had been specially busy, and not a few of the older species had been brought back since the fashion for hardy plants had set in.

Seasons of flowering, such as spring, summer, and autumn, also enable one to classify the material more easily. The spring furnishes comparatively few examples, the summer being more prodigal.

PERENNIALS FOR MARCH, APRIL AND MAY.

Adonis amurensis, *A. vernalis*, *Chionodoxas*, *Snowdrops*, *Christmas Roses*, *Lenten Roses*. As to the first, there are several improved varieties, such as the *Bath*, *Aberdeen*, *Wardie*, *Manchester*, &c. There is also an endless variety of the orientals, or *Lenten Roses*. A double variety of the *Rock Cross* (*Arabis alpina*) has also appeared, and a double *Anemone sylvestris*, or *Snowdrop Anemone*, a pure white form.

PERENNIALS FOR JUNE AND JULY.

Paeonies of three classes, the finest, however, being the *albiflora* of Chinese section, including all colours from pure white to glowing crimson, many of them being very fragrant; *Spirea Arneus*, *S. gigantea*, *S. palmata alba*, *elegans*, &c. *Aclyphylla Lyallii* is the best of the genus.

Delphiniums, or *Perennial Bee Larkspur*, have grown into supreme beauty under the art of the hybridiser. There are many species, but the florist's flower now holds the field, and furnishes almost every variety of colour from deepest blue to creamy white. By liberal culture the harvest of beauty may be prolonged until the late autumn through fresh breaks from the stools.

Gallardias winter best and flower most freely in light sandy loam. Hybrid *Glabdoli* are now so common that only two species were named, *G. Chidisi* and *G. Lemoinei*, both being quite hardy and representing every shade of colour.

Heuchera sanguinea is bright and beautiful. *Incarvillea Olga* commands attention through its fine foliage, its stature and flowers, while the Chinese species, *L. Delavayi*, introduced in 1893, is one of the best of its class and the most striking in the garden as strong plants, producing from eight to ten spikes of 3 feet in height, the foliage almost equalling the *Royal Fern*.

Phloxes early and late have been vastly improved, blooming from midsummer to the end of the season. *Anthemis tinctoria* though a native weed deserves a prominent place. *Bocconia microcarpa*, a new species, and *B. cordata* should be grown for the beauty of their seed vessels.

Campanula persicifolia, *C. Backhousei*, also a double form of the latter, are among the best. *Achillea Ptarmica* the *Pearl* is the best. The *Eremuri*, a striking genus of about six species, somewhat resembling *Hyacinthis*, pink and white, rising to a height of 8 feet or 9 feet, are superb for groups or back rows. *Hemerocallis aurantiaca major* (double *Day Lily*) is better than the single.

Platycodon grandiflora Mariés (the Chinese Bellflower), introduced in 1885, is also distinct and beautiful.

PERENNIALS FOR AUGUST AND SEPTEMBER.

Anemone japonica and its improved varieties are invaluable. *Whirlwind* and *Lord Ardillum* being the best, and partially semi-double *Asters*, or *Michaelmas Daisies*, which have been vastly improved in habit and floriferousness of recent years.

Montbretia Pottsi and a host of varieties are most useful. *Knapflora Varia*, or *Red-hot Poker*, as well as South African species, have been raised largely from seeds, their glowing colours adding much to the brightness of the dying season.

Veronica longifolia subsessilis from Japan is certainly the best of the tall speedwells. Flowers of deep blue, on stems 2 feet high, are very striking. *Galtionia candicans* is another fine African plant, introduced in 1882, with large snowdrop-looking flowers.

PERENNIALS IN OCTOBER.

Rudbeckia laciniata flore-plena, or *Golden Glory*, is later as well as brighter than the old forms. *Helonium grandcephalum striatum* is also a choice garden variety of a rich gold and bronze colour. Among dwarf Sunflowers, the

Helianthus multiflorus var. *Bouquet d'Or* is one of the best doubles. Of the rigidus section, *Miss Mellish* is one of the finest singles for cutting, and *H. rigidus* Daniel Dewar of double. The new Winter Cherry of Japan, *Physalis Francketti*, grows more popular, being far superior to the old Winter Cherry.

In his selections, Mr. Chapman was not forgetful of the value of the plants for decorative effect out of doors. Their effects are greatly heightened when associated with shrubs or grouped in grass.

After a most interesting discussion, participated in by many members, a very cordial vote of thanks was passed to Mr. Chapman for his interesting lecture.

READING GARDENERS ASSOCIATION.

THE last fortnightly meeting of the winter and spring session in connection with the Reading and District Gardeners Mutual Improvement Association was held recently in the club room, Old Abbey Restaurant, and was exceedingly well attended. A most important subject was chosen for the evening's discussion, and one which is without doubt engaging increased attention amongst lovers of outdoor flower gardening, viz., "Spring Bedding." The subject was introduced by Mr. J. E. Stevenson, head gardener to the Corporation, Bournemouth, and, needless to say, it was placed before the members in a very practical manner, spring bedding being a great feature in the Municipal Gardens. The lecturer said that this was certainly the best time to consider this important question, for it was now one could see mistakes in the planting of unsuitable varieties and the combination of colours, and put themselves right for another year. He then went on to enumerate the various varieties of flowering plants and bulbs which he found by experience to succeed well in the south: Wallflowers, Pansy, Viola, Arabis, *Doronicum*, Golden Feather, *Alyssum*, *Polyanthus*, Daisies, *Sedum*, *Narcissi*, *Hyacinth*, *Tulips*, &c., and to describe the culture of each. Then followed interesting remarks respecting the great importance of the proper blending of colours with particular varieties to be used for obtaining this object. A discussion followed, in which Messrs. Stanton, T. Bowie (who received a hearty welcome from the members on his return to the neighbourhood, he having come to take charge of the gardens at Calcot Park), Townsend, Alexander, Burditt, and Wilson took part. On the proposition of the chairman, Mr. Fry, seconded by Mr. Neve, a vote of thanks was accorded to Mr. Stevenson for his lecture, and to Messrs. Sutton & Sons for a beautiful collection of *Narcissus* blooms, consisting of Sir Watkin, *Horsfieldi*, *Cynosure*, *Maximus*, *Emperor*, *Empress*, &c., and to Mr. Stanton for some examples of *Commode* Nut Lettuce.

THE ROYAL HORTICULTURAL SOCIETY.
NOTES ON THE CHISWICK TRIALS.

FOR the last twenty years I have taken a personal interest in these trials, and have had ample opportunity of watching them both as a member of the fruit committee and as an ordinary Fellow of the society. My connection with horticulture alone would be sufficient inducement to keep myself in touch with the various trials conducted at Chiswick from year to year.

I have therefore been able to appreciate the conscientious work done both by the officials at Chiswick and those members of the fruit committee who have attended the meetings at Chiswick, and in any remarks I may make I wish very clearly to say that I am sure they have, one and all, carried out the tasks allotted them as ably as the circumstances of the case permitted.

I am confident, however, that all those members of the seed trade who have themselves devoted much time to raising novelties or testing novelties on a large scale would agree with me that in recent years no series of trials at Chiswick of vegetables has been so complete as to warrant the committee in awarding a certificate to any so-called new variety on the ground that it is distinct from or superior to existing varieties. I know this will seem a very sweeping assertion, but at the present moment, when it is suggested that new gardens should be acquired for the purpose of continuing these trials I think it essential this fact if it be a fact should be brought to the notice of those who have the framing of the society's policy, even at the risk of appearing to press unduly the opinion of one who has only just joined the council.

The reasons for this opinion are:

(i.) In no case do the trials at Chiswick contain anything approaching the number of standard sorts which an experienced seedsmen knows to be essential if the superiority of a so-called seedling or novelty is to be accurately gauged. In the case of Peas I should myself consider a standard collection of 200 or 250 varieties none too many with which to compare a reputed novelty before taking the responsibility of offering it as new, distinct, or superior. Again, in the case of Potatoes, the standard or reference collection should contain from 250 to 300 varieties to enable even an expert to adjudicate upon a so-called new seedling submitted for award. By way of illustration I may take the following figures from my trial book for 1897:

Peas	Total number of trial rows	184
	including seedlings for examination	288
	including other distinct varieties	150
Potatoes	Total number of trials	1227
	including seedlings for examination	496
	including other distinct varieties	403

At Chiswick last year the numbers were

Peas	Old sorts for comparison	9
	New varieties for award	46
Potatoes	Old sorts for comparison	25
	New varieties for award	46

Trials of other vegetables require to be tested in the same complete and exhaustive manner if any definite results are to be obtained. I do not care to refer again to my own trial book, but the following figures give some idea of the amount of labour which would be required at Chiswick if trials of vegetables and flowers were carried out with a view

of determining whether so-called novelties or seedlings were superior to those already existing:—

Tomatoes	Total number of trial rows (including 87 separate varieties).	243
Lettuces	Total number of trial rows (composed of 198 rows spring-sown for summer cutting in 94 varieties, and 78 rows autumn-sown for spring cutting in 70 varieties).	276
Cauliflowers	Total number of trial rows (composed of 164 rows spring-sown for autumn cutting in 57 varieties, and 71 rows autumn-sown for spring cutting in 50 varieties).	235
Onions	Total number of trial rows (composed of 237 rows spring-sown for autumn use in 62 varieties, and 99 rows autumn-sown for spring use in 50 varieties).	336
Cabbages	Total number of trial rows (composed of 255 rows spring-sown for autumn cutting in 75 varieties, and 180 autumn-sown for spring cutting in 70 varieties).	435
Broccoli	Total number of trial rows (including 46 separate varieties).	157
Dwarf & Runner Beans	Total number of trial rows (including 136 varieties, of which 40 are not yet in commerce).	255
Broad Beans	Total number of trial rows (including 35 varieties).	85
Asters	Total number of trial rows (including 270 varieties).	367
Stocks	Total number of trial rows (including 161 varieties).	157
Sweet Peas	Total number of trial rows (including 220 varieties).	253

(ii.) Secondly (and I wish to say it with all courtesy to those who form or have formed the fruit committee), it is practically impossible for the committee, as a body, to be possessed of the requisite technical or expert knowledge to enable them to judge accurately. Even those who are practical gardeners have never grown or seen growing in private gardens anything like all the varieties in commerce, and cannot therefore know personally the comparative merits of so-called novelties. I think I am within the mark in saying that a gardener in even a large establishment seldom grows more than fifteen to twenty-five varieties of Peas. Besides this, a gardener generally (not universally) contents himself with the varieties offered by one seedsman and knows but little of those offered by the many others in the trade. Unless the members of the committee were almost daily inspecting the trials of the larger seed-houses, where for the necessities of the trade it is essential that all existing sorts should from time to time be tested, and where the Pea trials number from 500 to 1000 rows, they could not obtain the technical knowledge required.

(iii.) Thirdly, because it is not sufficient to visit trials two or three times during the season. To ascertain the comparative merits of new and old varieties, Pea trials need to be closely watched day by day from the time they bloom till after they are matured, a period of six to eight weeks elapsing between the earliest and latest sorts, according to the character of the season. And what is true of Peas is true more or less of other vegetables.

(iv.) Because only comparatively a small number of the committee can find time to go to Chiswick even two or three times during the season.

It may then fairly be asked why, if such is the case, have none of those most intimately concerned ever called the attention of the council to the doubtful utility of these trials?

I can only suppose that it was felt that the council might not readily give up what was generally supposed to be a valuable part of the society's work. Also that *Chiswick existed*, and it was supposed to exist for these trials (and other purposes), and having their own trials conducted at very great outlay of money, time, and energy, it would appear ungenerous to call in question the self-denying work of very able men.

For myself I may say that it is only the proposal to move to another spot where similar trials would be conducted, and where the committees could only attend with still greater inconvenience, that has led me to express my views.

I have gone thus fully into the details of various trials, in order to explain my reasons for thinking that the Chiswick trials do not and could not, as at present carried out, confer any real benefit on horticulture, or at any rate no benefit commensurate with the annual cost, about £1000. If the present garden is returned or a "New Chiswick" acquired, I would suggest that, instead of comparative trials, standard collections of the leading vegetables and flowers should be grown, so far as space and funds permit, for the interest and information of the Fellows. I do not, however, forget that the gardens exist for other purposes besides trials of vegetables and flowers, but I am not at all sure that the collection of fruit trees, Vines, &c., is so complete and up-to-date as to be a reliable guide to Fellows wishing to learn the best sorts for planting. (Signed) ARTHUR W. SUTTON.

THE LIMPSFIELD SITE FOR THE NEW "CHISWICK."

OUR representative writes:—"I have visited this much-discussed proposed site for the new gardens of the Royal Horticultural Society just beyond Oxted. When at Clapham Junction I paid 2s. 6d. for a third return ticket to Oxted, I learnt that, had I gone by the preceding train leaving there at 10.47, I could have had a ticket for 2s. That is worth knowing, as there are on the South-Eastern Railway also two morning trains to Oxted at the same low rate of charge from London. These cheap tickets are available from the 1st of May until October. Reaching Oxted in half an hour,

my friends and I were taken out to the new site in twenty-five minutes by the aid of a slow horse and by the longest route, as it was thought best we should enter the ground from its lowest side, where it abuts on to a quiet country lane. By the more direct route the distance is easily covered in twenty minutes. Our attention was at this lower point drawn to the fact that about a third of a mile distant, where the Tunbridge Wells branch breaks out from the East Grinstead and Brighton Railway, it is proposed, should this ground eventually become the Royal Horticultural Society's gardens, to construct a manure and coal siding. The intervening space is open common land, which will never be built on; and away on the other side of the ground is similar common land of an immense area, which also will remain open for all time. The day was fine and warm, and possibly had something to do in helping to form optimistic ideas in one's mind in relation to the site, of which it is absolutely undeniable that it is one of singular beauty, and possesses for the formation of a great national horticultural garden ideal situations, sites or aspects, slopes, elevations, soils and surroundings. Without being at all enthusiastic, for I have long passed that stage in human weakness and am very much a stoic, I could but feel, and indeed said, that were I a rich man wanting a small estate on which to build a house, I would readily give, to secure this singularly lovely spot, much more than was asked of the Royal Horticultural Society for it. From its higher elevation, and especially near the Caxton Home, which stands on its northern edge, the view over the country far and wide is truly magnificent, and can hardly be excelled anywhere. If the Fellows of the society would but go and see this site for themselves before they give any opinion upon it, they would, I am certain, fully realise that my description of its beauty is rather moderate than high. Generally the position is on a sharp southern slope, with throughout a soil that is of a retentive sandy loam, in places tending to clay, but never sticky. In that respect it is a long way superior to the stiff clays of the Middlesex side of the Thames valley. Whatever may have been the general condition of any portion of the land, or spots of the land, at an earlier date, in any case on the 4th of May there is not to be found anywhere excess of water, and an entire absence of swampiness. That in the winter a good deal of water does percolate from the high land on to the lower land there can be no doubt, but there is not the least reason to be alarmed on that score; for the opening of the ditches and pipings, all of which have been allowed to become choked, and the putting in of a few tile drains, would amply secure the land from any water excess at any time. But it must not be overlooked that one of the greatest needs of a garden is found in an abundant supply of water. The estate naturally has springs, and it is only needful to tap these and convey the water into ponds or reservoirs, either by gravitation or by the aid of a ram, to force it on to a high elevation, to secure one of the greatest boons in abundance any estate could furnish. In relation to this water supply also there are, in places that do not at all interfere with the general working or cropping of the ground, admirable sites for aquatic gardening, now an important feature in horticulture, including *Nymphaeas* on the one hand, and such matters-of-fact products as *Watercress* on the other. In other directions there are charming spots for wild gardening, or even for the culture of *Osiers*, *Hazel*, for stakes and other things, such as become essential where a large garden is established. It does seem to have entered the minds of many persons, derived, perhaps, from what has been seen at uninteresting, flat Chiswick, that a Royal Horticultural Society's garden was needed solely for the conduct of seed trials, or of flowers, or some similar purposes. These are all important, and would have their place at Limpsfield; but when, as now for the first time in England, it is proposed, on a noble site of some fifty acres of ground, to establish a worthy national horticultural garden, it must be understood that everything possible in horticulture, small or great, must find representation. I cannot conceive of any site in any part of the kingdom that seems to be, by its diverse aspects, soils and surroundings, more fitted for the object in view than does this Limpsfield ground. I feel certain that did anyone see it as it now is, with mind absolutely unbiased, realising that the Royal Horticultural Society must have a new garden, that a more perfect site for the purpose could hardly be conceived. As the eye travels from the lower margin of the estate up to its highest point, note is made of the still lofty ridge of land beyond, with its margin of trees, that breaks in the most remarkable way all cold winds from east and north. Then, looking for evidence of quality of soil, there are seen in the hedgerows noble clean Oaks in all directions, not a scrubby tree anywhere—perfect evidence of the general excellence of the soil. Of existing crops, one fine field at the lower end has a thin crop of Oats and Clover, but no weeds, the second a promising growth of wheat, the plants now rapidly filling out and very clean. Then note in the centre come three diverse meadows, all showing a fine herbage, but would be much improved by the addition of some basic slag. This turf offers some of the finest medium conceivable for Melons, Vines, Peaches, Roses, and myriads of other things. Then comes a large area devoted to Hop culture. That these important climbers are making good growth speaks volumes for the excellence of the land, which only needs deep working and manuring to fit it to grow anything. Beyond is, at a high elevation, a small meadow backed by a lofty sandbank, on which a grand rocky could be formed, and the small meadow would make a pretty pleasure ground. The look-out here over the surrounding country needs to be seen to be understood. Could the council not only make a pleasure garden of this spot, but erect here a pretty tea chalet for the Fellows, I am sure that in time the place would become for them a most popular resort. Round immediately under the Caxton Home, which the county councils propose to purchase and convert into a school of horticulture, is a big field with a sharp slope to the south, ranging from sand at the top to clay at the bottom, forming a splendid site for fruit culture, seed trials, &c. Going to the site with very pessimistic ideas in relation to it, I came away convinced that it has merits of the highest order to recommend it.

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HIMALAYAN RHODODENDRONS.

A VISIT to Mr. H. Mangles's unique collection of Indian Rhododendrons near Farnham brings forcibly to mind the neglect of the many good things that may be enjoyed in the cool greenhouse, a temperature of glass-house whose capabilities are most undeservedly overlooked. In the case of this most interesting collection, though the houses are large, the Rhododendrons are so numerous, that they are more crowded than would be the case if the amount of space under glass was unlimited, and there were not a large collection of priceless plants to be housed at all costs.

If anything more divinely beautiful than Rhododendron Aucklandi exists we hope we may live to see it, but if not, one may well remain satisfied with its surpassing loveliness. Each individual bloom in the truss is like a pure white Lily over 4 inches across, three to six flowers being in each cluster. The segments are handsomely recurved, and the two lowest, which are wider, have their edges boldly crumpled in large waving folds. The calyx is pale green, clouded and spotted with tender rose colour. The long flower-bud is covered with rosy bracts tipped with crimson that remain among the opening flowers, lengthening as they develop. The scent is delicious.

Another of these lovely Rhododendrons is *R. Lindleyi*, smaller than *Aucklandi*, and only a little less beautiful, while it is still more excellently and powerfully perfumed. Its blooms of purest white, with pale brown anthers and pale green calyx, individually $3\frac{1}{2}$ inches by 3 inches across, are borne in clusters of from three to five. The rather dark green leaves are small and deeply plaited and pale green at the back. The bud is yellowish-green, pink tinted towards the tip.

R. campylocarpum is one of the most remarkable of these beautiful Rhododendrons, in colour a lemon-white, shaded inside with a greenish citron colour. The flowers are of waxy substance and are not recurved. The leaf is of moderate size and highly glazed. The plant is of a compact habit that is somewhat unusual among the Rhododendrons of this class.

R. argenteum, as at Mr. Mangles', is a small tree 15 feet high and about fifty years old. It blooms in March; the flowers open pink and pass to white, and have bright red anthers. The leaves are of remarkable size, many being

15 inches long; they are dark green and deeply plaited, and have much the appearance of gigantic leaves of the Loquat. *R. longifolium* much resembles it; in this the leaves are rather paler and nearly as large. It has a splendid white flower, purple in the throat, and also blooms in March. The flower is finer than that of *argenteum*, also opening pink and afterwards turning to white.

Another beautiful kind is *R. eximium*. The flowers are in full rounded trusses; there are sometimes as many as thirty blooms in the truss; they are Gloxinia-shaped and slightly waved at the edge; their colour is pink, turning to yellow-white with brown anthers. The leaves are 6 inches long by 3 inches wide, dark green with a strongly pronounced leather-like grain. They are rusty beneath, and when quite young are also rusty above with a brown powdery meal which easily rubs off and disappears as the leaf matures and hardens.

R. Hookeri is a rare species; the flowers are ten to thirty in a truss, and are of a fine soft scarlet; the edges of the segments are not recurved, the anthers are of a dull purple. The leaf is of a moderate size, of a full green colour, but dull surface, showing glands at the back. The undeveloped leaf-shoots are conspicuous from being clothed with crimson bracts arranged scale-wise.

Some kinds that find a home in this interesting collection bloom outside in a sheltered spot; of these the most noticeable is *R. Thompsoni*, with waxy bell-shaped flowers bearing a slight bloom that reminds one of the surface and texture of a *Lapageria*, while the rosy scarlet colouring exactly repeats that of the darker varieties of this well-known climber.

A hybrid variety of unknown parentage, also blooming outside, called the *Luscombe Hybrid*, somewhat recalls *Aucklandi*, which may be one of its parents.

These beautiful Rhododendrons are natives of the Eastern Himalayas, in Sikkim and Bhotan.

Of the many beautiful hybrids raised and shown recently we shall have more to write.

INJURIES TO PLANTS BY LONDON FOGS AND ENGINE SMOKE.

THE difficulties experienced by our nurserymen in and around London from smoke-fog are becoming very serious. At Kew, too, the damage is annually very great, while gardens and hot houses in the neighbourhood of

shunting engines are by no means free from the inconvenient, if not injurious, effects of engine smoke.

With regard to London smoke, the so-called dry fogs consist of particles of water enveloped by the ingredients of smoke. When such is spread over the western suburbs, especially by an anti-cyclonic easterly wind, it becomes deposited upon the glasshouses as a tenacious black or grey deposit, more or less thickly coating the glass. The first effect to the plants within the house is a partial arrest of their functions by a deprivation of a large amount of light. This, however, is a less serious result than the actual poisoning of the plants by the toxic elements contained in the fog or smoke. The most important and harmful ingredients prove on analysis to be carbon, which remains on the outside, about 40 per cent., the more or less poisonous hydro-carbons from 5 to 12 per cent., and sulphuric acid, derived from sulphurous acid by oxidation, 4 per cent. These enter the houses and attack the plants within.

With regard to the loss of light by the adherence of carbonaceous matters to the glass—and so firmly is this done, that it has often to be scraped off, no mere washing being effectual—the result is that all the vital functions carried on by the vegetative organs are impeded. By examining fog on the glass thus more or less covered with soot by the spectroscope, it is found that the more refrangible half, or that which consists of the blue and violet rays, are more absorbed than the red and green, though the brightest or yellow rays are also much reduced.

Now, if plants be grown under blue, green, yellow, and red glasses respectively, it is found that the stems will be more and more abnormally elongated in length, from blue to red, those under blue being nearly normal, *i.e.*, as in full light; consequently the most obvious effect upon herbaceous plants, say Ferns and *Pelargoniums*, is to have their fronds and stems greatly elongated.

Secondly, as transpiration is largely effected by the violet as well as the red rays, this process is proportionately checked; but absorption of water by the roots, nevertheless, proceeds as usual; consequently the plants become too succulent instead of having firm, woody stems, and the leaves tend to become coarse and large from a like over-succulency. It is found, too, that the ordinary moisture in the house does not evaporate readily when the air within it is charged with vaporous products of smoke, so that fronds of Ferns, for example, hang down, cling together, and then not infrequently rot. This effect is undoubtedly due to the water being charged with sulphurous acid and the volatile products among the hydro-carbons of the smoke. Thus both the mechanical evaporation generally and transpiration, a true vital function of the plants, are greatly impeded.

Respiration or "breathing" of plants is also hindered by the faulty circulation of air within

the tissue. Substances become incompletely oxidised, so that acid organic matters are formed which in normal health would not exist. The more or less reduction of yellow and blue rays is perhaps of the greatest importance, as it is by means of these that assimilation is mainly executed, so that the production of flowers is consequently arrested. Sachs showed that there was reason to believe that it was the extreme and most retracted end of the spectrum which was concerned with the process of flower-building. If that be so, the poverty of flowers seen in such plants as *Pelargonium* is easily accounted for. Sometimes the trusses bear but two or three blossoms apiece.

With regard to the nature of the poisonous ingredients in London fog and smoke, they are chiefly sulphurous acid and vaporised hydrocarbons, which pass into the houses, though the actual carbon itself may remain outside, connected to the glass by a greasy deposit of its products. The moisture within the houses absorbs these toxic matters, and so injures and destroys the foliage. The sulphurous acid thus reaching the plants acts as a powerful deoxidiser, and, by extracting oxygen from the living protoplasm within the cells of the plant, kills it. The direct result of this is at once seen in the falling of flower buds and the disarticulation of parts of the inflorescence, as well as in the injuries to the vegetative system. The first appearance of the effect on the latter is often a gradual yellowing of the leaves before they fall off, though it often happens that they fall while still quite green.

A local blotching often occurs from the effect of sulphurous acid in drops of water. This drips from the tips and margins, killing those parts. This is especially due to the sulphurous acid becoming changed into sulphuric by oxidation and then corroding the leaves. A rapid disarticulation of the leaves often takes place. This is caused by the fog entering the lacuna of the tissue through the stomata. The disarticulation is brought about by means of a rapid formation of the absciss layer. This layer is the one which forms the ordinary bark of the bough on which the leaf stands. The bark is, of course, continuous all over the stem, *except* at the spot where a leaf-stalk arises. But when it is time for a dead leaf to fall this active layer of bark-forming tissue spreads across the base of the stalk, and then some ferment is probably secreted which dissolves the delicate tissue of the cell-walls, so that the weight of the leaf soon causes it to fall.

This process appears to be abnormally hastened when the leaves are poisoned, so that they fall in a few hours. The consequence is that bushes of green leaves have to be swept up in the Palm stove at Kew after a severe London fog. The amount of sulphurous acid has been found on analysis, in dull weather in London, ordinarily to be about 6 per cent., and in a thick yellow fog it amounted to as much as 20 per cent.

Artificial experiments with varying amounts of sulphurous acid in water produced precisely similar effects as occur in Nature, varying in intensity according to the strength of the solutions employed, and resulting in a like destruction of protoplasm, in the decomposition of chlorophyll grains, the formation of the yellow "chlorophyllan" instead, &c. Experiments with vaporised carbonaceous products proved them to be equally injurious and poisonous. For example, pyridine brought about a rapid limpness of the leaves, a destruction of protoplasm, and a subsequent browning;

but the chlorophyll was less affected than by sulphurous acid. The browning of the leaves is due to the presence of tannins. Other volatile carbonaceous products act like pyridine, proving the exceedingly poisonous nature of the so-called "tarry products" of smoke.

With regard to the action of these substances on flowers, it is found that they are usually the first organs which suffer. In distant suburban localities the influences of the fogs are found sometimes to be confined to them. Thus a hundred buds fell off one *Camellia* tree after a thick fog had passed over Kew.

The injury is most frequent at the stage immediately preceding the opening of the flowers. If the buds have expanded, then the flowers sometimes become checked and are smaller, but the injury is less. They do not fall off, but the corolla may lose substance, become translucent by the suffusion of water into the outer cellular spaces. They may become yellow by the formation of the chlorophyllan, and brown by the presence of tannins. If they get bleached, this would be due to the sulphurous acid.

The above differences were seen, for example, in *Salvia lantanifolia*, in which, while the buds fell off, the expanded flowers were uninjured. In *Rhododendron jasminiflorum* the flowers were uninjured while within the bud scales; also expanded flowers were but little affected. But if the flower-buds attempt to open during the fog they perished. The bright green buds of *Angraecum sesquipedale* turned yellow. Similarly with the buds of *Phalenopsis*, *Begonias*, *Camellias*, &c.; they all changed colour and fell off. Further details will be found in Prof. F. W. Oliver's paper on this subject in the *Journal of the Royal Horticultural Society*, vol. xvi., p. 1. GEORGE HENSLAW.

THE EDITORS' TABLE.

DIANELLA CERULEA.

I AM sending flowers of the beautiful *Dianella cerulea*. It is the greatest wonder to me that it is not more frequently met with in our gardens, as the flowers of bright blue stand so erect above the graceful lanceolate green foliage, and when not in flower it always looks graceful amongst other flowering plants. The treatment is very simple, for it is half hardy, so in winter I grow it in a cool greenhouse with about 40 to 50° of heat, and in the summer I stand it under a north wall; it delights in a compost of peat, loam and silver sand, and likes to be potted firm. It is a native of New Holland. W. H. STACEY.

Bampton, Devon.

[It is quite true that this pretty plant is too much neglected, the more so that blues are so few among flowers.]

LATE TULIPS FROM IRELAND.

MR. BAYLOR HARTLAND sends us from Cork another delightful series of Tulips, and numbering no less than twenty-nine kinds. We have not described all these noble Tulips, but the following were singled out for their fine colour and form: *Fulgens lutea*, very handsome, intense yellow; *Snowdon*, pure white, sulphur outside; *Bouton d'Or*, *Cornuta chinensis*, with long twisted segments of richer colour than the type; *Vitellina*, the deep crimson *Didieri*, *Spathulata Bronze King*, a variety of *T. gesneriana*, of a bronzy shade; *Spathulata aurantiaca maculata*, crimson, flamed with orange; *Leghorn Bonnet*, light sulphur-yellow; the charming *T. saxatilis*, so soft a blue with yellow on the lower half of the segments; *Shandon Bells*, carmine splashed

with creamy white; *The Fawn*, a beautiful Tulip, whitish outside, then bronzy yellow, and then rose colour; *Didieri alba*, *Golden Eagle*, *Elegans alba*, very pure, and *Golden Crown*. We are pleased to know that Mr. Hartland is growing the late Tulips so well, for no hardy flower of May is nobler.

FLOWERING SHRUBS FROM CRAWLEY.

FROM MESSRS. Cheal, Lowfield Nurseries, Crawley, come sprays of *Pyrus japonica*, *Pyrus Maulei* and flowering *Crabs*. A seedling of *Pyrus Maulei* of a bright light salmon colour is specially noticeable, also a pure white. A large-flowered *Crab* of a deep rose colour named *niedwetziana* is a noteworthy novelty. The flower is boldly cupped and the buds very large and fine in colour.

AURICULAS FROM MR. HORNER.

THE Rev. F. D. Horner sends single blooms of some of his seedling alpine Auriculas in splendid colourings of purple, yellow, red, black and deep brown-purple, most of them perfect in form and proportion, and several with the quiet rose petal edge, long sought by the florist and now attained. These flowers are perfect jewels of beauty.

KITCHEN GARDEN.

THE NEW CLIMBING FRENCH BEANS.

DURING this time the cultivator is on the alert to make the most of the soil, and few plants that have been introduced of late years have found more favour in so short a time than the climbing French Bean, as the produce is so much greater from a small space than that of the ordinary runner. Most of this new type of Bean do not exceed 6 feet; some are smaller, and this is a great gain, as in many gardens space is a consideration. Many people prefer the smaller smooth Bean to the ordinary runner, and if the pods are cooked quite young and whole, few vegetables are superior. I do not intend to dwell upon the cooking, but there can be no question whatever we often allow our vegetable crops in this country to become too much matured before they are cooked; thus there is a loss both in quality, quantity, and time in preparation, as small whole pods are more tender, need but little preparation, and when cooked whole are better flavoured. Another important point often overlooked is, that plants on which vegetables are allowed to become fully grown cease to make new wood, and the energies of the plants are thrown into the formation of seed, growth being arrested. The pods of such kinds as *Earliest of All* and *Epicure* are well suited to cooking in a whole state, and if gathered when from 3 inches to 4 inches long, they have a distinct delicate flavour which sliced older Beans do not possess.

Two rows of this Bean may be accommodated where one of the older runners is grown, and the plants set their bloom quite close to the soil, so that earliness also is obtained, which is equally important, and from close observation I find the weight per row is greater than from others if the pods are not allowed to get old. As is well known, one of the chief faults of the dwarf or kidney Bean is that it ages quickly, the pods becoming dry, but this does not happen if the crop is gathered regularly, and if this is done new growth is made and the bearing continues. Much the same thing happens with the runner or climbing variety, only there is more vigour and a longer cropping season.

Besides those good qualities I have described there are others. I find the pods are more liked in the kitchen, and even when not gathered small they are sooner prepared, being more shapely; they are also a better colour. Those who prefer a

smooth Bean, shapely, and of the Canadian Wonder form, should grow Excelsior. This in a favourable season will run to 10 feet and is a heavy cropper; the pods are produced in clusters. It is valuable for market, though when gathered the pods will not stand so much rough usage as the old runner without showing it, as they are more tender. Tender and True is still well worth room in all gardens, and this is probably the best known, having been now some five years in commerce. The latter additions are most valuable, and the past two dry, hot summers in the southern parts of the country have brought them into greater favour. I need not dwell upon their culture, but there is no better time than the early part of May to sow, though we make several sowings during the season. For late use they are invaluable. For this purpose I advise Epicure, as the pods are thick and fleshy and remain good a long time. G. WYTHES.

AMERICAN NOTES.

WATER LILIES IN TUBS.

A FEW years since the Water Lily was cultivated only in a few botanic gardens, and was universally supposed to be manageable only by the specialist. But year by year it has outgrown these quarters, and proves itself to be a plant for the million. Any person possessing water and a two-gallon pail may have aquatic plants and flowers. Water Hyacinths, Water Poppies, Parrot's Feather, and even the miniature Nymphaeas may be grown in a vessel (wooden preferred) having a superficial area of 1 square foot. Tubs the size of oil or whisky barrels, sawn in two, make suitable vessels for a variety of Nymphaeas and Lotus. A most pleasant addition to a lawn, noticed lately, was a group of four tubs, three of them placed in a triangle, their inner edges supporting the fourth—making a pyramid. In the upper or central tub was a Lotus, its flowers and umbrella-like leaves towering up several feet high, while Parrot's Feather was trailing down over the sides, almost completely hiding the tub. In the lower tubs were red, white and blue Nymphaeas with some other aquatics, while around the margins a few rocks were placed, and interspersed with moisture-loving plants the whole making a mound of fresh, bright green foliage and brilliant coloured flowers all summer. Tubs, pails or casks for Water Lilies should be filled two-thirds full of good, rich loam, the roots planted 2 inches deep, then be given a warm sunny place, and kept full of pure water. At frost the water may be poured off, and the tubs carried over winter in a warm cellar or under the benches of a greenhouse. GEORGE B. MORTIMER, in *Fick's Illustrated Magazine*.

NOTES ON AQUATICS.

TUBS and boxes used for growing Nymphaeas and other aquatic plants should be filled with new soil, though in some cases this may not be necessary, but unless the boxes are of extensive size it is better to renew the soil. Presuming the boxes are about 3 feet square and 1 foot deep, in the case of hardy Nymphaeas it is best to thin out the plants to at least three good crowns and to partly renew the soil, but at the preceding season's growth was strong and vigorous I would renew all the soil and replant. In the case of a tender Nymphaea, renew the soil and plant one single plant in such sized box. Although plants will grow in tubs and boxes of smaller dimensions, and even in pots and pans, and produce flowers, the results attained by higher grade methods will always compensate for any additional care or labour.

As to soil for growing Nymphaeas and other aquatics, good turfy loam, sod from a pasture, composted in the autumn with one-third its bulk of cow manure, makes excellent material. No bone

or artificial fertiliser is needed, and if the soil is still or of a clayey nature, so much the better.

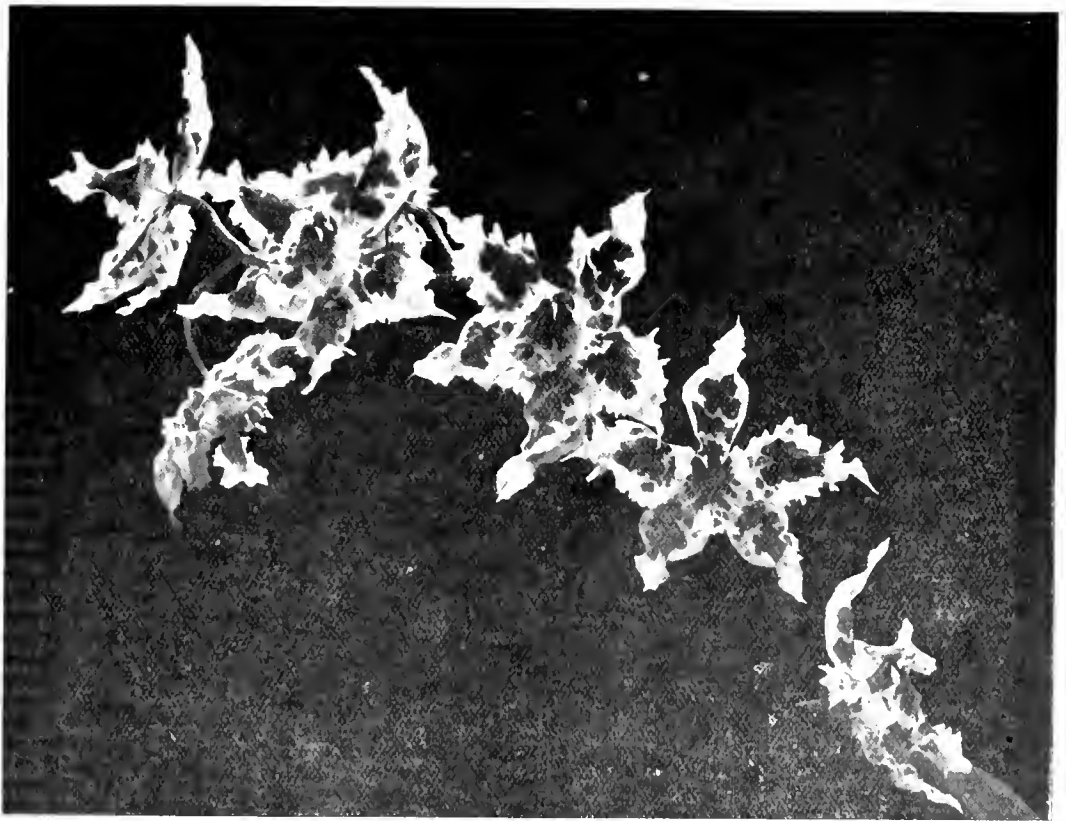
Hardy Nymphaeas may be planted in most sections now, but it is best to wait until conditions are such as will excite growth at once. Some varieties are very liable to rot if dug and transplanted before active growth takes place; better err on the other side, and wait for future results. There are some varieties that give the best results the first year, especially in artificial ponds, but the majority of them are better the second season.

In the case of Nelmubiums in artificial ponds, these are best undisturbed unless they are overcrowded, which is sometimes the case. The divisions or sections where these are grown may receive a top dressing of rich compost, first taking off 3 inches or 4 inches of the old soil. This should be done before the new growth appears. Where new plantings are to be made of Nelmubiums it is very important not to be too rash and plant a few days too early. The advice given for planting Nymphaeas must be emphasised in this case. Regardless of the fact that every season many complaints are heard that Nelmubiums are a failure, yet as soon as the season opens numerous orders

water, were all beamed and disfigured by the ravages of red spider. Overcrowding not only results in attacks of insects, but the flowers are hid from view; they are also undersized, as is the case with other plants. In planting new ponds it is often the desire of the planter to have immediate effect, but if this is attained the first season, crowding is sure to result the following season. In large ponds leave ample space between the clumps, and plant from three to twenty plants in a clump, the plants 3 feet apart. In small ponds and where it is desirable to have several varieties of different colour it is best to plant but one of a kind.—Wm. TRICKER, in *American Florist*.

A NEW ORCHID.

AMONG recent introductions of *O. crispum*, the subject of the accompanying illustration stands out as one of the most distinct and beautiful we have seen. In general appearance it is almost identical with the cherished variety *O. crispum apiculatum* in the collection of Baron Schroeder, but it differs altogether in the colour



ORCHIDOGUE—*O. CRISPUM APICULATUM*

are placed for these plants; the result must be failure and disappointment if planted in the open pond. Nelmubiums may be dug and shipped in April to southern districts or to be started indoors, but if planted under ordinary conditions and the weather similar to what we have experienced so far this April, it will be disastrous. To succeed in planting and establishing Nelmubiums do not dig or plant before new leaves are produced and growth all round is active and Nature fully afoot. The indications are that it will be the end of the month before this is the case, and in northern and western sections not before the first week in May.

In natural ponds and lakes it will be well to look over the stock, for where established plants have wintered without the ravages of rats it may be necessary to thin them out. The results of overcrowding are sometimes very perceptible. I saw large ponds last season that were sadly crowded. The large, succulent leaves, standing out of the

of the markings which are not nearly so dark as those on the plant in The Dell collection. Superior forms of *O. crispum* frequently realise high prices, and it is therefore not surprising to know that one of the highest prices yet paid for an Orchid was given for this plant. It made its appearance among one of Mr. J. Carder's importations introduced by Mr. T. Boelhof, of Broxbourne. The flowers are each upwards of 1 inches in diameter, and on the exterior of the sepals there is a suffusion of purple, which is reflected through the front, giving the appearance of a rose suffusion on the white ground. The spottings, as shown in the centre and basal areas, are deep brown-purple, mottled and mottled with white. The petals are of fine form and substance, beautifully crisped on the margins, and in the centre there is an almost

solid blotch similar in colour to that of the sepals, and extends almost to the base. The lip is larger than that of *O. apatum*, white, becoming yellow on the disc, in front of which there are several small brown spots. The illustration is reproduced from a photograph taken at the time the plant was exhibited at the Drill Hall on May 8. It was exhibited by Mr. H. T. Pitt, Rosslyn, Stamford Hill, and received a first-class certificate.

H. J. CHAPMAN.

NOTES OF THE WEEK.

The Temple show.—We remind our readers that the annual exhibition of the Royal Horticultural Society, in the Temple Gardens, opens on Wednesday next, and is continued during the following two days.

The cold weather and winds of the past few days have greatly upset the promise of a good fruit crop, and reports received from various quarters show how widespread is the damage. The tender foliage has also greatly suffered.

Tulips at Long Ditton. The splendid collection of Tulips in the nurseries of Messrs. Barr and Sons at Long Ditton is now in full beauty. *Tulipa gesneriana*, its forms, and other late kinds make a brave show with the Darwin kinds.

Notes from Ireland. I have now quite a grand display of all the different forms of that most free blooming of all Primula, *P. obconica* or *penultima*, and my big plants of *Dimorphotheca Ecklonii* are lovely masses of bloom. I never had the blue *Asphodel (Asithoa cerulea)* so fine as this year. *Cyclanthus Tuckii* is just opening two fine heads. W. E. G.

Narcissus Johnstoni Queen of Spain. On p. 321 this *Narcissus* is spoken of as dwindling away after the first year. This objectionable quality is by no means universal, as in some cases where it has been planted in the grass it has become thoroughly established, and is considerably stronger at the present time than it was the season following its planting—four years ago. Some of the *Daffodil* family, *N. obvallaris* among them, appear to succeed better when planted in the grass than when grown in tilled ground. S. W. F.

The form of the wild Primrose. "A. D." in writing of garden Primroses suggests that none but "naturalists" admire the form of the wild Primrose, while to the "florists" cultured taste its "ragged outline" is an abomination. I am, and trust that your correspondent will find few to agree with him in deprecating the contour of this gem of the spring. The "good form" catalogued by "A. D." is far from realising the aim of perfection in the eyes of the host of flower-lovers who prefer a somewhat less regular outline than the petal of circle which is the florist's aim. To the recognition of this taste we owe the introduction of the so-called *Primula stellata* and the star-flowered *Crocus*. S. W. F.

Bird life in the City. For the sixth season in succession a pair of wood pigeons are nesting there, in the old churchyard of St. Mark, the Virgin, Aldersgate. It is well within the memory of old-time East End cooks, who dated the historic Plumtree in Wood Street, which stands on the site of the Church of St. Peter's, "Cape," that here it was destroyed in the Great Fire of 1666, and was never rebuilt. For many years a pair of wood pigeons built a nest in the churchyard of St. Bartholomew's, but they seem to have deserted the old quarters, which are now over-looked by the new Post Office building in St. Mark's Churchyard. E. G.

Polyanthuses from Surrey. From Mr. J. K. S. we have received some lovely baskets of *Polyanthus* for the first meeting of the Royal Horticultural Society, the only lot being of the true, possible strain. In colour, as to neither colour, or form, or size, is an adequate idea of the beauty of the worth, but only were there three or four more of the same kind, I could not

the colours also were striking, distinct, and excellent in every way. Especially were we attracted by the richer yellows, or again where a white border of much purity is shown to greater advantage by a rich dark yellow centre. Self whites, too, were important among them, while all displayed a vigour and freedom that for gardening purposes generally may be cited as among the finest attributes of these showy and easily-grown flowers of spring. The plants, in their fine tufts nestling amid ample foliage, were all one could wish in these beautiful, though delightfully simple, flowers. E. JENKINS.

Rhodora canadensis at Wisley. One of the prettiest plants now in bloom at Oakwood is *Rhodora canadensis*. It has stood the trying weather well planted in a bed of Heaths, not many of which are in bloom, and brightens up the bed. Some of our *Gentianellas* have bloomed well. On one plant, 8 inches by 8 inches, there are sixty-eight blooms, and the effect is gorgeous.—G. F. WILSON, *Heatherbank, Weybridge, Heath.*

Cooking Asparagus. The right way to cook Asparagus is so little known among cooks, that we are glad to quote from Mr. George Bunyard's Asparagus list the following words: "The cook should stand the bundle loosely on the head and then tie them up, cutting the base level. They should be set in the saucepan upright, and the water should reach about half-way up the stems. The more tender tips then become steamed, are less liable to be broken, and retain their full flavour. Always cook Asparagus quite fresh."

Paris 1900 Universal Exhibition. Corrected official list of dates of temporary flower shows to be held during the exhibition: May 23 (general), June 13 and 27, July 8 (general), August 8 and 22, September 12 (general) and 26, and October 10 and 31 (general). Exhibitors must send their request for space to the Secrétaire Général du Groupe VIII, 97, Quai d'Orsay, Paris, *fifteen days* before the date of the show (although the general programme says six weeks), clearly stating the number, species, or variety of the products to be exhibited, whether in pots, cases, baskets, or to be planted free in open ground, the space required, and the section or class in which they are to compete. D. GIBBS.

Strelitzia Reginae. When in bloom this is sure to arrest attention, firstly, from the resemblance of the flower to a bird's head, and secondly, owing to its brilliant colouring, while its attractive features are not limited to the blossoms alone, as the stout leathery *Canna*-like leaves are always ornamental. They reach a height of a yard or thereabouts, and are well overtopped by the flower stem, which occasionally branches at the apex. A succession of blossoms is kept up from one scape for a considerable time, and, apart from their peculiar shape, the combination of vivid orange and purple is not to be found in many flowers. This *Strelitzia* is a native of South Africa, and was introduced into this country as long ago as 1773. It needs the temperature of a warm greenhouse, or about midway between the stove and the stove, and given this its cultural requirements are not at all exacting. A good loamy soil, lightened by a slight admixture of leaf-mould, decayed manure, and sand, plenty of sunshine, and an ample supply of water during the summer will put it into the *Strelitzia*.

Notes from Baden-Baden. The first lot among the thymaceous class to show flowers was *L. ittica*. It is a pygmy only 2 inches high, and the flowers are violet and yellow. Then came *L. Bludnowi*, a rare species from Russia. This is about the size of *L. pumila*, but the flowers are of the richest glistening yellow. *L. balkana* has morning chocolate flowers, but being early is, nevertheless, welcome. *Anemone coronata* from Japan is a welcome addition to these spring flowers. It has deeply cut and divided leaves, and blossoms in the middle of April; flowers nodding, silky outside, of dragon's blood colour. *Campanula Steveni* is only 5 inches high, and bears half a dozen rather large bright blue flowers. A very rich and free blooming plant is *Ranunculus acris*. The brilliant yellow cup are large

and of perfect shape. After a standstill of several years, *Rheum Ribes*, figured in *Botanical Magazine*, comes on with four strong stems, each carrying many hundreds of flowers. These I may be able to distribute in quantity. It is a great treat for an amateur and horticulturist to watch and observe the gradual development of its leaves, which at first are pressed in a big clump resembling a toad sitting on the surface of the border. Afterwards they gradually expand, and become perfectly round in shape and fully 3 feet in diameter. *Rheum palmatum floribus rubris* is a very striking and beautiful variety, the palmate deep green foliage contrasting beautifully with the bright crimson flowers.—MAX LICHTLIN, *Baden-Baden.*

Berberis stenophylla. It is when one sees this shrub in full bloom—as it is now, in middle May—that one wonders at the prevalence of so many uninteresting evergreens in our private and public gardens. There is many a shrubby given up to such things as Privet and Laurel which might just as conveniently be occupied by a group of this beautiful *Berberis*. It is absolutely hardy, of singularly graceful habit, and never fails to blossom profusely. Any soil appears to suit it, and it can be propagated freely under bell-glasses out-of-doors in late summer. It is a hybrid between *B. Darwini* and *B. empetrifolia*, and was sent out from the Haudsworth Nurseries, near Sheffield, thirty years or more ago. It forms a dense thicket of interlacing growth quite impenetrable, but sends out each summer long arching shoots which are covered the following spring with rich golden-yellow flowers. It is used abundantly at Kew as an undergrowth to the Oak, Elm, and other thinly-planted tree collections.—B.

Pyrus Schiedeckeri. The group to which this tree belongs unobviously comprises the loveliest of all the Apple tribe, for amongst its allies are such first-rate things as *P. floribunda*, *P. Torino*, and *P. spectabilis*. It is probably by hybridising some of these that it has been raised. To my mind it is not surpassed in beauty by any other of the *Malus* group. Several plants may be seen in flower in the collection of *Pyruses* near the winter garden at Kew. The flowers are intermediate in character between those of *P. floribunda* and *P. spectabilis*. They are borne in clusters, are semi-double, and the petals are deeply suffused with a lovely shade of rose. The distinctive character of the tree, however, is the way in which its long straight shoots are covered with flowers. Branches from 3 feet to 4 feet in length may be cut which are completely wreathed from top to bottom with bloom. The plant is comparatively new to English gardens, and I have seen no full-sized trees. But it promises to attain a height of at least 15 feet. W. J. B.

Spiraea arguta. It is only during the last three or four years that this shrub has sprung into notice, yet it is without doubt the finest early flowering *Spiraea* at present in gardens. As it has been shown at several of the Drill Hall meetings this spring there is reason to hope it has been taken up by the trade, and we may expect in a few years' time to see it hold the place in gardens that it deserves. There are three or four masses of it at Kew now in full flower which offer excellent evidence of its value as an ornamental shrub. The plants are now simply masses of pure white. It is not only the purity and profusion of the flowers, however, that give the plant its charm; the thin, wiry, arching twigs give it a peculiarly elegant appearance. This shrub will grow 4 feet to 5 feet high, and is, as a rule, furnished to the ground with foliage. It ought not to be planted very thickly, so thinly, in fact, as to allow the side shoots to be layered. This in time enables the whole surface of the ground to be covered with an irregular, uneven growth, which is much more effective than a solid clump of plants all the same height. This *Spiraea* was raised by Herr Zabel about twenty years ago. It is a hybrid between *S. Flumbergi* and *S. multiflora*. B.

Begonia Triomphe de Nancy. The hybrids of all classes of plants for which we are indebted to M. Lemoine are very numerous, but it is questionable if any have attained the height of popularity achieved by his *Begonia Gloire de*

Lorraine, which is now so universally grown. It is one of the beautiful varieties that we owe to *B. socotrana*, the other parent being the South African *B. Dregei*. Previous to this, however, M. Lemoine sent out another hybrid of *B. socotrana*, viz., *Triomphe de Nancy*, which at first was thought highly of, but it is now not often met with, though it is decidedly attractive, and well worth growing for flowering in early spring. It forms a close, compact plant, in which the influence of *B. socotrana* is more pronounced than in *B. Gloire de Lorraine*. The flowers of *B. Triomphe de Nancy* are of a bright coral-red colour, and borne in great profusion. They are not large, and do not expand to the same extent as most of the other kinds. Plants in 5-inch pots about 1 foot high carry quite a mass of blossoms.—T.

Geum montanum aurantiacum.—This is a first-class novelty raised by Mr. Perry, of Winchmore Hill, and not only embraces all that is good and best in *G. montanum*, but surpasses this well-known sort in the rich colouring of the flowers and the exceptionally fine finish and substance of the petals. The plant is less than 6 inches high, and makes quite a tufted growth. It is suitable for either border or rockwork, where in any case it should receive, as it undoubtedly merits, the best possible culture. Mr. Perry has, we know, been some time engaged in raising cross-bred seedlings of these *Geums*, and the present plant is certainly a step in the right direction.—E. J.

Tulipa Borscezwoli.—There is much in this exquisite plant to remind one of the well-known *T. triphylla*, particularly in the general form of the flower. This Tulip is singularly beautiful and attractive, and whether in the bud or the expanded blossoms, which have a finely recurved outline, is graceful and picturesque. Internally the flower is an orange-yellow, the outer segments being of reddish carmine, slightly subdued, it may be, by being overspread with a bluish-purple bloom like that on good Grapes, though of much lesser degree of intensity. This lovely Tulip was recently shown by Miss Willmott. E. J.

Eupatorium adenophorum.

The *Eupatoriums* are all free-growing greenhouse plants, and some of them are decidedly popular in gardens, particularly where cut flowers are needed in quantity, as there is a good deal of the cut-and-come-again character about them. That at the head of this note is employed for decorative purposes in No. 4 greenhouse at Kew. It is decidedly one of the best, but up to the present is but little known. If stopped freely during its earlier stages this species forms a bold bush, 3 feet to 4 feet high, profusely studded with its pretty white blossoms. They are arranged in little globular heads about one-third of an inch in diameter, which in their turn are disposed in flattened clusters from 3 inches to 4 inches across, hence a specimen in full flower has a very pretty effect. Another point in favour of this *Eupatorium* is its simple cultural requirements. Though grown under the above name at Kew, it is in their new list referred to *E. trapezoidum*. H. P.

Double yellow Wallflower.—It was pleasant to note in at least two collections of hardy things at the Drill Hall lately bunches of the old double yellow Wallflower, the individual flowers being rich orange-yellow. It is one of the oldest of good garden flowers, but certainly not one of the commonest. Select a rather poor or rocky soil, plant very firmly in position, and carefully avoid manure. In this way it is possible to grow the plant into the size of a four-year-old Gooseberry bush, and when in flower it is a sight indeed.—E. J.

Kennedyya rubicunda.—This is a vigorous-growing greenhouse climber, suitable for larger structures than its more popular relative, *K. Marryattii*. It is just now flowering freely, and the racemes of red pea-shaped blossoms form a

very attractive feature, especially where no hard-and-fast rule of training is followed, but the flexible twining shoots simply allowed to dispose themselves in a graceful and informal manner. Like the other members of the genus, it is a native of Australia. Nearly related to the *Kennedyas*, and often included with them, are the *Hardenbergias*, which are for the most part climbers of moderate vigour, bearing dense clusters of small pea-shaped blossoms of a rich purple tint. The best are *H. comptoniana* and *H. monophylla*, both of which are now in flower.—H. P.

Anemone fulgens bicolor.—This plant is no novelty in the strict sense perhaps, but it is, notwithstanding, of striking individuality, and as such will assuredly be in demand for some time to come. Some fine bunches of it recently exhibited by Messrs. Wallace, of Colchester, at the Drill Hall attracted many admirers. The plant was then labelled *Anemone f. amulatus striatus*, a rather cumbersome title, perhaps, and certainly not more descriptive than the one at the head of the note. The plant is obviously a form of *A. fulgens*.

blue pallida dalmatica, and the others of the *aphylla*, *anemona* and *neglecta* families, whose flowers are for the most part of varied arrangements of purple, lilac, and white, and numerous garden kinds derived from *variegata* and *squalens*, whose flowers are yellow and crimson, and of harmonious minglings of these with various tints of purple-bronze and smoke colour.

The illustration is from a photograph by Mr. Greenwood Pim of his own garden in Co. Dublin.

ROMAN KITCHEN GARDENS.

BEFORE long, in Roman kitchen gardens Peas and Broad Beans and Broccoli will have given place to crops of Tomatoes and juicy Water Melons. Pumpkins and Gourds will be pushing their rambling growths in and out amongst the maize stems, and *peperoni* will be ripening their big scarlet and yellow capsules in the



AN IRIS BORDER IN MR. GREENWOOD PIM'S GARDEN.

in which the petals are distinctly of two colours, white and scarlet, the former flaked or flamed, as it were, amid the latter. It is a well-fixed variation through years of cultivation. The variety is a distinct departure from the old form or from any of its many varieties, and it cannot fail to prove an attraction in any garden. We shall look with interest as to what the seedlings of this picturesque plant will be. E. J.

AN IRIS BORDER.

HAPPY is the place where there is ample space for a garden of summer Irises, and all the happier if it may be as the flowery bordering of a long grass walk such as that in the illustration. In such a double border may be grown in large clumps all the best of the Flag-leaved Irises, beginning in May with the old blue German. This is quickly followed by the white-grey Iris of Florence. Then come the pale yellow flavescens, the magnificent pale

summer sun. How is all this wealth of produce brought within the reach of every class of buyer, for there is no Covent Garden in Rome to absorb and redistribute it to other markets?

Almost at break of day, one is awakened by the cries of the street sellers. "*Caroli!*" "*Broccoli!*" they sing out; "*Capucini, Capucini!*" (a popular name for a certain kind of Cos Lettuce), as with basket poised on their cushioned heads they look out eagerly for early buyers. Occasionally it may be a *contadino* of more prosperous sort, the bells of whose gaily betasselled donkey ring out an accompaniment to his master's voice, though, as a rule, the carts come by later in the day. But no one can walk or drive through the streets of any Italian town without noticing the unusual number of vegetable shops. Dark little cellars inside, many of them, and yet what capital studies of still-life they present in the bright spring morning, with their fresh clean-washed wares so becomingly displayed,

Creamy Cauliflowers, the tiniest of Brussels Sprouts, *torzuti*—the *chou-rave* of the French—and "greens" of every sort. Baskets of huge Tripoli Onions side by side with the small flat silver-skinned *cipollì*, which form so favourite an addition to many an Italian dish, while the indispensable strings of Garlic or clusters of drying shrivelling Tomatoes hang up in the doorway. Quaint bowls of glazed brown and yellow ware are filled with shelled green Peas, and flat rush baskets with young pea-pods to be boiled *au naturel*, or French Beans gathered in the baby stage. Big round Pumpkins, dark green and mottled with crimson, or the paler long-shaped Gourd from which many an orange-hued slice has already been cut, wait for more customers. There is Celery, too, greenish and only half blanched, and fine "sticks" of Cardoon, with the beautiful leaves roughly trimmed off, not blanched at all, but tender enough because quickly grown. Bunches of Artichokes hang up by the stalks and Leeks spread out, fan-like, to display their good quality, with stout red "fingers" of Carrot, and last, but not least, great heaps of the white crisp bulbs of *finocchio*. A basket or two of new Potatoes, the size of marbles, may complete the list of vegetables to be seen any February day in Rome, but old ones are generally to be bought at the wood and *carbon* shop near at hand. Evidently these are not legitimate articles of greengrocery.

The *fontivari*, as a rule, do not go to the *Camp dei Fiori* on Wednesday mornings with a view to "green-foods." They troop off there to potter amongst the antique-looking silver ornaments or quaint copper pots and remnants of rich brocade offered for sale on the stalls in the small streets hard by, in fond hope of picking up some veritable bargain. But the vegetable market takes possession of the *piazza* itself, and the double rows of white canopied stalls ranged on either side of the fine central statue of St. Bruno and of the splashing fountain are well worth a visit. No "field of flowers" this in former times! Just four hundred years ago, on February 17, the fires were alight in which he suffered for his faith who now looks down from a pedestal of honour upon the peaceful, motley crowd. It is here that the poorer people come to make their marketings, and besides all the ordinary roots and fruits, one may see many a strange vegetable comestible offered for sale. All sorts of mysterious salading excite one's curiosity. Small tufts of Dandelion are plentiful, and so also is Chicory, both grown, not only for salad, but for the roots, which, when roasted, form the only "coffee" within the reach of the poor. But there are many more. One basket is filled with young Sorrel leaves, another with Lamb's Lettuce, and a third with Good King Henry, which grows wild in abundance, and is an excellent perennial substitute for Spinach. These one could name, but many more greeneries are included under the generic term of *insalata*, which does not convey enlightenment. Fine rosettes of the white-veined, marbled leaves of the "Blessed Thistle" (*Carduus Marianus*) with long tap-root attached lie upon some of the stalls—a favourite spring vegetable, and cultivated in some parts for the purpose, and bundles of young shoots of wild Asparagus, some of which look sus-

piciously like the twining growths of black Briony. Bunches of side sprouts and flowering tops of Kale and Turnips are sold by the score, for nothing is wasted; even the horses in the market carts contentedly munch the long coarse Artichoke leaves which cannot be coaxied into the stewpan.

More than one curious example of the using up of odds and ends might be given. A little later in the season it is common to see basket-fuls of the large yellow barren flowers of Marrows and Gourds in the greengrocers' shops. These, dipped in batter, are dropped into boiling oil, and come out crisp and golden-brown amongst the various other concomitants of the *frittura*. Tiny Artichokes cut in half are excellent cooked in this fashion, but who would expect to find inch-length bits of the flower stalk, either stewed or fried, served as a vegetable! Yet they are extremely good, and customers would probably feel defrauded of their rights if stemless heads were offered to them. It is a trite saying that an Englishman will starve where a foreigner can feast, and such instances go to prove it. It is certainly true that in the matter of food we are, as a nation, wasteful in many ways; still the art of cooking Marrow flowers would scarcely commend itself to a hungry Briton. But there is a lesson we may learn from Italian gardeners. They do not wait for their vegetables to be the finest ever seen, but eat them while they are young and tender, which in many cases tends to increase the crop. *Zucchette*, for example, the smallest of the baby Gourds, no bigger than a good sized

walnut, to which the flower still holds on, are much in vogue during the early summer months. This may be a trifle premature for us in England, but the practice of cutting Vegetable Marrows from 3 inches to 4 inches long can confidently be recommended on the score both of flavour and economy.

It would be a thousand pities if, with good soil, abundance of water, a genial climate, and an enormous and industrious population, who subsist largely on vegetable foods, the land about Rome should be suffered to go out of cultivation. Yet it is said that, on account of oppressive taxation, there is a decline in horticulture, and that the ground is not tilled so extensively as formerly. It is certain that Naples sends up a vast proportion of the early vegetables to the Roman shops which could be produced nearer home, while the Riviera provides the flowers for the sellers in the Roman streets. K. L. D.

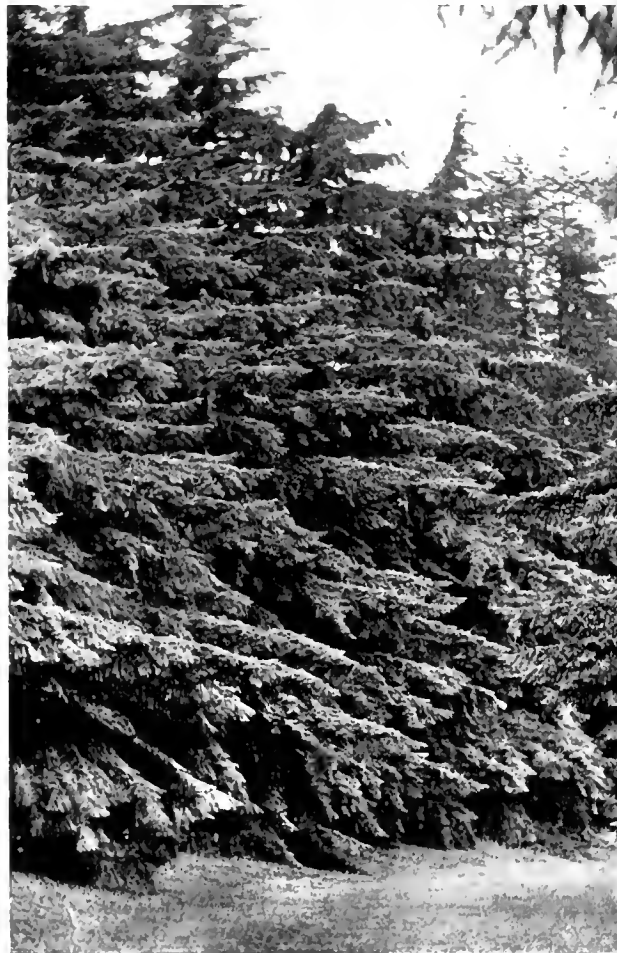
[This has been unavailably held over for some time.—Eps.]

CONIFERS AT MURTHLY CASTLE.

THE second quarter of the present century saw the introduction of a large number of conifers hitherto unknown to English gardens. Their cultivation was eagerly taken up, and especially in Scotland, a land whose general conditions seem highly favourable to a considerable number of species, much success has been attained. It may still be premature to state with any degree of assurance what may be the ultimate suitability of many of these conifers for growth in our islands. The lifetime of a tree is not comprised within its first sixty years, and such a length of time is all too short to prove the ultimate success of any new tree, though within that space it may come to a magnificent size and apparent promise. Such a state is shown by the splendid Douglas Firs in the grounds of Murthly Castle, Perthshire, where also many another exotic conifer is grown in quantity.

These words of Sir William Thiselton-Dyer, that formed part of his opening address on the second day of the conifer conference of the Royal Horticultural Society in 1891, may here be quoted:—

"Anyone who had not travelled in Scotland could form no idea of the extent to which rare conifers were cultivated in that country and the splendid development which they attained. The chairman, by way of illustrating these remarks, directed the attention of the audience to some large photographs representing specimens of conifers to be seen at Murthly Castle, Perthshire, where they flourished, and where stately and magnificent examples 70 feet, 80 feet, and 100 feet high were to be met with. Such trees could only be seen in Scotland, and were the result of a peculiar association of physical conditions. In the south-west of England it was impossible to find a parallel, though even on the sunburnt soil of Kew good specimens of the Pines proper were occasionally to be seen. With regard to the Abies, however, that section of conifers of which the Spruces may be taken as a type—a state of things prevailed in Scotland which could not be rivalled in England. On the other hand, the climate in the south-west of the latter



DOUGLAS FIRS AT MURTHLY.

country was fairly suitable for some other conifers, and many of the fine Mexican Pines could be grown there."

Of the remarkable Douglas Fir at Dropmore, Mr. Charles Herrin on the same occasion says: "The monarch Douglas Fir, planted in 1830, has attained a height of 120 feet, girth of trunk 11 feet 9 inches, with beautiful spreading branches sweeping the ground, covering a diameter of 64 feet. The leaves are also of a glaucous hue, equalling in that respect many of the plants now sold from nurseries under the name of *Douglasi glauca*. . . . Many trees have since been raised from its seeds and planted out on the estate: one, planted in 1843, is now 78 feet high, with a girth of trunk of 8 feet 2 inches, spreading 30 feet in diameter at base: a perfect specimen."

By comparing the growth of the latter tree with the Murthly table, it will be seen that the trees make their growth much more rapidly in Scotland. The Murthly conifers were all planted by Sir William and Sir Douglas Stewart. The present owner, Mr. Stenart Fotheringham, who measured the trees in 1891 in anticipation of the visit of the Scottish Arboricultural Society, on learning that we should be glad to know their increase of growth since that date, has been so good as to have the same trees measured again, the increase being shown by the subjoined table:—



AVENUE OF ANCIENT YEWS AT MURTHLY.

GROWTH OF CONIFERS AT MURTHLY CASTLE, PERTSHIRE.

AUGUST 11, 1892.

MARCH 24, 1900.

	Height.	Girth at feet.	Spread at branches.	Height.	Girth at feet.	Spread at branches.
Wellingtonia, planted 1857 (a)	66.6	9.3	26	74.11	10.7	28
Abies Menziesi, planted 1845 (b)	91.9	9.7	45	105.10	11.3	
Pinus monticola, planted 1850 (c)	67	5.6	18	70.2	6.2	22
Araucaria imbricata, planted 1847 (d)	42.6	4	9	51	4.8	9.8
Abies Picea, planted 1847	34.8	6.6		42.6	7.10	
.. magnifica, planted 1867	31.9	2.7	9	43.3	3.8	11
.. Douglasi, planted 1847 (e)	86.6	24	8.10	97.4	9.10	27
.. grandis, planted 1852	64.2	4.8	22.6	70.10	6.10	35.8
.. albertiana, planted 1860	56	5.5	32	72.1	6.4	40
.. nobilis, planted 1847	75.4	6.1		92.8	6.6	
.. nordmanniana, planted 1854	58.6	4		74	4.9	
.. hookeriana, planted 1862 (f)	30	4	15	39.6	4	15.4
Cedrus Deodara, planted 1842 (g)	51.3	6.8	26	61.2	7.4	36
.. Libani (h)	65.10	11.8		67	12.5	
Cryptomeria japonica, planted 1852	36.3	4.2	26	41.7	4.3	
Libocedrus decurrens (i)	34.8	3.6	10	38	4.5	14
Thuja gigantea, planted 1862	46	3.6	21	57	3.7	
Cupressus lawsoniana, planted 1859 (j)				48.7	4.2	
Spanish Chestnut					17.10	
.. (k)					19.2	
Silver Fir (l)				90	11.3	
Cupressus lawsoniana erecta viridis				25	2.8	7
Abies ajanensis, planted 1885				24	1.7	10.6
.. brachyphylla, planted 1885 (m)				14		9.7
.. Veitchi, planted 1885 (n)				20.9	1.4	10.2
.. amabilis, planted 1885				14.11		9.5
.. concolor violacea, planted 1885				20.1	1.5	14.9
English Yew (o)				30	14.3	80
English Yew					10.8	
Abies albertiana (at Roman Bridge) (p)				75	4.3	
.. orientalis, planted 1852	30	2.7		40	3	
.. smithiana, planted 1857	47					
Pinus Jeffreyi				57	4.9	

(a) At the ground this tree measures 16.9; cones freely. (b) There are six others about the same size, and all are growing freely. (c) Most of these have lately got a fungoid disease, viz., peridendrum. (d) Many of these lost branches, and some were killed by frost in 1894-5. They cone freely, and young ones are growing from seed. (e) A great many others about the same size, and all perfectly healthy. (f) A beautiful tree quite distinct from the others; long, drooping branches. (g) About sixty trees growing in the grounds averaging 50 cubic feet. (h) Age unknown, but probably not less than 150 years. (i) Probably thirty-five to forty years of age. (j) Two trees, recently taken out, measured 12 cubic feet and 14 cubic feet. (k) At ground this tree measures 29 feet. (l) Inclined to go back. (m) Will become a handsome tree. Coned last year. Some fertile. (n) Very apt to lose its leader either by birds or wind. Coned last year. (o) Very old; possibly 500 years. Many others of the same age and size. (p) Quite a different form from the others, the lower branches being quite table-form.

Mr. Fotheringham also furnishes the following remarks: "The measurements were all carefully taken by sending men or boys up the trees, not by dendrometers, and are, I believe, correct. There are something like eighty or a hundred different varieties growing at Murthly, but some of them are young and only experiments. Those measured and noted are the most striking; they are nearly all growing in large numbers. The remarks appended to the table are made by Mr. James Laurie, the gardener, who knows conifers well. The only additional notes I have made are the following: *Abies Menziesi* will never in my opinion supplant the Spruce. *Abies orientalis* is not as free-growing as the Spruce, but quite as hardy. *Araucaria imbricata*.—Many of these were damaged by severe frost. *Cedrus Deodara* will not in my opinion live to great age in our climate. *Cupressus thyoides*.

This particular tree was so much broken by branches blown off its neighbour that I cut it down. *Pinus monticola* has been attacked by a parasitic growth that is likely to destroy all the young growth and probably the trees. *Juniperus recurva* was severely injured by the hard frost. By the hard frost I mean the winter of 1894-5. In February, 1895, the thermometer was for several days below 0 Fahr., and on one night went to 11 below 0. This shows that all these trees will stand great cold at the time of year that it is likely to

come, but late frosts in spring, when the sap has begun to rise, is detrimental to the young shoots of those that start their growth early in the season. There are at Murthly, besides conifera, fine specimens of Yews, Oaks, Beech, Spanish Chestnut, Horse Chestnut, and Sycamore."

THE INDOOR GARDEN.

REINWARDTIAS.

OF the three species comprising this genus of greenhouse plants, natives of mountains in the East Indies, only two are met with under cultivation. *R. tetragyna* and *R. trigyna*.

Their bright and attractive yellow flowers are produced towards the end of the year, and though the individual blooms do not last very long, a good succession of them is maintained.

The first-mentioned species has pale yellow blossoms, while those of *R. trigyna* are of a deeper colour. The Reinwardtias belong to the natural order Linaceae, and were for some time called Linums; in fact, in many gardens at the present moment they are known by no other name.

Although not at all uncommonly cultivated, it is but seldom that one sees them really well grown. One reason of their often thriving so indifferently is, I think, because too high a temperature is kept in the house where they are growing. The Reinwardtias are also very subject to attacks of red spider, and this pest, if not quickly destroyed, soon disfigures and eventually cripples them. Propagation is best effected by means of cuttings taken in spring. These should be inserted, several in a 6-inch pot, which should be placed under a hand-light in the propagating pit. As soon as they have taken root transfer them to 3 inch pots, and after

a few days remove them to a cooler temperature. A warm pit, the night temperature of which is from 55 to 60, is an excellent summer position for *Reinwardtias* when established in small pots. As the plants increase in size and vigour it will be necessary to place them in larger pots, those of 5-inch or 6-inch diameter being quite large enough, and when well rooted in the smaller ones the plants may be transferred into these.

It is advisable to shade the plants from bright sun so as to preserve the deep green colour of their leaves. In order to form bushy and shapely plants attention to the timely pinching of the shoots is essential. In the autumn, when growth is almost completed, give more air and discontinue shading, so that the shoots may have every opportunity of becoming well ripened; the plants will then remain in better health during the dull winter months, and will also flower more satisfactorily. At this period (in winter) water should be carefully applied, and a warm buoyant atmosphere maintained to assist the expanding blossoms. As mentioned above, the red spider pest is often very troublesome; frequent syringings with clear water, and occasionally with a solution of soft soap and water, are effective in dealing with these minute insects.

Eucomis punctata, however, is well worth a place amongst greenhouse flowering plants. It produces in late summer a tall, cylindrical scape, bearing greenish white fragrant flowers spotted with brown. The scape, upon which the flowers are closely set together, reaches to a height of about 2 feet, and remains in full beauty for a considerable time.

At the season of the year when *E. punctata* comes into bloom there are not many greenhouse plants in flower, especially of those suitable for placing upon the ground around the border edge, so that for such a purpose this Cape bulb is most useful. It is by no means difficult to cultivate; in a cool north house it succeeds admirably. When at rest but little water is required, though liberal supplies are necessary when the plant is in full growth. A rich sandy soil is found to be suitable for potting.

H. H. T.

"IN A SMALL WAY."

NOTES FROM AN OBLONG GARDEN.—VII.

I DO not believe there ever was a valetudinarian gardener. The two hobbies—I am told some people really enjoy being ill—are incompatible.



MURTHYA CASTLE, PERTSHIRE.

THYRSACANTHUS RUTILANS.

A GRAYNE old-fashioned plant is this, and one that there is no danger of confounding with any other occupant of the stove or warm greenhouse. It is seen at its best when grown as a standard, for the bright coloured blossoms, borne as they are in excessively long pendulous racemes, form quite a unique feature. Its flowering season is spread over a lengthened period, as blossoms may be had during the winter and spring months. The general demand for cut flowers, for which this *Thyrsacanthus* is ill-suited, would appear to be the reason that it is now so little cultivated. Cuttings strike root readily during the spring, and should be grown on freely afterwards. It needs a good open soil, a mixture of loam, leaf mould and sand, with a little decayed manure, being very suitable. Red spider is sometimes troublesome, but this can be kept down by a liberal use of the syringe.

H. P.

EUCOMIS PUNCTATA.

THE members of the genus *Eucomis*, which are half-hardy, rather strong growing bulbous plants from the Cape of Good Hope, do not apparently increase in favour with cultivators at home, for it is but seldom that one comes across any of them in our greenhouses. The flowers are not particularly showy, and this, no doubt, is partly the reason of their restricted culture.

How I loathe being ill! How I fight it, rebel against it, garden up to the very last moment, and get up tottering to go out and replant the Violet bed—a thing this that must be done, and done by myself, if I want nice clumps of *La France* and *California* and *Princess of Wales* and all the other big new beauties to put my little frame over in September. But gardening in an east wind, in a dabbling way such as attends water-planting, and with the assistance of a crude youth smelling strongly of the stable, whose aid includes upsetting half a pailful of icy water over the enthusiast, is apt to bring about unpleasant consequences, dividing, as in my case, the lover from the beloved, the tiller from the soil, for a desperately dull and long drawn-out decade of days.

My last autumn's planting of Violets has been in bloom ever since the middle of January, although no frame protection was given. I find *California* very easy to grow, and much more willing to bloom than the older, smaller, inferior varieties. The double Violets, however, take a long time to establish themselves in these parts, and do not seem to benefit by yearly division. Some Violet roots which were given to me when my own supply ran short

have turned out delusions of meagre little scrappy white things, no better than field scented Violets, which are common enough about here, so I am grubbing them and filling their places with *La France*. I have had an immense pleasure since my last instalment of diary was evolved. Gardeners are proverbially generous, and I have certainly met with such kindness from total strangers in the course of my life as should give me a high ideal of human nature in general; but the generosity which for the mere love of giving and of conferring happiness will take the trouble to dig up of its very best, pack beautifully and abundantly, and despatch, to puff up the tyro with the joy of possessing what his betters have struggled to produce and rejoiced in perfecting, is actually superb. Hampers are always agreeable visitors, whether they contain country produce, little dogs, pussy-cats, or crockery ware, all of which come occasionally; but a hamper of many rare plants—and some of them marked A1 by one who knows—is a delight beyond all describing. Several of the best forms of Asters—these grow wildly in our soil, walking away from their centres all round in the engaging way they have when happy—*Heliopsis levis*, *Potentillas* of two charming kinds, the best of the *Bergamots*, the deification of *Red-hot Pokers*—all these and many more which I have seen praised in *THE GARDEN*, coveted, and shall now never have to do without. Was not this a pretty gift! And when I have opportunity I shall try to follow the good example of the kind giver—in a small way.

This week I am planting fifty single *Begonias* in a little round bed on the half-shady side of the house where there is a rather nasty little lawn, so cockneyfied, it was only fit to cut up into small beds. The soil is mainly clay and builder's rubbish, and is as unpromising as possible, so the beds have been made of loam, leaf-mould, hotbed manure and sand. There is a great *Syringa* in one corner, which nominally lives next door, but is quite at home here; it is one of the finest forms, and seems to like its shady position, for last year it was glorious, while another on the sunny side was not half so floriferous. It eats up the ground, however, as badly as any *Laurel*, and its hungry roots are always asking for more. Its companion sentinel is a beautiful *Arbutus*, which fruits profusely. But don't look further; you will only see hardy Ferns, which I hope you detest as much as I do. They remind me of frowsy landladies with black alpaca aprons and greasy black caps, appearing in the place of sweet young *Phyllises* in coloured ribbons and fair caulbric.

We have had a fortnight's bravery of pink Hyacinths and double Daffodils. The combination sounds rather eccentric, but is effective, the Hyacinths being waxy pale *Norma*, of a tone just suiting the Daffodils' yellow. I am an epicure in Hyacinths, and like to savour them by yearly tints. Last year, however, we had so many blue ones of one shade, that we were all sick of their monotony. All pinks or all whites are well enough, but there is something very wearying about a mass of blue Hyacinths unrelieved.

Last autumn I made a large sowing of *Dianthus*, mixed, in all the wall crevices and rockwork cracks which seemed eligible, and about a month ago, discovering the remainder of this packet of seed in my desk, I turned it into a pot in which some other seeds had failed to come up. Whatever had been the cause of failure agreed with the *Dianthus*, for in three days it was up, and is flourishing amazingly, though nothing is visible of the autumn-sown seed. I have a great affection for the *Cheddar*

Pink, but I cannot get it to grow here; we have no limestone, but it might put up with chalk. Anemone Pulsatilla is quite agreeable when presented with the humbler article, but the Cheddar Pink refuses absolutely to oblige. Mule Pinks—*Dianthus Napoleon III.* planted on one of the rockeries are very sulky. Carnations grow, but do not flower freely, and a long line of florist's Pinks of different kinds—Paddington, Alice Lee, Charles, Lizzie Duval, Mrs. Pettifer—began to grow half-heartedly, and stopped very suddenly when the sparrows pecked them. I think there is something in the soil the family does not like. A neighbour of ours has a large bed of that single very pale pink alpine Pink which is much fringed and smells so ineffably delicious, smelling like yellow Sweet Sultan, but sweeter still. I covet this, but I know it will not grow with me. Limestone again, I suppose! M. L. W.

Bathwick Hill, Bath.

TREES AND SHRUBS.

THE SILVER BELL, OR SNOWDROP TREES.

HALESIAS.

ABOUT one hundred and fifty years ago the name *Halesia* was given, in honour of the "learned and venerable" Dr. Stephen Hales, to a small genus of American trees and shrubs by a Mr. J. E. Ellis. Ellis himself was a merchant in London and a botanist, and to him belongs the credit of first introducing the two best species of *Halesia* to Britain. These American *Halesias* are three in number, and have pure white, bell-shaped, or Snowdrop-like flowers, borne in clusters or in short racemes on slender drooping stalks; hence the popular name of Snowdrop or Silver Bell trees. They are also distinguished by having the seed vessels more or less winged. In a wild state they are confined to the south-eastern portion of the United States.

In much later times a group of Asiatic trees previously known as *Pterostyrax* were also included under *Halesia* by Bentham and Hooker. These, although similar to the American species in several points of floral structure, differ considerably in many respects; among others, in the long branched racemes and in the five-parted character of the smaller and more numerous flowers (the American species have almost invariably the parts of the flowers in fours). Several authorities, more especially the American ones, have not accepted Bentham and Hooker's arrangement, but according to the British acceptance of the word, "*Halesia*" now includes some seven or eight species. Of these, only one—*H. tetraptera*, the common Snowdrop tree—has been widely cultivated in this country. On the whole it is the best, but the others are also beautiful trees and shrubs, for which reason, as well for the variety they give, they deserve to be brought into notice.

The tabulation of the species is as follows:—

I.—AMERICAN (OR TRUE HALESIA) SECTION.

H. diptera *H. tetraptera*
H. parviflora *H. t. var. Meehani*

II.—ASIATIC (OR PTEROSTYRAX) SECTION.

H. corymbosa *H. hispida*
H. Fortunei **H. micrantha*

* Not yet in cultivation.

The *Halesias* like a rich, moist, loamy or peaty soil. Although often trees of considerable size in their native homes, they mostly retain a

somewhat shrubby character in this country. All the species, however, except *H. parviflora* can, by pruning away the lower branches, be made to form small trees.

H. TETRAPTERA (COMMON SNOWDROP TREE).

Since almost the middle of the eighteenth century this tree has been valued in the gardens of Europe for the beauty and grace of its flowers. Whilst (according to Sargent) it occasionally attains a height of 80 feet to 90 feet in the South United States, it is rarely more than 20 feet high in this country, frequently, indeed, retaining a shrubby form. It flowers in May, and bears its pure white pendent blossoms, six to ten together, in fascicles. They have the size and shape of Snowdrops. The seed vessels are $1\frac{1}{2}$ inches to 2 inches long, and striking on account of the four prominent wings that traverse them lengthwise. This tree was introduced by Ellis, the London merchant already mentioned, in 1756.

Halesia Meehani is a handsome and very distinct form of *H. tetraptera*. It originated as a seedling in Meehan's nursery, Germantown, Philadelphia, and has been grown in the Kew collection for some years past. Compared with the ordinary Snowdrop tree, Meehan's plant has the flowers borne on shorter stalks, and the leaves are thicker and more coarsely wrinkled.

H. DIPTERA.

Although introduced to England only two years subsequent to *H. tetraptera*, this has never become common in our gardens. It is dwarfer than *H. tetraptera* and is more of a shrub than a tree. The flowers are white, Snowdrop-like, and borne on slender pendulous stalks in fascicles as in the previous species. They differ, however, in having the corolla lobed almost to the base. Still more distinctive is the seed vessel, which has but two prominent wings, the other two being only rudimentary. Whilst not, perhaps, equal in merit to *H. tetraptera*, this species appears to have been undeservedly neglected. Its dwarf, more bushy habit will also render it more suitable for some positions. It comes from the South-eastern United States, and loves abundant moisture at the root. It blossoms rather later than *H. tetraptera*.

H. PARVIFLORA.

Unlike the two species already described, this is invariably a shrub. It is represented in the Kew collection by a large bush, which flowers as a rule with great freedom towards the end of May each year. The arrangement of the flowers is more racemose than fasciculate, and whilst they are very abundant, they are not so large as in *H. tetraptera* or *H. diptera*. They are white and Snowdrop-like. The seed vessels are only slightly and unequally winged. On the whole, therefore, the species is easily distinguished from its two fellow American species. The grace and abundance of its bloom make it well worthy of cultivation wherever a variety of hardy shrubs is desired. Introduced from the South-eastern United States in 1802.

H. HISPIDA.

Belonging to the Asiatic group of *Halesias*, this species differs very markedly from the American ones already mentioned. Whilst the individual flower shows similarities in structure, the plant itself—in leaf, mode of growth, and especially in the inflorescence—is very distinct. It is a vigorous shrub or small tree with large, rugose, elliptical or oblong leaves. The flowers are small, white, and very numerous on the raceme, which is 4 inches to 8 inches long. One striking peculiarity of the raceme is that the flowers are arranged on the upper side only

of its branches (a somewhat similar arrangement is seen in *Freesia* flowers). The seed vessels, which it has produced in quantity during the hot dry summers of recent years, are covered with bristly hairs. Whilst perfectly hardy at Kew in the open, it blossoms more freely on a wall. The finest specimens I have seen of this *Halesia* are growing near a carriage road leading to Mr. Gumbleton's house and garden at Belgrove, Queenstown. It is a native of China and Japan, and in this country flowers in June. Introduced about thirty years ago.

H. CORYMBOSA.

A member of the same section of the genus as the preceding, this is a much rarer and less known plant. I do not know if there is any authenticated instance of its having flowered in Britain, or even in Europe, most plants so-called being *H. hispida*. It was first found on the mountains of the most southern of the main islands of Japan, in the province of Higo, and may possibly be not quite so hardy as *H. hispida*. Judging by pictures and dried specimens, its racemes, whilst having much the same general character as that species, are shorter, broader, and more branched. The flowers are not so numerous on the branches of the racemes, and the fruits are more downy than bristly. The flowers have the same one-sided arrangement on the racemes.

There are other species of the Asiatic section of the genus known to botanists, but they are not yet introduced. *H. Fortunei*, gathered in 1845 in China by the famous collector after whom it is named, and *H. micrantha* from Central Japan are amongst them.

Arboretum, Kew.

W. J. BEAN.

RECENT PLANT PORTRAITS.

The May number of the *Botanical Magazine* contains portraits of the five following plants:—

Aloe abyssinica.—A fine double plate of a handsome tall-growing species with a bare stem, bearing on its summit a crown of long, thorny leaves, from the centre of which rise three flower-stems, each bearing from two to three bunches of showy pendulous, tubular, clear yellow flowers, with prominent red-tipped anthers. It was introduced from Abyssinia in 1771.

Cotyledon (Echeveria) Purpusi. A native of California. This plant is more of botanical than horticultural interest, and produces bunches of small tubular orange flowers. It is found on the Sierra Nevada at an altitude of from 7000 feet to 8000 feet, and is so closely allied to *C. nevadensis*, that it may be a synonym for that variety.

Campanula mirabilis. A native of the Western Caucasus. This handsome plant was discovered by M. Alboff on limestone rocks in the Western Caucasus at an elevation of 2400 feet. It was sent to Kew by Herr Max Leichtlin, of Baden-Baden. It bears a profusion of large, upright, pale lilac flowers, which almost hide the stem, branches, and leaves. It has proved to be a biennial under cultivation, though said to be an annual by its discoverer. It is, however, somewhat difficult to manage, and sometimes does not bloom till the third or fourth year from seed.

Lilium sutchuanense.—A native of China; also known under the names of *L. tenuifolium* and its native name of Hong-pee-ho. This beautiful Lily was raised from seed by the Abbé Farges, who sent it to M. Maurice Vilmorin from Eastern Szechuen. It is one of the twenty-four species of Chinese and Tibetan Lilies enumerated by Franchet. Its stems are 18 inches to 2 feet high, and each bears two flowers of a deep orange colour, distinctly and profusely spotted with brown.

Rubus ceflensis. A native of China. This is a curious tropical Bramble, more of botanical than horticultural interest, with handsome foliage, deep green above and light red underneath; it bears bunches of small white flowers at the axils of each leaf all up the stem, and also at the apex of the shoot.

The *Revue de l'Horticulture Belge* for May gives portraits of two varieties of stove Irids, named

Maria gracilis and *M. northiana*, both handsome flowers with white petals, and variously marked blue and brown centres. They are, however, most fugacious, each bloom only remaining open half a day.

Rosa Solih d'Or.—Raised by M. Pernet-Ducher, of Lyons. This plate gives an apparently much better and more accurate portraiture of this fine new Rose than the recent plate in the *Revue Horticole*, which did not seem at all to answer to its description or to do the flower justice.

The *Revue Horticole* for May I contains a portrait of a fruiting branch of the interesting new *Solanum pierceanum*, or *Naumanni*, from the Gaboon, the fruits of which commence green, then change to white, then to yellow, ending bright scarlet; they are all through veined with violet, and are most ornamental. It was introduced to cultivation by the Botanic Garden at Montpellier.

The sixth part of the fifteenth volume of "Lindenia" contains portraits of the following Orchids:

Cypripedium Gertrud Hollington var. illustr. Quite one of the most distinct and beautiful varieties yet produced. It resembles *C. bellatulum* in form, but is beautifully suffused with rosy purple, with small black spots.

Sophranitis violacea. A distinct and beautiful and apparently most free-blooming little plant, with rosy violet self flowers.

Arinda Humboldtii. A large-flowered Orchid of rather dull colouring, and more curious than beautiful.

Odonoglossum crispum var. primum. A most

distinct and beautiful form, with very clearly-defined rosy purple blotches on a pure white ground.

W. E. GUMBLETON.

AN ARTIST'S NOTE-BOOK.

ANEMONE NEMOROSA ROBINSONIANA.

THERE has been of late in the pages of THE GARDEN a rather full correspondence on this excellent spring flower. But its merit is so great that its praises may be repeated, and it is well to remind those who wish to grow it that though there are many flowers of blue *Anemone nemorosa*, the true *A. n. robinsoniana* is a large flower of good substance, as shown in the accompanying illustration.

A NEW AZALEA.

MANY very charming new Azaleas and Rhododendrons have been shown before the Royal Horticultural Society this year. One of the number is the variety represented in the accompanying sketch, named *Duchess of Wellington*. It was recently given an award of merit by the floral committee and a first-class certificate by the Royal Botanic Society, in each instance being shown by Messrs. R. and G. Cuthbert, Southgate Nursery, Southgate,

Middlesex. It is a very distinct Azalea, of neat compact growth, with flowers of soft pink colour, relieved by markings of brownish crimson upon the upper petals.

THE FLOWER GARDEN.

LILIES.

ALTHOUGH I believe that somewhere in the back numbers of the old GARDEN's pictured pages I have already contributed something to the sum total of human despondency on the above subject, I am induced to send a few more notes, partly because you appear (p. 269) to invite discussion on it, and partly because Lilies, presenting, as they do, as a genus, the most unquestionable difficulties in cultivation, are of perennial interest to all concerned in gardening.

Not very long ago, in looking over some old letters I came across one from Mr. Wolley-Dod, in which, when writing of Lilies, he observed that he had come to the conclusion that six was about the number of species he could permanently establish. I remember being interested in this letter at the time I received it which must have been three or four years ago—for three reasons. Firstly, because I flattered myself at the time that I could "go" not only "one," but three or four "better"; secondly, because Mr. Wolley-Dod mentioned as a reason why a seventh (*L. Hansonii*) could not be added at the time to his list, a certain peculiarity (to be alluded to further on) which had



ANEMONE NEMOROSA ROBINSONIANA.

(From a drawing by H. G. Moon.)

always puzzled me, although the Lily in question has always done, and continues to do, well here; and, thirdly, because I thought, as I think still, that this very moderate allowance is likely to be the measure of success of the average amateur gardener in latitudes considerably south of Cheshire, and, indeed, in most parts of England except parts of the south and south-west.

Five of the species named by Mr. Wolley-Dod were, I think, as follows: *L. croceum*, *L. pardalinum*, the hybrids *L. davuricum*, *L. testaceum*, *L. colchicum* (syn., *L. szovitzianum*). I do not recollect what was the sixth, but it may probably have been *L. Martagon* in all its forms, including the white variety. It certainly was not the Madonna Lily (*L. candidum*), probably the commonest of all Lilies, as it is also one of the most beautiful. It is not, however, my object to enumerate the species that succeed in Cheshire, but I allude to this simply to emphasise the fact of the small number permanently established in a garden where probably most have been tried and all have been taken care of. Although the Lilies apparently established here at present I believe somewhat exceed the number of six, they can hardly be said to fairly include all the kinds above enumerated, for though *L. pardalinum* has been grown here for many years and is still alive, I cannot regard it as a success, as it seems perpetually to deteriorate, and if it blooms at all, the flowers are few and weak. I have renewed my stock more than once, and re-made the beds with new soil of a peaty nature, but I never seem to get much more "forward" with this species, and I am beginning to doubt if the game is worth the candle. Peat is no doubt the best soil for this, but I recollect Mr. Wolley-Dod telling me that it does fairly well with him in common soil in any part of his garden. Possibly a *quant. suff.* of moisture may account for this, but certainly I could not grow it so in the stuff we call "soil" here, which is understood to grow *Golding Hops* in perfection, but which presents the substance and appearance of a brickbat during a dry summer.

The common orange Lily (*L. croceum*) is a beautiful garden plant which will probably grow anywhere in good strong soil. Another orange Lily (also of the *Isolirion* type) is *L. bulbiferum*, the bulbs of which, although said not to be very long-lived individually, are freely and speedily reproduced by the bulbils borne in the axils of the leaves. This, with *L. davuricum*, may probably be grown by everybody, though the latter, which in some gardens grows with extraordinary vigour, never seems to increase here, and I doubt if I have more, it as many, flowering bulbs as I had when I planted them eight or ten years ago.

L. testaceum (syn., *L. excelsum*) is a beautiful Lily of a curious apricot colour, which is probably as easy to grow as any Lily in cultivation. I bought a bulb of this some fifteen or eighteen years ago, and for many years I regarded it as the best horticultural investment I had ever made, for it multiplied year after year with extraordinary rapidity and regularity. Subsequently, some six or seven years ago, I dug up the clump and planted the bulbs about in three or four different places in my garden. Since that time, however, although these bulbs come up healthily and flower well enough, no one of them ever appears to have produced another flowering stem. I cannot tell why this is, but the era of productiveness seems to have passed in their case, and it may be new blood is wanted.

L. testaceum is said to be a hybrid between *L. candidum* and *L. chalcidonicum*, and the fact that it is the first Lily to push its nose through the ground in the early spring may perhaps be taken as a proof of its affinity to the former, to which it has no other likeness, for it is an unmistakable *Martagon*.

L. colchicum, as far as my experience goes, is a Lily that must have good garden soil, and will not grow in light stuff of which peat is the staple,

In the letters above alluded to I think I remember Mr. Wolley-Dod telling me that this was the most successful of all Lilies with him, and that it seeded freely about in his garden, the seedlings taking only some three or four years to grow into blooming bulbs. If this is so, I think he has his full share of gardeners' good luck, for *L. colchicum*, in my opinion, is, with one possible exception, by far the most beautiful Lily in cultivation. I have always had this Lily, and keep it sometimes for years, but it never seems to increase, and occasionally disappears, injured fatally, as I have sometimes thought, by late frosts. I see seedlings about, too, but they never come to anything with me.

The common purple *Martagon* will, I suppose, do anywhere in tolerably good soil; but this is certainly not the case with the white variety or with the rich maroon-coloured

be that after a few years the bulbs, owing seemingly to their rapid increase, become matted together to such an extent, that though they remain healthy and continue to throw up stems they cease to bloom. The only thing appears to be to dig them up, divide, and replant them, though, like the Roman Commonwealth, they can neither endure the ill nor suffer the remedy, for though the *status quo* is unendurable, moving is nevertheless resented, and, like almost all *Martagons*, they refuse to flower the first year after being transplanted.

It took me some time to get the scarlet *Martagon* (*L. chalcidonicum*) to do here, but for the last few years these have done very well. My best clump this year is the product of a few bulbs that I had put aside as some of my original failure; they have been let alone and have finally "harmonised with the environment." My largest clump, the product four or five years ago of ten or



AZALEA DUCHESS OF WELLINGTON.

(From a drawing by H. G. Moon.)

L. M. dalmaticum, I see the var. *album* doing well in cottage gardens, and friends have often given me good bulbs of this, which bloom well enough for a year or two and then disappear. *L. dalmaticum* treats me with even less consideration. Two years ago I bought some fine bulbs of this from a neighbouring nurseryman, but it only bloomed poorly the first year, and is now, I fancy, gone entirely; and it is most likely that the white variety has also by this time gone the way of its many predecessors. I regret this, for the white *Martagon* is among the best Lilies. I think it probable that the coldness of my soil and aspect, rather than the ingredients of the former, are the causes of this failure.

L. Hansonii I have always looked upon as one of my most successful investments. I rather wonder that the price of this continues as high as it does. I never bought more than one bulb of this, and have now dozens, besides having occasionally given them away. This is not only a beautiful Lily, but it is unique in point of texture, for the orange flowers, of Turk's-cap form, are thick as if cut out of leather. Its one peculiarity as regards culture appears to

twelve bulbs, which has since on occasion thrown up thirty or forty blooming spikes, appears to be deteriorating, probably having somewhat exhausted the stool. Although at the sacrifice of blooms next year, I must harden my heart and dig them up in the autumn, for they happen to occupy a position which is at present the object of a "Russian aggression," in the shape of an immense plant of *Ostrowskia magnifica* with two blooming spikes of *Eremurus elwesianus* growing in the middle of it. These are things before which everything (unless it may be that hopeless plant, *Clintonia andrewsiana*) must give way in my garden.

Probably few people care to grow the yellow Turk's-cap (*L. pyrenaicum*). It is, nevertheless, by no means a bad flower, though the scent is stronger, and therefore worse, than any of the *Martagons*, which is saying a good deal.

I believe I am right in stating that there are a good many gardens where *L. candidum* fails to grow satisfactorily or fails altogether. One occasionally reads also in the gardening papers discussions about some obscure disease to which either the bulbs or the leaves are subject. Of this latter

I know nothing and have never noticed it, and the plant grows equally well in every part of my garden in the worst soil and positions as in the best. *L. candidum* should be moved as soon as it has died down, for it starts into growth the first wet day after this has happened; but as this operation has to be done in the hottest weather, when the earth is hard and dry and dusty, it is wiser not to be one's own gardener on these occasions.

I noticed a few days ago in my garden a plant of *L. longiflorum* that has certainly been in the ground for two years. It bloomed last year, and is apparently coming up strong enough to do the same again. I left a large quantity of them in the ground last year, which are also evidently alive. I should not, however, like to say that this species was "established" in such a garden as this. I believe, however, that the tendency to a precocious growth is the real difficulty, and that the bulbs are hardy and not difficult to grow and bloom successfully in warm soil and situation.

Three or four years ago I was fully persuaded that I had successfully established *L. Browni*, one of the most distinct and desirable of Lilies, and a queen among the Eulirion class. In this, however, I was disappointed, for I have certainly seen nothing of it for the last two seasons. Last year, indeed, a pink nose came through the ground, and was promptly assimilated by an itinerant snail, and a few days ago I noticed a similar plant shoot in the same locality. I forget what *L. Browni* should look like in its earlier stage of growth, but if this is not *L. Browni* it must be an attempt at a resurrection on the part of *L. Leichtlini*, which occupied an adjacent site in the same cemetery. I believe I am right in stating that there are gardens where *L. Browni* is found to be one of the easiest Lilies to grow, and those who possess warm soils, such as that in the neighbourhood of Bournemouth for instance, cannot do better than cultivate it.

Some time in the autumn of 1898 one or two of my friends and myself invested in a cargo of good things from Mr. C. Purdy, of Ukiah, California. These included some rhizomes of *L. Parryi*, all of which I believe succeeded. I see my own plants are again coming up. *L. Parryi* (which requires peat) is one of the most distinct of known Lilies, and if it is rightly classed with the Eulirions, it is, I believe, the only yellow Lily included in the group. I have had this and lost it before, and I doubt whether I shall keep it for many years.

Of the *Arcililirion* group of which *L. auratum* is the king *L. tigrinum* is the only Lily I have ever had which appeared to reproduce itself freely by bulbs or seed. This it has seemingly ceased to do, and I fancy there are very few left now in my garden. It is one of the finest of the late summer Lilies, and is not apparently particular as to soil. There are, by the way, two or three varieties which have names, one of which is better than the others, but I forget which is the best. The double variety (*L. tigrinum* fl. pl.) is difficult to grow.

L. speciosum (syn. *L. lanceifolium*) is quite hardy in many places, but it dies here if left out. This, however, is so easily managed in a greenhouse that one can grow it off as part of one's out-door garden "furniture" during the summer months. The last Lily that I have to mention as growing with me is *L. Henryi*, sometimes called the "orange speciosum." I bought a bulb of this somewhat more than two years ago, for which I gave either 10s. or 7s. 6d. Last year it threw up two flowering stalks, and this year there are three. I look upon this as one of the finest introductions of recent years, and anybody apparently can grow it. In this garden

L. Henryi has also somehow got itself planted in the middle of a fine plant of *Ostrowskia*—an ominous conjunction of Russia and China!—and as the ground round them is green with seedlings in all stages of *Eremurus himalaicus*, it is a sort of spot "where three empires meet," and where the equities will finally have to be adjusted. *Comment done?*

I have now, I believe, mentioned all the Lilies that grow, or may possibly be growing, here under not very favourable, but not perhaps especially adverse, conditions, and it only remains to briefly allude to those which, from one cause or another, have proved intractable. I append at the end of this paper a list of Lilies under four heads, viz.: A, Lilies well established, some or most of which will probably grow in any garden; B, Lilies growing here, but of more doubtful permanence; C, a few Lilies which though failing here can certainly be grown in warm soil, or, as in the case of *L. giganteum*, where sufficient moisture can be secured during summer; D, complete failures. With regard to these latter the two that I personally most desiderate are *L. washingtonianum* and *L. Humboldti*. I do not remember ever having seen the former

personal knowledge it has always ended by dying out.

A gentleman was in my garden last year who assured me that it has been fully established for many years past in the garden at Saltwood, near Hythe. These gardens occupy, I believe, a curious "pocket" of remarkable soil that contains peat and is without lime, although they are, of course, in close proximity to the hills and cliffs which in their objective relation furnish her name to Perfidious Albion. The only instance, however, that I personally know where it is established is in the Wisley garden.

I remember once asking Mr. Wilson whether he had taken any observations of the life and duration of individual bulbs. He had not done so, but the question is really immaterial, for it makes no difference whether the same bulb continues to produce flowers, or whether it splits up into pieces which in their turn grow into flowering plants. Under any circumstances the succession is maintained, the bulbs live *et quasi cursoris citi lampada tradunt*. The tradition here at any rate has been maintained for a sufficient number of years to enable them to be pronounced



A GROUP OF THE WHITE BROOM.

growing in any garden except my own, and that only for one year; nor, outside flower shows, have I ever seen a decent specimen of the latter, except, if I rightly recollect, in Mr. Wilson's wood-garden at Wisley. As for *L. auratum*, what can anyone say that is at once new and true? In estimating the value of this Lily I am always reminded of Lord Chancellor Thurlow's reply to a deputation of Nonconformist ministers who sought his assistance on some occasion. "Well, gentlemen, if you can get your thing established, I'll support it!" I cannot ask the editors to print the strong language of that most interesting century so soon to become the penultimate, though it just occurs to me that if we were to adopt the fashionable modern expletive we should not only put ourselves in order in and with the most ladylike paper in print, but also furnish a brilliant example of that "circumstantial swearing" that Bob Acres so much affected. It would certainly be both interesting and valuable if one could collect a little genuine and authentic information as to the number of places where this Lily is really established—established, that is to say, long enough to be considered genuinely permanent and self-supporting. Many people keep it for three or four years, or even more, but in all the cases that have come within my

to be self-supporting, and if they were let alone they seem as if they would continue to do so. If, indeed, the wood-garden should ultimately revert to its "prairie value," it may perhaps be doubted whether the British botanist of (let us say) the middle of the twenty-first century will be writing of *L. auratum* as having a habitat "in a wood near Weybridge, in Surrey; not supposed to be native." But, inasmuch as by that time the neighbourhood of Weybridge will probably form part of London S.W., the chance of naturalisation is not likely to be afforded.

A.	B.	C.	D.
<i>L. candidum</i>	<i>L. Browni</i>	<i>L. speciosum</i>	<i>L. Humboldti</i>
<i>L. chalice-</i>	<i>L. Martagon</i>	<i>L. Thunberg-</i>	<i>L. Batemani</i>
<i>donicum</i>	<i>album</i>	<i>ianum</i>	<i>L. carniolicum</i>
<i>L. colchicum</i>	<i>L. M. dalma-</i>	<i>L. giganteum</i>	<i>L. Leichtlini</i>
<i>L. croceum</i>	<i>tienn</i>		<i>L. pomponium</i>
<i>L. Henryi</i>	<i>L. Parryi</i>		<i>L. superbum</i>
<i>L. Hansoni</i>	<i>L. longiflorum</i>		<i>L. washington-</i>
<i>L. bulbiferum</i>	<i>L. pardalinum</i>		<i>ianum</i>
<i>L. davuricum</i>			<i>L. concolor</i>
(syn. <i>L. umbellatum</i>)			<i>L. Cordian</i>
<i>L. Martagon</i>			
<i>L. pyrenaicum</i>			
<i>L. testaceum</i>			
<i>L. tigrinum</i>			

Those marked * have bloomed here

J. C. L.

WHITE PORTUGAL BROOM.

(GENISTA LUSITANICA.)

THE white-flowered Broom of Portugal is one of the best flowering shrubs for pictorial use in half-wild ground. Its high degree of graceful beauty makes it welcome among the choicest shrubs, but it is seen to the best advantage when in any half-wild spot, in ground broken or tossed about, or, as our French friends so aptly describe it, *terrain accidenté*, it can be planted in bold groups that can take their own shapes, of vigorous uprightness in the strength of young growth, and of somewhat straggling, though always graceful, maturity and age. Even if an old plant splits and falls it does not necessarily mean loss and death, for the sympathetic watcher only takes it as an opportunity for renewing the old plant's life by pegging the half-broken, but still adhering branches just underground, where they will take root and make a grove of good growth around the old worn-out stem.

These white-flowered bushes are like a group of ghostly visitors in the twilight of early summer, while even in winter their well-filled masses do not present the naked aspect of most deciduous shrubs.

Like others of its family, the white Broom will thrive in very poor, light soils, but looks its best surrounded by shrubs whose leaves are of a very quiet tone of colour, such as *Cistuses*, and does well in groups with them; indeed, in any spot of poor, rough ground such a combination, completed by a carpeting of wild Heaths, could scarcely be improved upon.

GARDENING OF THE WEEK.**THE ROSE GARDEN.**

ROSARIANS whose gardens are situated in low-lying districts have doubtless suffered a keen disappointment owing to the severe frost on the 26th ult. In some localities as much as 14 were registered. Such a visitation should be a warning against too early pruning, and although the new growths may not appear to have suffered much, the result in many cases will be crippled or green-centred blooms. If the young shoots are black in the stem, it is better to pinch them back to their base. They will break into growth again and flower, although somewhat later and perhaps not so fine in quality. If the shoots are very thick upon the plants, those in the centre and such as point inward should be rubbed off, but too much haste must not be used in this matter. It is well to see which growths are likely to flower, and also to be sure that those about to be retained are free from insect pests.

Maggots will now be very troublesome. Examine every curled leaf, and if the enemy is not there, track him out until secured. Where a leaf is badly injured, pinch it off to save further examination. If a bowl of strong quassia-chip solution is kept near at hand, the end of a young shoot that happens to be covered with aphids may be either immersed in the solution or otherwise thoroughly soaked with it. The recipe for this solution (which is also good for mildew) is as follows: Steep $\frac{1}{2}$ lb. of quassia chips in cold, soft water for a few hours, and then simmer in a gallon of water for twelve hours. Add to this 5 oz. of good soft soap. When the latter is thoroughly dissolved, make up to five gallons by adding soft water. It is then ready for use. Climbers upon hot walls would benefit greatly by a frequent syringing of this mixture. This timely washing will save much future trouble. Lay the shoot on the left hand and draw a lamp-glass brush gently over it, having first dipped the brush in the solution. Syringe every leaf if practicable. Providing the evening is a warm one, it is best to syringe at

that time. If done in the morning, it must be before sunrise. But, after all, the best remedy against aphides is a thoroughly healthy, vigorous root action. If Roses are happy at the root, so that they can make healthy growth, and old wood is freely cut away at pruning time, one need not fear much trouble from Rose enemies. Even the maggots are less numerous, for by removing the two or three-year-old growths one cuts past many of the insect deposits.

Keep the surface-soil well stirred, especially after rain. I am not in favour of mulching Roses until the month of June, when the buds are rapidly swelling. If the soil is in good order the plants will not yet require stimulants. It is when buds are about the size of marbles that feeding must be resorted to, but it is as well to be ready to afford fertilisers when required. Night soil is excellent if poured into drills made between the rows of plants during or following a good rain. Never give liquid manure when the ground is dry. Should there be no rain when assistance is needed, give a good soaking with plain water first. Horse droppings or peat-moss litter saturated with stable drainings for a week or so before using makes a very good, though rather powerful, stimulant. On light soils a good dressing of fresh cow manure is best of all, and in such cases this should be given at once, so that moisture may be preserved. If there should be available enough pure wood ashes to give the soil a slight dressing, do so prior to the application of the cow manure.

Climbing Roses upon walls should receive a thoroughly good soaking of water at the roots. The application must be repeated two or three times until the ground is well soaked. Afterwards fork up the surface and keep the soil loose. Dwarf plants set apart for the purpose may now have their growths pegged down. Galvanised iron pegs are as good as anything. Push these into the ground so that their tops are about 1 foot out. It is not necessary to peg down all the growths; only such as are of a good length. The Penzance Briars are delightful treated in this way; so also are strong growers such as Ulrich Brunner, Grace Darling, Gloire de Dijon, &c. Many kinds of Roses naturally spread outward, almost horizontally. Varieties like Crimson Rambler, Flora, and others similar in habit, if not bunched up like a broom, will do this. They produce a delightful effect when their long wavy branches bend and touch the lawn on account of their weight of blossom.

Stocks budded last summer will now require a stick placed against them, so that the new shoot when a few inches long may be properly secured against strong winds. In the case of standard Briars, part of a Bamboo cane divided down the centre, so that one side is flat, is as good as anything. This should be about 18 inches long and attached to the top of the Briar. As the wild growths upon the latter break out, they must be pinched back, and as soon as the shoot of the young Rose is 4 inches or 5 inches long, all wild growth may be entirely removed. The object of retaining it is to assist the plants to make roots, and also to ensure the bud starting into growth. A little knotting painted on to the ends of standard Briars will prevent the troublesome wild bees from depositing their eggs in the pith.

Where buds of new or scarce Roses are required, or kinds that one is desirous of increasing, the plants should be ordered at once. If potted on and grown in heat, one may have a good supply of buds by August. Of course, for this purpose plants grafted this season would be necessary.

Pot Roses coming into bloom should be removed to a cool house and shaded during the hottest parts of the day. Those showing bud will require weak stimulants about twice a week. A little liquid manure sprinkled over the pipes at night is helpful to the foliage, but do not attempt to grow fine foliage at the expense of blossom.

Climbing Roses that have almost ceased flowering should be gradually cut back in order to encourage new rods for next season's crop of bloom. A drastic pruning should only be employed where abundance of heat and moisture (similar to a vinery) can be afforded. If *Maréchal Niel* is

treated in this manner, fine new rods 12 feet to 20 feet long may be secured, which, by thoroughly ripening off in the autumn, will bear a good supply of bloom next year.

Young growing plants planted out now either in the inside border of the Rose house or into large pots will make rapid growth if supplied with ample heat and a moist atmosphere. This refers more especially to Roses of a climbing nature, although the present is an excellent time to make permanent plantations under glass of the leading cutting kinds, such as *Niphetos*, *Bridesmaid*, *Perle des Jardins*, *Mrs. W. J. Grant*, &c. PUBLISHED.

ORCHIDS.

MANY of the summer-flowering varieties of the *Cattleya* and *Lælia* species will now be advancing their flowers through the sheaths. These make rapid progress and quickly expand their blooms at this season of the year. It is advisable to place plants that are in a forward condition in a position where they may obtain the maximum amount of strong light, with due consideration for protection of the foliage from injury by the direct rays of the sun. This will be found not only to add substance to the flower, but it will considerably assist in the proper development of the colours. It is surprising the different effects the light has upon flowers, even of portions of the same plant. Of course, a great deal must depend on the conditions under which plants are cultivated. It is well-nigh impossible to obtain the amount of substance and colour in Orchid flowers in the neighbourhood of London and other large towns that can be procured where pure air and clear light are obtainable. It is therefore necessary to give due consideration to different conditions and act with discretion.

There are perhaps no greater contrasts to be derived or finer displays made than are found among the varied forms of the fragrant *Cattleya Mossia*, the quaint tints in *Cattleya Mendeli*, and the grandeur of the noble forms of *Lælia purpurata*. The bulk of these will now require every encouragement to assist them in developing and expanding their flowers. One of the chief considerations is to protect them from being distressed by over-flowering. The plants should be relieved of their flowers as soon as possible after they have become properly expanded. If allowed to remain on after this the strain on the plants will be great and the pseudobulbs will shrink, and it is a very difficult matter indeed to induce plants to regain their normal conditions after being over-flowered. It is a difficult matter indeed at this season of the year, when plants are required for exhibition purposes, to give due consideration to the flowering period of plants, but no one can conceive but the grower of such plants the ill-effects caused by this one item. I have dealt at some length on these particulars because one is constantly brought into contact with questions of longevity in the different species of the *Cattleya* family, and I am convinced that a large amount of the distress and the complaints made in respect to the various sections are caused in the first place through over-flowering.

In the cool divisions, the *Mastlevallias*, though later than usual, are now beginning to throw up their flower-spikes, and will require liberal treatment as regards moisture both at the roots and in the atmosphere. As the spikes and young growth advance they usually form an attraction for greenfly. These may be destroyed before the flowers begin to expand by fumigating with XL All fumigator, or the wash prepared by the same firm may be sprayed over the plants. Fumigation after the flowers have expanded should be avoided, as I find that this compound has a peculiar effect on the colouring of the highly coloured flowers, especially those of the *M. haryana* section. Whenever the outside conditions permit, the *Odontoglossums* should have a free circulation of fresh air among them. The top ventilators should be closed when the final damping is done, and remain closed for a few hours to allow time for the atmospheric moisture to become condensed. The roof ventilators may be opened again after this, and remain open during the night whenever the outside conditions

will allow. As the warmer weather advances more frequent damping of the floors, &c., will be required, and a slight spraying overhead in bright weather will be found beneficial to *Cyripediums*, *Vandas*, and most of the intermediate house section. The *Dendrobiums* in full growth may be freely syringed and a highly humid atmosphere maintained.

H. J. CRAPMAN.

CHRYSANTHEMUMS.

WHERE large and representative collections of *Chrysanthemums* are cultivated—and to be able to enjoy to the full extent this charming autumn and winter flower each section should be represented—much care, forethought, and attention will now be required to attain the best results; and although November is generally admitted to be the season at which to see them at their best, it should be the aim of every gardener to prolong the display as long as possible. For usefulness for home work I doubt if a collection grown and timed to bloom during December and January is of less importance. I know of nothing at that season which can equal these for decorative purposes either as pot plants or for supplying cut flowers, always in so much demand during mid-winter, and by selection even now this end can be attained. Late kinds of appropriate colours should be chosen, and a good batch of the most pleasing varieties should be cultivated rather than a large number of uncertain kinds.

Whites and yellows are generally most in request, and two of the best of each that I am acquainted with are *Jessica* and *Niveum*, pure white, *Golden Gem*, bronzy yellow, and *Eugenie Launjelet*, late *Anemone pompon*, bright golden yellow; this requires good cultivation to have it at its best, and should not be stopped after the middle of June.

If plants established in 3-inch pots are shifted into 6-inch pots by the end of the present month, and finally potted into 8-inch and 10-inch pots by the end of June, they will be quite early enough, and most varieties should be stopped up to that time.

The plants should be grown in bush form and tied loosely to one stout stick, allowing sufficient room between the plants at all stages of their growth for light and air to reach every part, and manure water should on no account be applied till after the flowering pots are well filled with roots. Syringe freely in hot, dry weather, and see that the growths are not allowed to become infested with insect pests. Dust the bottom foliage occasionally with black sulphur to ward off the attacks of mildew. The pots, if possible, should be stood on boards or slates, and made secure against rough winds. Strong neat posts should be driven in and stout tar cord stretched along, which is much preferable to wire, and the stakes securely tied to same.

Pompons and pompon *Anemones* deserve much more encouragement than they at present receive both at our exhibitions and for home purposes. A well formed collection of these is most interesting and useful, and the advantage of them over the larger and more showy kinds is that they remain considerably longer in a fresh condition, and for cutting are extremely useful.

They are best grown as medium-sized bush plants, loosely trained. I advise stopping the plants about three times, the last date not being later than the first week in June. Disbudding can then be judiciously performed, which will enable each flower to fully develop without any trace of coarseness, and, on the other hand, poor, weedy blooms will be avoided.

Ten inch pots for the most robust and 8 inch for the weaker kinds are quite large enough for flowering them in, and they should if possible be finally potted in these by the middle of June. A suitable mixture will consist of three parts of good fibrous loam, not too heavy, one part of finely sifted horse droppings, and a 6-inch potful of bone meal to each bushel, with sufficient road sand to keep it porous. Use the soil in a moderately dry condition and pot very firm with the potting stick.

E. BECKETT.

KITCHEN GARDEN.

KIDNEY BEANS.

I ADVISED a small sowing of dwarf Beans some few weeks ago where shelter could be given, and though the plants so far have had cold weather to battle against, they should now make up for lost time, and if possible the shelter continued at night, or during cold cutting winds, which are so harmful. A much larger sowing should now be made on a warm border, and in light soils I have found it advantageous to sow on the flat, as the plants need liberal supplies of food and moisture during June and July should the weather be dry and hot. This plant is often sown much too thick. I am aware that with early sowings there are considerable losses, thus necessitating thick sowings, but this does not apply after the present date. Plants sown too thickly are much impoverished during growth, and such plants are the first to be attacked by insect pests, being weakly. Such strong growers as *Progress*, *Early Favourite*, and the Canadian *Wonder* type need more room both in the row and between the rows, and if sown thick it is well to thin out to give the plants room. For a supply from June to October I would advise sowing every month up to the end of July, and even later when protection can be given to late plants. For summer supplies there are no lack of good varieties.

RUNNER BEANS.

Early in May, from the 10th to the 15th, is considered a good time to sow runner Beans. A hard-and-fast date cannot be laid down, as soils and localities differ. Much the same remarks are applicable as in the case of the dwarf varieties as to feeding and space and to avoid crowding. For early supplies in heavy soils it is a good plan to sow half-a-dozen seeds in 4½-inch pots in frames, to prepare trenches or deep drills, and to plant out towards the end of the month. Few plants suffer more from slugs than runner Beans, but plants raised as advised are much less subject to attack than those sown in the open. With a good depth of drill or trench, either at sowing or planting, the plant in its early stages may be given protection, as it is an easy matter to place some of the stakes over the drills and to cover at night with mats or tiffany.

There are some excellent varieties to select from, and the newer climbing French varieties should not be overlooked. Such kinds as *Excelsior* and *Epicure* are splendid. Few of the newer tall kinds can beat the one called *Best of All*, a splendid Bean both as regards quality and crop. The *Mammoth Scarlet* is also good. I have also observed that the white-flowered varieties, such as *Mammoth White*, are earlier than the others, and earliness is a great gain with this crop.

PEAS FOR SUCCESSION.

The grower will now require to be careful in selecting those kinds that give a long supply, as from this date there are many failures, those who can grow early and mid-season kinds well frequently failing with late ones. I would in all light or poor soils advise deep drills, and these prepared in advance of sowing by incorporating some good, well-decayed manure, dug in the bottom of the trench much in the same way as for Celery. In a wet season there may be a fear of gross growth, but I have never had much difficulty, as it is an easy matter to top plants. For late use I prefer 3 feet to 4 feet varieties. Excellent varieties of this height are the old *No Plus Ultra*, *Michaelmas*, *Continuity*, *Autocrat*, and *Windsor Castle*. They should receive good treatment, as late Peas are so much liked that it is worth the trouble to give special culture.

Spon House Gardens, Brentford.

INDOOR GARDEN.

POINSETTIAS.

If the early batch of plants were stood in a house where they would start as suggested some time ago, there should now be a nice lot of sturdy cuttings about 3 inches long ready for propagating. These should be cut off with a sharp knife close to the old wood and inserted at once singly in 2½ inch pots,

using as a rooting medium a rather fine mixture of two-thirds peat and one-third loam; sand enough should be added to make the whole gritty, and a pinch of the same material should be dropped into the hole made with the dibber before inserting the cutting, which should then be well closed round to prevent air reaching it below the soil line, and watered in with nice tepid water. Only a few cuttings should be taken off at a time, so that they shall not have time to flag previous to being plunged into the moderate hotbed where they are to strike, and covered with hand-lights or bell-glasses. If the cuttings are at all weak and drawn, it will be necessary to support the leaves by putting three tiny sticks round the sides of each pot and twisting thin strips of matting round these on which the leaves may rest, but cuttings of the best type of growth and not over-long will not require these supports if the work is done quickly and well. A bottom-heat of from 65° to 70° will suit the cuttings, and in this they root quickly.

SEED SOWING.

More seeds of *Primula* should now be sown, and these may be raised in a cold frame. Germination may be slower there than in heat, but it is surer, and one often finds that these late-sown plants escape all pests in the way of fly, and grow away freely and well from the commencement, making eventually the best of plants, though late in flowering. A start should also be made with *Cinerarias*. These, too, do best when raised cool; and the front part of a pit, with the seed-pan stood on the cool ash bottom and shaded by the front wall, is very suitable. The seeds should be only lightly covered with fine sandy soil, and a sheet of glass should cover the pan. New seed of *Aralia Sieboldii* (*Fatsia japonica*) will now be at hand and should be at once sown, as this seed soon loses its germinating powers if kept long out of the soil after being ripened. The scarcity of this plant must be due to the negligence shown in not getting seeds at the right time, for few green plants are more handsome or interesting, and it puts up with a fair amount of ill-treatment, so that it is valuable for the decoration of rooms and draughty halls. *Humea* seed should be sown in May or June, and I like to divide the seed, sowing a portion in each month with an interval of three weeks or so. The seeds are fine and light. Often, too, I fear they are not of good quality, so that one cannot depend on getting a crop. Place the seed pot in a damp shady corner of a cool frame or under a handlight behind a north wall, so that frequent watering is not necessary. Above all beware of fire-heat, which *Humeas* always resent.

Lilium longilorum to come in for succession to the earlier *L. Harrisii* should be top-dressed as soon as the stem roots show, and may be brought forward by placing the earliest in the greenhouse. Other pot Lilies, such as *L. auratum* and its varieties, may be treated similarly.

POTTING.

Various plants will require potting on now. These include *Bouvardias*—if pot culture is to be the summer treatment, or they may be hardened for planting out in a week or two—*Celosias* of sorts, and many other soft-wooded subjects.

Shipley Hall Gardens. J. C. TALLACK.

FRUIT GARDEN.

GRAPE VINES.

THE early Vines with the fruit now in the colouring stage require a drier atmosphere than they have been subject to in the earlier period, brought about by keeping on a crack of ventilation at the front and apex of the viney during dull days and nights, and in the daytime when the sun is shining as much ventilation as can be afforded, maintaining the suitable forcing temperature to ripen the Grapes. Increase ventilation in the morning as the temperature rises, and reduce it in the afternoon as it declines. Always guard against sudden changes of temperature, as it causes moisture to condense on the Grapes, which is detrimental to the bloom.

From the time colouring begins, damping down of the viney should be gradually reduced, first discontinuing in the afternoon on fine days, and not at

all when it is dull, to once in the morning on fine days when the Grapes approach ripening. When Grapes begin to colour, the growth of the berries is faster than at any other stage, so that manure water must be frequently and copiously given to the roots to assist the berries to attain their largest size. After the Grapes are ripe, water must be given as often as required to prevent them shrivelling and to maintain the vigour of the Vines for next year.

After Grapes are ripe, heat should be turned off and theinery ventilated as freely as possible at all times, though the fruit should not be allowed to get wet during rain. We are now in the season when the days are long and the sun powerful, so that the soil of well-drained Vine borders dries quickly, whatever stage the growths of Vines are in; all borders should therefore be frequently tested, and before the soil becomes dry sufficient water should be given to reach every part of the border, from the surface to the drainage. A little neglect of watering may do harm that would be irreparable this season. To guard against borders becoming unduly dry and to save labour, mulching is of the greatest importance inside and out, and I think for this purpose there is nothing better than cow-shed manure. Where mulching is objected to on account of its appearance, the soil should be kept loose on the surface by frequent hoeing, which in itself acts as a mulch and prevents the soil from cracking.

In the case of succession vineries with swelling fruit, damp them down as often as the dryness of the atmosphere demands. On dull days once will be sufficient, while on bright days it may be done four times. Ventilate freely so as to keep the foliage firm and healthy, beginning early in the morning to prevent burning of foliage, and increasing it as the temperature rises; as it declines in the after-

noon, reduce, and shut when it does not exceed 85°. But little fire-heat is required, except during the night and in the daytime when the weather is dull. Frequently go over the Vines and remove laterals.

For Vines in flower keep more warmth in the hot-water pipes during the day, except when the weather is excessively hot. About noon go over them, giving the rods a few sharp raps with the hand to distribute the pollen, and in the case of the shy-setting varieties draw the hand down each bunch at the same time. While in bloom damp down but once on fine days only; the afternoon is the best time to do it. At this season Vines in all stages when the weather is fine are benefited with some ventilation at night, put on at dusk.

About this time there is a great deal of Grape thinning to be done. It is tedious work that requires to be done with care and judgment, according to size of berries when ripe, the form of bunch, and whether required for autumn use or to be kept through the winter. If required for use soon after being ripe the berries should have room to grow to their fullest size without becoming in the least squeezed out of shape. The bunch should retain its shape when cut and lying on a dish, and for late keeping the berries should not quite touch each other, so that air may have full circulation throughout the bunch. G. NORMAN.

The Gardens, Hatfield House, Herts.

IN THE GARDENS OF DEEPDENE, DORKING.

THE accompanying illustration depicts a view in the beautiful gardens at Deepdene, Dorking, the charming country home in which Lily, Duchess of Marlborough takes intense interest.

The Rhododendrons and Azaleas, the pride of the place, are commencing to flower in profusion, and in early June the whole garden seems enveloped in a cloud of colour, for the Rhododendrons are luxuriant, making dense leafy growth, and seem to spring up here, there, and everywhere. They form walls to the grassy walks, and in the evening of an early summer day make a rare picture, as the illustration suggests. Gardening is thoroughly carried out at Deepdene. The borders are filled with old garden flowers, and the houses with the latest varieties of Carnations and many rare Orchids.

CORRESPONDENCE.

SINGLE VIOLETS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Will you kindly tell me the best varieties of sweet single Violets to grow in a frame and where I can obtain them? What should the bed consist of to make them really successful? The soil is very light and sandy here. Can you tell me of any book or paper on Violet growing? H. H.

[There are several new forms of single Violets the flowers of which are very large and borne on long footstalks, which makes them more valuable for arranging in vases, &c., when cut. Of these probably Princess of Wales and California are the best. Among the older varieties we recommend you to grow Victoria Regina; indeed, when this is well grown one hardly needs a better. We find no difficulty in having plenty



A VIEW IN THE GARDENS OF DEEPDENE, DORKING.—RHODODENDRON TIME.

of bloom from autumn to spring—that is, of course, by placing well-prepared plants into frames early in September, though the lights are not really placed over them until severe weather threatens.

You must make a start at once if you would have bloom throughout the winter; and by growing on young stock yourself, the plants can be lifted in the autumn with a good ball of earth attached, and no check will be given. This is impossible when the plants have to be bought, and probably sent a great distance at that season. The first thing is to prepare a suitable site for the plants to make their growth. If it were practicable to place the plants at once where they are to flower and then in autumn cover them with portable frames, much labour would be saved. What is against such a practice is that a shady or partially shaded position is necessary during the heat of summer, and in winter the plants should occupy a frame standing in the sunniest part of the garden, as at that season of short days the plants should receive every ray of sunshine possible.

Your soil should grow Violets well, better than a heavy clay, but being of a sandy nature, plenty of well-decayed manure should be dug in, that from the cow-shed being preferred, as it is not so hot as that from stables, and retains moisture better during drought. Having provided a deep rich tilth, secure the stock of young plants and plant without further delay. If the weather proves showery, no further attention will be needed for a time, but should dry weather set in, water occasionally, and dew the foliage over in the evening to prevent it flagging and start growth. Keep the side shoots, or runners, nipped off during the summer, and hoe the surface soil between the plants frequently. This will establish strong clumps and encourage healthy foliage.

About a fortnight before the plants are lifted for placing in the frame cut round each one with a sharp spade about 9 inches from it. Drive the spade in its full depth to sever straggling roots. A dull, damp day is best for doing such work, or a watering should follow if the ground is dry and the foliage flags. New roots will then quickly form nearer the centres and round the ball, and then transplanting may be done without the least check.

In the meantime the frame should be prepared. We prefer an ordinary wooden frame to a brick pit, as we find the former can be well tilted at the back, and the bed therein made to slope nicely towards the sun. Moreover, linings of leaves and litter can be packed round the frames during hard weather, and the interior is maintained more uniform, both as regards temperature and moisture, than is possible in a brick structure. The latter, too, are often deep, and much material of some kind is necessary to bring the plants within 1 foot of the glass. In making up the bed in the autumn, if soil that has been used for Cucumber or Melon growing during the summer can be employed, no better compost could be provided for Violet growing; indeed, it is preferable to fresh loam and rank manure. Six inches of such soil, placed over a bed of leaves rammed firm, will supply plenty of root-run. Place the plants 1 foot apart each way, making the soil moderately firm about them. Give a good soaking if necessary, but plant if possible during a dull, showery day. Leave the lights off, as the dew on the foliage is beneficial, and only begin to use them when frost is expected. To coddle the plants up or attempt to grow them in heated pits, however small the amount of fire-heat may be, leads to failure.

The plants could be obtained from any nurseryman, and you will find that those who make a speciality of Violets generally advertise them in these columns.

We are not aware of any work devoted to Violet cultivation, but if you follow carefully these few instructions, you will be well repaid by a wealth of bloom next winter. (Eds.)

APPLE LORD BURGHEY.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I was glad to notice in THE GARDEN for April 21 (page 309) that Mr. E. Hobday mentions this Apple. It is one that we do not hear much about,

but it is a very good late dessert kind and well worth growing. I have often purchased fruit from the shops in Peterborough a few years ago, and was under the impression that it was rather a new introduction. On referring to Dr. Hogg's "Fruit Manual," however, I find that it was first distributed in 1865. This variety was raised in the garden of the Marquess of Exeter at Burghley, near Stamford. It is a very showy Apple, being of a beautiful dark red colour, medium size and very good flavour; in use from Christmas to May. The flavour is not so rich as Cox's Orange Pippin; the flesh is yellowish, tender, juicy, and sweet, with quite a fine flavour and smell. It is one of the most distinct flavoured Apples that I know. It grows well here (North Yorkshire) and makes a nice bush; the fruit is much appreciated. Mr. Hobday will see that it has "trekked" 150 miles north. I tried to get more trees of this variety last planting time, applying to three different firms, but was unable to do so, as it was late in the season. It is catalogued by Messrs. J. Backhouse and Son, also by Messrs. Fisher, Son and Sibray, Limited. Your correspondent will also notice that it is mentioned by Messrs. J. Veitch and Sons on page 309, as well as by other writers.

J. S. UPEN.

DE CANDOLLE'S FLORAL CLOCK.

By the kindness of Mr. J. G. Baker, we are enabled to give the following, in answer to a query on page 169. Some correspondence followed the original question, but no list of plants so complete as this:

	OPENS
	A.M.
<i>Ipomoea purpurea</i> (major <i>Convolvulus</i>)	2. 0
<i>Calystegia sepium</i>	3. 4
<i>Papaver nudicaule</i> , many <i>Compositae</i>	5. 0
<i>Convolvulus tricolor</i>	5. 6
" <i>sieulus</i>	6. 0
<i>Sonchus Hieracium</i>	6. 7
<i>Laetuea</i>	7. 0
<i>Angallis arvensis</i>	8. 0
<i>Calendula arvensis</i>	9. 0
<i>Spergularia rubra</i>	9. 10
<i>Mesembryanthemum nodiflorum</i>	10. 11
<i>Ornithogalum umbellatum</i>	11. 0
<i>Passiflora coerulea</i>	12. 0
	P.M.
<i>Pyrethrum corymbosum</i>	2. 0
<i>Silene noctiflora</i>	5. 6
<i>Oenothera biennis</i>	6. 0
<i>Mirabilis Jalapa</i>	6. 7
<i>Lychnis vespertina</i>	7. 0
<i>Cereus grandiflorus</i>	7. 8

WHEN TO PLANT LILIES.

[TO THE EDITOR OF "THE GARDEN."]

SIR, The list of Lilies and their requirements suggested on page 269 is especially commendable, and if carried out should prove of great value to the cultivator, particularly if we are by it prepared for occasional failures. The common fault of such lists issued for trade purposes is that those kinds difficult to grow very rarely have this feature pointed out. It is by common consent acknowledged that the best time of the year to plant Lilies is in the autumn, or whenever good bulbs are obtainable.

This last stipulation is very necessary, for the statement that there are firms who grow all the foreign Lilies at home and have them in the best condition for planting at the right time needs, I think, a little qualifying. Where, for instance, can we get home-grown bulbs of *Lilium auratum* represented by its several varieties in any quantity? By home-grown I mean those that have been obtained from seeds or scales and grown altogether in this country, not those imported one season as fully developed bulbs, then planted out and lifted the following autumn. Concerning these last, I would much prefer waiting till after Christmas to obtain good plump bulbs from Japan than those which had been kept over from the previous year. The quantity of bulbs of *Lilium auratum* grown in this country is very small compared with the huge quantities sent here from Japan, where the climate

and conditions are suitable for their culture, but here they behave in such an erratic manner that they rarely prove a remunerative crop.

L. Krameri again is another Lily of which much the same may be said, while the allied *L. rubellum*, though apparently of stronger constitution, has yet to prove whether it will succeed in this country. Without frequent importations the following species would doubtless soon be lost: *L. callosum*, *concolor*, *Coridion*, *nepalense*, *neilgherrense*, and *washingtonianum*. Regarding *L. longiflorum*, the bulbs imported from Japan yield a much finer display of blossoms than can be obtained from those grown in this country, and exactly the same applies to *L. speciosum* in its several forms. Concerning the bulbs imported from Holland, we are now so closely in touch with that country, that bulbs can be sent from there quite as quickly as from some parts of England.

That many beautiful Lilies can be grown in this country is admitted, but this does not, I think, apply to all, hence the advice to plant whenever good bulbs are obtainable. H. P.

SNOWDROPS GROWING AMONG IVY.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—Referring to p. 312, "Snowdrops growing among Ivy," I think your readers may be glad to hear of some other things that I have grown for many years in a thick Ivy carpet that covers the sloping earth walls of the ancient moat, now drained, that surrounds my house. The following plants grow freely in the Ivy: Snowdrop, Snowflakes, Hellebores, three kinds of common Violet, wild Primroses, *Anemone nemorosa*, *Hepatica*, *Periwinkles*, many kinds of Daffodils, Ferns, Solomon's Seal, Lily of the Valley, *Trillium*, *Dictamnus Fraxinella*, *Lilium Martagon*, some *Campanulas* and *Cyclamens*. All these seem to be happy in their covering of Ivy, and at flowering time reach out long stems nodding over it. Many more plants, I am sure, would do well in the same position. I hope that those who know of more will mention them. W.

Nichols, Austria.

TWO BEAUTIFUL SHADE-LOVING PLANTS.

HEPATICA AND OMPHALODES.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—Referring to your correspondent "S. W. F." and his able remarks on *Hepatica angulosa*, I make bold to say that there is more in his remarks concerning the shade-loving characteristics of *Hepatica angulosa* than appears on the surface. The fact is it succeeds admirably in woodlands, or where trees are dotted about so as not to form too dense an overhead canopy of foliage. It has answered admirably also under my care for carpeting the whole space around such flowering shrubs as *Berberis stenophylla*, seedlings from the original plants, or some form of offspring, growing close up around their base.

Another gem is *Venus's Spring Navelwort* (*Omphalodes verna*), which like the former begins to bloom as early as the month of March. This *Omphalodes* holds its own also many years together when intergrowing with British woodland weeds. For wilderness gardens both are pre-eminently satisfactory. WILLIAM EARLEY.

THE DOUBLE WHITE ARABIS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I am glad to observe by your note on this new flower, under the heading of "New and Rare Plants," that you appreciate the double form as it has been recently shown before the Royal Horticultural Society. Grown on the rockery here in full sun, it promises to be quite an acquisition to our gardens. Plants obtained last autumn are, of course, as yet too small to show their full attractions; but the "charming little rosette," as you aptly call it, looks very delightful in the company of its neighbours when hanging over a stone. The old *Arabis* has been a life-long favourite of mine,

and I have been rather doubtful if it would not be spoiled by doubling its flowers. I confess, however, that the fear has been a vain one, and I anticipate that in its new form it will become a greater favourite than before. Perhaps someone will be able to tell us by whom it was raised. I have no recollection of the name of the raiser of this pretty little plant ever having been mentioned in our gardening press. S. ARNOTT.

PEACH-LEAF BLISTER.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—I naturally differ from your able correspondent "G. S. S." with diffidence, but gardeners have often found that their experience and scientific deductions have not always been unanimous. If a fungus be the cause wholly of the blister in Peach foliage, how is it that it is never seen on trees under glass, or very seldom on the second leafage on outdoor trees, even if the first leafage has had to be entirely gathered and destroyed because of blister? Why is blister so restricted to the Peach family, and does not extend to other stone fruits, such as Plums and Cherries? Canker is scientifically described as the product of a fungus (*Neectria ditissima*), yet every gardener knows that there is no canker on trees the roots of which are running in sweet, well-fed soil. Gumming, also associated with fungoid attacks, is the original product of similar causes, or of excessive coarse feeding. No wonder it, with such knowledge, gardeners are sceptical as to assumed scientific facts. A. D.

HARDY BAMBOOS AND THE PAST WINTER.

[TO THE EDITOR OF "THE GARDEN."]

SIR. My experience coincides with the opinion expressed by the writer of this article. My Bamboos certainly look far more unhappy than they did after the great frost of 1894-5. Is it advisable to cut down the injured canes, or may they be expected to recover, to some extent, their wonted verdure? F. C.
Erdleigh, Reading.

TULIPA KAUFMANNIANA.

[TO THE EDITOR OF "THE GARDEN."]

SIR. I was glad to read the note by Mr. E. H. Jenkins on this Tulip, of which, by the way, a beautiful coloured plate by Mr. H. G. Moon appeared in "THE GARDEN" for July 9, 1898. It is a really glorious flower. In its colour scheme there are two shades of one may use the word of white, one clear and cold, the other cream; then come pink, orange, and, most exquisite of all, a pearly grey tint which brings the whole together and gives a peculiar character to the bloom. It appears to vary a little, especially in the patch of colour at the throat. There are not many bulbous plants (*T. Goozi* is one of them) which seem to fill a border so well, though only a few be planted. In this garden, however, I find it has one drawback. On the sunny border where it is planted it flowers before the stalk is 5 inches high, sometimes even less than that. Therefore if not protected with glass or surrounded with stones, a heavy shower may bespatter it with mud and soil its beauty. Mr. Moon in his coloured plate shows this dwarf habit very clearly, as he also indicates, perhaps, the best position for the plant, *i.e.*, a nook in the rockery. There are a few other Tulips which do well here and may be worthy of mention; they are: *T. chisiana*, the Lady Tulip, which is fairly well known at always reminds me of a piece of old embroidery; *T. australis*, the quaint little orange-yellow and green flower with twisted leaves which is generally sent out as *T. persica*; *T. puberula*, dwarf and early, of a beautiful carmine colour, passing through blue and dark grey into orange at the throat; and *T. acuminata*, with the strange attenuated perianth, waving its arms about as if searching for something to cling to, and flaked and blotched in a way that recalls the Parrot Tulip. *T. saxatilis* I have not succeeded with, and I should be grateful if any of your readers who have been

more successful with it would give me a hint as to its cultivation. With all that Mr. Jenkins says about the beauty and interest of these Tulip species I entirely agree. But they must be planted with care and in a natural way. To my mind all the beauty of the Tulip vanishes when it is planted in serried ranks in the beds and "buns" one so often sees. I would almost hazard the statement that the Tulip is not a good bedding plant at all. I mean, of course, from the artistic point of view. This, I know, is contentious matter, but let anyone compare the beds of Narcissi with those of Tulips at Kew this year and he will see what is meant. Taylor.

F. N. A. G.

CUTTING GRASS LAND PLANTED WITH BULBS.

[TO THE EDITOR OF "THE GARDEN."]

SIR. I have about an acre of rough grass adjoining my lawn which has hitherto been mown with a scythe for hay, but last year I planted a great many bulbs, Daffodils and Tulips, in the grass. I should be very grateful if you can let me know, through the medium of your excellent paper, if it will harm the bulbs to have the grass cut as usual. There are several large Beech and Chestnut trees under which I want to have more Daffodils, Grape Hyacinths and hardy Cyclamens, but I am afraid that in the summer they will not get sufficient sun to properly ripen the bulbs. The Crocuses and Star of Bethlehem flourish under these trees, so perhaps I may have hopes for the Daffodils. The bulbs planted last August have flowered beautifully this spring. C. BETTERTON.

[Mowing at hay-time will not hurt the bulbs. *Eranthis* (Winter Aconite) does well under trees, and in most cases the common double Daffodil (*N. Telamonius*) also succeeds. It would be well to try other Daffodils, but success depends so much in their case on special local conditions, that it could only be determined by experiment. — EDS.]

THE BLUE WOOD ANEMONE.

[TO THE EDITOR OF "THE GARDEN."]

SIR. Mr. Burbidge asks, on page 284, if any blue form of *A. nemorosa* exists on the Continent. A few years ago, while staying on board one of the battleships of the Channel Squadron, I was afforded, during the early spring, an opportunity of seeing something of the country surrounding the great estuaries of Ferrol, Arosa Bay, and Vigo, in the north-west of Spain, short accounts of which were published in the columns of "THE GARDEN" at the time. In the month of February I found in a Fir wood a few miles from Vigo a colony of blue Wood Anemones, their tints being of a silvery shade almost precisely similar to that of *A. robinsoniana*, but the flowers far smaller in size. The wood in question, which was on a hillside, was remarkable on account of the many enormous water-worn granite boulders it contained, many of them almost circular in shape and some almost 20 feet in diameter. I brought several roots of these Anemones to England, but under cultivation they proved so inferior in size of flower and vigour to *A. robinsoniana*, that I discarded them. A few miles farther from Vigo, *Narcissus cyclamineus* grew in a marshy spot near a slow-running stream, while *N. triandrus albus* was to be found in thousands over the hill-sides near Ferrol and in less numbers in the neighbourhood of Vigo. Both at Arosa Bay and Ferrol I saw many Wood Anemones, but only of the normal white form. The north-west of Spain, with its great sea-murms running in for miles between its steep, mountainous hills, its clear rivers, home of trout and salmon, with here and there a sonorous waterfall having a sheer drop of 100 feet or more, is highly favoured in picturesque beauty, the more assertive charms of which are enhanced by the gentle presence of a profusion of wild flowers. Verdant meadows by the stream-side starred with flesh-pink Cuckoo Flowers, yellow Oxalis by the road verges, tall Columbines in the woods, lane-banks blue with *Lithospermum*, serried ranks of *Asphodels*, hills golden with Sun Roses or snowy with *Cistus*, while whitewashed cottage walls gleam through a tracery of shell-pink Peach blossom. S. W. FETZNERER.

THE FUTURE OF THE ROYAL HORTICULTURAL SOCIETY.

[TO THE EDITOR OF "THE GARDEN."]

SIR. I have read with much interest the various reports which have appeared on the Limsfield site for the proposed New Chiswick, and as I presume that before long the Fellows will be asked to decide definitely for or against this site, I shall be very much obliged if you can find room for this letter in your next issue.

Whatever the merits or demerits of this site may be—and to some extent the differences of opinion are doubtless due to the fact that even heavy and wet land looks much more promising in May than it does in winter—the fact remains that it is nearly three miles from a railway station, with bad approaches.

Even supposing the soil were all that is claimed for it, it must be obvious that to transform a heavy arable and pasture farm into a garden where horticulture of every kind shall be carried on in a manner worthy of our national society would entail an enormous outlay of capital. In addition to this transformation of arable and pasture land into a garden, houses heated in the most approved manner must be built in which plants of all kinds may be grown; also vinerias, Peach and Fig houses, &c., must be erected, and afterwards maintained at an annual cost compared with which the expense of Chiswick is insignificant.

Those who favour the scheme are doubtless prepared to admit all this, but I venture to think that the Fellows generally are unwilling to see all the existing funds applied to such a purpose, together with a further sum vastly exceeding the present resources of the society, and which can only be raised by voluntary donations.

Before sanctioning so great an outlay we ought very clearly to understand what advantages would accrue to the Fellows, also what (if any) would be the gain to horticulture generally.

Unless in one garden we have all branches of horticulture carried out on a scale almost regardless of expense, what hope is there that students would be likely to choose the New Chiswick as a school for gardening rather than avail themselves of the opportunities already afforded by a course of training at Kew, or in gardens such as Frogmore, Sandringham, Gammersbury, Syon House and many others, or by employment in Messrs. Rivers', Messrs. Bunyats, and Messrs. Pearson's nurseries for the culture of fruit under glass or in the open, at Messrs. Veitch's, Messrs. Sauder's, Messrs. Bull's, and elsewhere for Orchids, &c., at Messrs. Paul's, Messrs. Turner's, Messrs. Cant's and elsewhere for Roses, &c., Messrs. Kelway's for herbaceous plants, &c.

The value of the Chiswick trials of vegetables has already been discussed sufficiently to show that such work is far more completely done in the trial grounds of the large seed houses. What material advantages then can result from this vast outlay of capital and the money required for the annual upkeep?

But there is another point which the Fellows will readily grasp and have, perhaps, already seen, *viz.* that, with the establishment of a New Chiswick at the cost which the Limsfield site must necessarily entail, all hope of a National Hall of Horticulture disappears, at least so far as the present generation of horticulturists is concerned. If the society appeals to the country to finance the Limsfield scheme, it cannot again appeal for funds to acquire a new hall and headquarters for the society.

Now that it has been shown by so many writers that Chiswick can be made to answer all the actual requirements of the society, so far as a garden is concerned, the counsel would earn the most unqualified approval and gratitude of the Fellows were they generously to forego their New Chiswick proposals, at least until such time as it has been proved impossible to raise the money required for a horticultural hall.

But the most important factor in the case is that, judging from his letter in last Saturday's *Gardener's Chronicle*, it appears not unreasonable to hope that Baron Schroeder may again be willing

to lend his aid, which would at once go far to ensure the success of any well-devised scheme for acquiring a new hall. If the Baron's letter may bear this interpretation, can we sanction a scheme which would deprive the society and horticulture generally of what is universally admitted to be the fittest way of celebrating the centenary of the Royal Horticultural Society?

The thanks of all horticulturists are due to Baron Schroeder for coming forward at a time when his counsel and support were never more welcome.

ARTHUR W. SUTTON.

Buckcherry Place, Woodhampton, Berks.

THE ROSE GARDEN.

CLIMBING MULTIFLORA ROSES IN POTS.

QUESTION if any Roses are more admired, when fine specimens in pots are exhibited, than the beautiful, comparatively modern, climbing kinds of Claire Jacquier and kindred types. This particular variety, unfortunately rather tender for outdoors, is a grand Rose when allowed to grow in a natural pyramidal form in a pot. Plants in 14-inch pots, when established three or four years, can be had some 10 feet in height, and anyone acquainted with this lovely Rose will readily form an idea of its beauty when thus developed. I have seen specimens of Claire Jacquier carrying as many as thirty fine trusses of bloom, each comprising fully fifty tiny buds and blossoms of a lovely yellow colour. The growths producing these are from 1½ feet to 2 feet in length, and create a plant of elegant habit. The newer Aglaia is very pretty and certainly more valuable for outdoors, but under glass quite eclipsed by Claire Jacquier, the latter being more free flowering as a pot plant.

Alister Stella Gray is another useful kind, much like Claire Jacquier, but being both summer and autumn flowering it is in some respects even more valuable, although not nearly so vigorous. There is no need to mention Crimson Rambler. When not overdone in quantity it is indispensable, for unquestionably its colour is very attractive. The cooler these Roses are grown the more beautiful their colours appear, and when pruning it is well to thin them out considerably, preserving as much as possible of the younger ripened wood which gives the best trusses. Psyche, with its pretty pink-tinted buds, is a useful addition to this tribe.

The single Roses, excepting the Bilar type, never appear to me to be of much value as pot plants. Carmine Pillar is splendid in colour, but as it is so very transitory, a good specimen is rarely seen. Although not yet much employed in this way, I should say the pink rambler Euphrosyne would be a valuable addition as a pot specimen, and the newer hybrids of Wisconsin are very beautiful when grown in pyramidal shape.

Anything that enables one to break away from formality is welcome, and why should we not have the charming Banksian Roses in pots? Two or three plants of the white kind would give off almost as much fragrance as a household of Violets. For hot conservatories these Roses would be just the thing. The restricted root space, although not conducive to over-rampant growth, would compel a more abundant blooming. In many cases, pot or tub plants of these climbers are more useful by reason of their fitness for removal in the summer than plants put out in the borders. The latter in a few years claim too much of the root space for the benefit of the other occupants.

Both standards and pillars are as easy to grow as the ordinary bush form. It is best to pot up the plants early in the autumn. Do not stint them for root room, and procure selected specimens where possible. Good loam and one year-old cow manure form the best compost, two-thirds of the former to one-third of the latter, and a 1½ inch potful of a good, stable plant manure to each barrow-load of the soil. Plunge the plants outdoors, only removing them indoors in case of severe

weather. The pillar plants should be pruned rather hard the first season, about half the length of their growths being removed. When root action has commenced, the plants make better growth if placed in a cool greenhouse. Syringe them every morning to encourage new growth as much as possible. Ripen off the growth during August and September; of course, this growth will be all retained for flowering the following spring.

PHILOMEL.

NOTES FROM KEW.

PLANTS IN FLOWER IN THE ROCK GARDEN.

"H." sends us the following list of almost every plant in flower on May 12 in the rock garden at Kew, and we print it as likely to interest our readers:—

Adonis pyrenaica	Mertensia alpina
Alyssum saxatile citrinum	Muscari neglectum carneum
" " podolicum	Mycosotis dissitiflora
Anemone Halleri	Narcissus juncifolius
" " Pulsatilla	Noceca alpina
" " trifolia	Peonies
Arenaria balearica	Phlox amona
Arnebia cilioides	" canadensis
Aubretia deltoidea	" divaricata
" " Hendersoni	" lilacina
Brodiaea (Milla) uniflora	" reptans
Bryanthus empetriformis	" subulata grandiflora
Callia palustris and forms	" stellaria
Cardamine paradoxa	Polemonium reptans
Chrysanthemum virginicum	Potentilla splendens
Corydalis nobilis	Pulmonaria ottomensis alba
Cytisus kewensis	Ranunculus acemtifolius
" " Ardeii	" amplexicaulis
Daphne cneorum	Rhododendron amomum
" " oleoides	" " indicum
Dicentra eximia	Rhodothamnus Chamaecistus
" " spectabilis	Rubus arcturus
Dodecatheon Mendia alpina	Saxifraga aizoon
Doronicum columnae	" " cernua
Econocyonanthea	" glaucescens
Epidendrum muschannum	" kliei
Euphorbia myrsinites	" Sibthorpi
Geranium rivularis	Schizocodon soldanelloides
Gemma Rossi	Scilla campanulata and varieties
" " montanum	Sedum asiaticum
Globularia indicialis	Laurelia cordifolia
Helonias bullata	Trillium grandiflorum
Heus glaberrima	Trollius asiaticus
" " semipetaloensis	Valenaria pyrenaica
Kerria japonica (single and double)	Vernonia pectinata
Lathyrus vernus	Viola cuneolata and alba
Loeogonocastrium	Waldsteinia fragmoides
Matthiola coronopifolia	" trifida
Madagascar	

THE LILACS.

A noble group of the varieties of Lilac is in flower near the chief entrance from Kew Green. They are represented by well grown shrubs, and from this mass one is able to select those colours most appreciated in both single and double forms. The Lilacs are engaging much attention at the present time, and at this season no group of hardy shrubs is more precious.

LATE TULIPS.

The Late Tulips are in full beauty, and the finer kinds for colour are represented by groups to gain the full effect of their large globular flowers. T. gesneriana, elegans, Golden Eagle, marospila, and others make the gardens gay at this time.

RUBUS DELICIOUS.

A bed of this beautiful bramble from the Rocky Mountains is in full bloom near the Fern houses. Few shrubs are more graceful than this, the white flowers borne upon slender stems and exhaling a delicate fragrance.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.

LOCAL COMMITTEE AT CHISWICK, MAY 9.

The collection of Tulips growing in the Chiswick Garden was again examined on the above date by the local committee, who recommended awards of merit to seven varieties, and three marks, *i.e.*, highly commended, to seven others, all of which are given below with brief descriptions.

Vanbald.—From Messrs. Hogg & Robertson, Dublin. This belongs to the double-flowered group, and at first sight bears some resemblance to Imperator umbrosum, a variety the committee recognised by recommending three marks on a previous occasion. It is a sturdy grower, 9 inches high, and bears very double rich scarlet flowers, in which can be seen a faint suggestion of orange when fully expanded. A bed

composed entirely of this variety would have a fine effect with the mid-day sun shining upon it.

William III.—From Messrs. Hogg & Robertson. Here we have another double-flowered Tulip of more than ordinary merit, and much brighter in colour than the last-named. The large, bright orange-scarlet flowers of good build are carried on stiff stems and last a long time in good condition. Its average height is 10 inches, and when it becomes better known is sure to be planted extensively.

Rosa Mound.—From Messrs. Hogg & Robertson. The flowers of this variety are single, of good outline and medium size, bluish-white, edged with rose and beautifully stained with rose-pink on the exterior of the petals. The centre of the flower is yellow and the height varies from 7 inches to 9 inches.

Conteur de Cardinal.—From Messrs. Hogg & Robertson, Messrs. Jas. Veitch & Sons, Chelsea, and Mr. H. J. Jones, Lewisham. Although classed among the early-flowering varieties, this really belongs to the mid-season group, and one of the most distinct and beautiful it is, too. Dwarf and sturdy in habit, its exquisitely formed, medium-sized flowers, with stout petals carried on very stiff stems, are of the richest crimson-scarlet, shaded with plum colour on the exterior of the outer petals. This is one of the most effective in the Chiswick collection, and a bed of it would create a glorious effect. It is serviceable for edging beds, and although occasionally forced into bloom for conservatory decoration, it is not always a success when thus treated. It is better adapted for the outdoor garden, where it ought to be seen in greater numbers than at present.

Voltaire.—From Messrs. Hogg & Robertson. This may well be described as the best double-flowered crimson Tulip. It is sturdy in habit, 10 inches high, and its bold, very double, Peony-like flowers, with raised centres borne on substantial stems, are deep crimson in colour, almost verging on maroon. It is a week or so later than Imperator rubrum in coming into flower.

Crisis Gris de Lia.—From Messrs. Hogg & Robertson and Mr. H. J. Jones. So far as colour of flower is concerned, this is perhaps the most difficult in the extensive collection to describe accurately. The medium, beautifully-shaped flowers, with stout petals, are dull pinkish heliotrope, irregularly edged with cream-white. It is of sturdy habit, and grows 7 inches high. To see the best effect this variety is capable of producing it should be planted in bold groups on slightly raised mounds in a rather sunny position. It is a first-rate sort for forcing.

Queen of the Artherlands.—From Mr. H. J. Jones. This received three marks on the 2nd inst., and as the flowers were in such good condition on the 9th inst., and coupled with the fact that it is a recently introduced variety, the committee unanimously recommended an award of merit. Its globular flowers are large, flesh colour, passing to soft pink. It grows 9 inches high.

El Tornado.—From Mr. H. J. Jones. Like the last-named, this received three marks on the same date, and as it is of recent introduction, quite distinct and very beautiful, the committee felt justified in recommending an award of merit in this case also. It certainly deserved the honour bestowed upon it, as its large reddish-brown and orange-yellow flowers are very substantial, and remain in good condition for several weeks.

Pink Beauty.—From Mr. H. J. Jones. This falls under the same category, having received three marks on the 2nd inst. It was, however, exhibited at the Drill Hall on the 9th inst. by Messrs. Hogg & Robertson, upon which occasion it received an award of merit, and the committee thought so highly of it in the Chiswick collection as to confirm the previous day's award. Its long, exquisitely-shaped flowers are rich rose, passing to white, and the central portion of each of the three outer petals is stained flesh colour.

TEMPLE FLOWER SHOW, MAY 23, 24 AND 25.

The thirteenth great flower show of this society, held annually in the Inner Temple Gardens (Thames Embankment), will open on Wednesday next at 12.30. Judging from the large number of entries received, the show promises to be quite up to its usual standard of excellence. The following well-known amateurs are among the names of intending exhibitors: Duke of Northumberland, Nepenthes; Lord Gerard, Carnations; Lord Waulage, K.C.B., fruit and vegetables; Sir Trevor Lawrence, Bart., Orchids; Sir J. Pigott, Bart., Coriols and Palms; Sir J. Pease, Bart., fruit and vegetables; Sir F. Wigan, Bart., Orchids; Alex. Henderson M.P., fruit and vegetables; Henry Little, Orchids; R. F. Mesurier, insectivorous plants; Ludwig Mond, Orchids; Leopold de Rothschild, Water Lilies in tubs and fruit trees in pots.

THE TRADERS IN POISONS AND POISONOUS COMPOUNDS FOR TECHNICAL AND TRADE PURPOSES PROTECTION SOCIETY.

ITS AIMS AND OBJECTS.

THE CHEMISTS' MONOPOLY TO BE OPPOSED.

ANOTHER SUGGESTED AMENDMENT TO THE PHARMACY ACT, 1858.

No small amount of opposition, it appears, is being elicited by the recent action of the council of the Pharmaceutical Society of Great Britain in advancing and enforcing, by means of legal proceedings, the claim of the registered chemist and druggist, previously more or less a stranger to this particular branch of commercial enterprise, to the sole right, under the Pharmacy Act, 1858, of retailing chemical compounds (even when in sealed packages) which, although containing a certain scheduled poison or poisons, are totally unconnected with pharmacy, being intended merely for technical, trade or industrial uses, such as, to take a notable example, for agricultural and horticultural purposes.

No objection, it is explained, is offered to the pharmacist obtaining his fair share of patronage in this or in any other branch of industry opened up by the ever-growing overlapping of trading energies. It is contended, however, that

the monopoly recently set up by the council of the Pharmaceutical Society was never intended by the framers of the Act of Parliament in question, and that it can only be maintained at considerable public inconvenience, and in direct antagonism to the interest of commerce generally, inasmuch as it would confine to the counters of a few comparative strangers to the business the entire retailing of a large number of ready-prepared everyday chemical requirements hitherto easily and harmlessly procurable from a variety of responsible shopkeepers who, although admittedly not qualified to compound or dispense medicines, are surely quite as competent as any registered chemist and druggist to sell—subject to proper precautions—securely packed retail quantities of chemical compounds intended solely for technical or commercial purposes—even although such compounds may contain a poisonous ingredient or ingredients. To continue to hold otherwise, as was recently remarked by Sir Richard Harington in the much-discussed county court action, The Council of the Pharmaceutical Society v. White, would be to invite developments that "might bring the Act into ridicule." The argument, added his honour, that it is unlawful for anyone save a pharmacist to sell (say) a particular weed-killer which may contain a poison, and which he may have procured at the order of a customer, would apply equally to any retailer, not registered as a chemist, selling paint containing arsenic. If pushed to its utmost limit, the principle, according to Sir Richard, would simply mean that a paint containing arsenic can only legally be sold by a properly qualified chemist—and "it is scarcely probable that the Legislature intended such a thing." The same might be said with regard to fly-papers, arsenical soap, and a thousand other household articles that are no more dangerous when sold from a general shop than by a pharmacist.

This opinion of Sir Richard Harington seems to have been unambiguously supported by Mr. Graham Murray, Q.C., M.P., as Lord Advocate for Scotland, in January last, in an answer publicly given to Mr. Michael Cuthbertson, of Sunny Park Nurseries, Rothsay. "Where poisonous substances," observed this gentleman, speaking with the responsibility of office upon his shoulders, "are to be dealt with in the way of being dispensed pharmaceutically, it is quite right that the retailing should be done by properly qualified persons. In my view, however, preparations such as sheep dips, insecticides, weed-killers, &c., which contain poisons do not need to be dispensed, and are supplied by the manufacturer in the final form in which they are to be applied. I do not, therefore, see that any trade or profession should have a monopoly of selling them, provided proper regulations be made and precautions taken that they will not be supplied or used for any other purpose than those for which they are meant."

The initiative of Mr. Cuthbertson with the Lord Advocate for Scotland has been and is being followed by several well-known manufacturers and traders interested in the question in various other important commercial centres, with a view of interviewing and influencing other members of the Government and of Parliament generally. An organised association, also, under the title, "The Traders in Poisons and Poisonous Compounds for Technical or Trade Purposes Protection Society," with offices at 5 and 6, Clement's Inn, Strand, London, W.C., has been formed to take prompt and sustained action in the matter, and to make a strenuous and united effort to obtain legislative assistance to put an end to the monopoly now claimed for pharmacists, and to gain for the original, and certainly the most generally recognised, vendors of this particular class of specialties—*inter alia* agricultural agents, seed-men, nurserymen, corn dealers, ironmongers and hardware merchants, oil and colourmen, &c.—permission to resume the sale and retailing of chemical compounds for technical and commercial purposes, notwithstanding that such articles may contain poisonous ingredients, providing always that such sale and retailing be subject to proper and well-defined restrictions, and be limited to commodities "in original sealed packages as received from the manufacturers or wholesale dealers."

We have alluded already in THE GARDEN to two of the principal cases which have resulted in the formation of the above protection society.

The Traders in Poisons or Poisonous Compounds for Technical or Trade Purposes Protection Society, as already mentioned, have taken offices at Nos. 5 and 6, Clement's Inn, Strand, London, W.C., and the committee have appointed Mr. T. G. Dobbs secretary of the society, Mr. G. H. Richards, of 125, Southwark Street, London, S.E., hon. treasurer, and Messrs. Dobbs and Hill, of Worcester, legal advisers.

A strong representative committee has been formed, and the society is now seeking support by way of subscription or donation from all classes of traders, the objects of the association being stated shortly as follows:—

- (1) To promote and protect the interests of traders in poisons and poisonous compounds for technical or trade purposes.
- (2) To take steps as the executive committee may consider desirable for opposing legislation which is calculated to injuriously affect such traders.
- (3) To secure the removal of repressive and vexatious restrictions in regard to the sale of poisons and poisonous compounds for technical and trade purposes by traders other than pharmacists.
- (4) To promote and support by all constitutional means the passage through Parliament of any Bill or Bills comprehending the above objects.
- (5) To advise and assist members of the society in any litigation in which the general interests of the traders in poisons and poisonous compounds for technical or trade purposes are in the opinion of the executive committee injuriously affected.

A petition to Parliament has been drawn up for the signature of seed-men, nurserymen, gardeners, corn dealers, ironmongers, oil and colourmen, hardwaremen, agricultural agents, farmers, and other classes of tradesmen and users of chemical compounds containing poisons, but only intended for technical and industrial purposes, pointing out, *inter*

alia, (1) the important losses to trade generally, and (2) the very serious inconvenience to consumers and the public at large by the retailing of such articles being taken *in toto* away from the tradesmen who have been accustomed to stock such specialities and given—as a monopoly—to pharmaceutical chemists, the large majority of whom have little acquaintance with, and at best small accommodation for the storage of, goods in these lines, which are frequently of a heavy or bulky nature.

Copies of this petition, we are informed, are being sent out from the offices of the society to gentlemen in various localities who will interest themselves in the matter; and with the view of making the movement of a popular character, the minimum annual subscription for membership has been fixed at 5s., and donations are invited.

We know that Mr. G. H. Richards, of Southwark Street, has been mainly responsible for organising this society to defeat the unworthy objects of the Pharmaceutical Society.

THE NEW YORK SOCIETY OF HORTICULTURE.

A REPRESENTATIVE gathering of horticulturists took place at the New York Botanic Garden recently. Among those present were C. L. Allen, N. L. Britton, P. J. Berkmans, L. Barron, S. Butterfield, W. S. Clark, A. L. Don, J. Dallas, J. J. Donlan, J. de Wolf, D. Fowls, S. Henshaw, N. Hallock, F. M. Hexamer, A. R. McCarthy, J. N. May, W. N. Murphy, W. A. Manda, G. V. Nash, G. T. Powell, Mrs. E. S. Starr, H. A. Siebrecht, J. H. Troy, J. Thome, Mrs. J. Thorne, J. Withers, A. L. Willis, C. W. Ward, A. Wallace, James Wood.

Mr. J. Wood, of Mount Kisco, N.Y., was elected chairman, with Mr. Leonard Barron as secretary.

Dr. Hexamer, on being called upon by the chair, explained the objects of the meeting. He told of the early history of plant growing in New York, but while there was now a greater amount of money expended on plants in New York than in any other city, there was actually less interest in their growing. Hence the present movement, taking advantage of the magnificent organisation of the New York Botanic Garden. When he first came to New York, Dr. Torrey and himself were the only working botanists in the city. Messrs. Henshaw, Fowls, Siebrecht and Withers also spoke.

In Dr. Britton's set of resolutions there is provision for committees, which shall be as follows: (1) A floral committee; (2) a fruit committee; (3) a vegetable committee; (4) a forestry committee; (5) a membership committee; (6) a finance committee.

We wish the society success.

ROYAL HORTICULTURAL SOCIETY OF IRELAND.

A MEETING of the council of the above society was held at their office, 61, Dawson Street, on Tuesday last, at which were present Messrs. Edmond D'Olier (in the chair), Greenwood Pinn, M.A., Rev. P. C. Hayes, M.A., Surgeon-General Beaumont, M.D., H. Smallman, James Robertson, J.P., F. W. Enbridge, M.A., D. Ramsay, and the secretary, W. H. Bilyard. The minutes of last meeting were read, confirmed, and signed. Preliminary arrangements were made for holding the Rose show in Merrion Square on July 5. Accounts to the amount of £35 14s. 10d. were passed and authorised for payment.

HORTICULTURAL CLUB.

THE usual monthly dinner and conversation took place on Tuesday, May 8, but two events hindered the attendance from being a large one, the funeral of the late Mr. T. E. Haywood and the annual dinner of the Royal Gardeners' Orphan Fund. The meeting, however, was a very interesting one, as an address was given by M. de Graaff, of Leyden, on "Java," in which were very vivid descriptions of both the flora and fauna of that tropical island. Many questions were asked concerning the subjects brought forward, and much interest was excited by the wonderful account of the Bamboos, which grew to a height of 150 feet. The chairman, Sir J. D. T. Llewelyn, Bart., M.P., proposed a vote of thanks to M. de Graaff, which was cordially agreed to by the members present.

SWEET PEA BICENTENARY CELEBRATION.

SELDOM, if ever, has a proposed exhibition of a special flower received such general support as that of the Sweet Pea, to be held on July 20 and 21 next. At the present time, about two months ahead of the exhibition and conference, financial matters are in a most satisfactory condition, while the applications for schedules serve to indicate the widespread interest that is being taken in this popular flower and its exhibition. On Friday, the 11th inst., the executive committee met at the Horticultural Club with Mr. George Gordon, V.M.H., in the chair, when it was reported by the honorary secretary, Mr. R. Dean, V.M.H., that the whole of the north nave of the Crystal Palace would be devoted to the forthcoming exhibition, and a suitable room provided for the conference proceedings. The trade displays will form a border around the competitive exhibits, and these latter will be relieved by tables of plants. One great improvement promised is that the tables will be draped with green baize, and consequently there will be no unsightly array of boxes and other impedimenta below the flowers.

In connection with the conference arrangements were made for papers to be read as follows: "The History of the Sweet Pea," by Mr. S. P. Dicks; "The Evolution and Improvement of the Sweet Pea," by Messrs. J. Eckford and C. H. Curtis; "Classification of Sweet Peas," by Mr. W. P. Wright; "Sweet Peas in America," by Rev. W. T. Hutchins; and "Some New Points in the Cultivation and Decorative Use of the Sweet Pea," by Mr. B. Dumkin. Fifteen judges, including three ladies, were selected for the competitive exhibits, and it was decided the exhibition committee should judge the trade exhibits. Applications for space must be made to Mr. R. Dean, Ranelagh Road, Ealing, as the entire arrangements for the show are in the hands of the committee. Intending exhibitors and others will be interested to learn

that a luncheon will be provided at the Crystal Palace on July 20, tickets 5s. each, including wine; breakfast will also be provided earlier in the day at 1s. 6d. per head.

With a view to secure as large an attendance as possible the executive committee is calling a general committee meeting for four o'clock on Thursday, May 24, the second day of the Temple Show, at Anderson's Hotel, Fleet Street. It is hoped that all committeemen in town will make a special effort to attend and receive the report of the executive committee.

WOLVERHAMPTON CHRYSANTHEMUM SOCIETY.

AT a general meeting of the committee of the above society it has been decided to abandon the usual annual show for this year. Owing to the very heavy calls upon the subscribers in consequence of the present war and other calamities of a national character, it is feared that it would not receive the support which has been accorded it in the past.

It may be mentioned that another reason for the decision of the committee is the poor support which the society received last year; this we do not think was from any falling off of interest, but was no doubt owing to the general depression consequent upon the commencement of what is proving to be a protracted and costly war.

It is the intention of the committee, however, to hold the show next year, when it is hoped prospects will be brighter in every way.

BEDALE ROSE SOCIETY.

THE date of the above society's show is fixed for Thursday, July 26. Mr. Thos. Linscott is the hon. secretary.

BECKENHAM HORTICULTURAL SOCIETY.

ON Friday evening, May 11, a paper was read before the members of the above society by Mr. James Hudson, V.M.H., of Gunnersbury House Gardens, entitled "The Cultivation of Fruit Trees in Pots." The long experience and great success of Mr. Hudson as a grower made the subject of interest and value. The routine as followed at Gunnersbury was described, and one of the principal points of the paper consisted in the number of various crops each house was capable of producing. In one instance where the Peaches, Nectarines, and Plums are cleared out the third week in June, Melons follow, to be succeeded by Salvias, and again ready for pot trees, Peaches, Nectarines, Plums, Cherries, and Figs were particularly adapted to pot-culture. Apples and Pears were grown for flavour and colour. Apricots, being late and subject to canker, were not grown. Potting, watering, and temperatures were dealt with. High night temperatures were the cause of too much wood. A discussion followed, in which several members joined, and a hearty vote of thanks was accorded the lecturer.

ROYAL BOTANIC SOCIETY.

A MEETING of the Fellows of the Royal Botanic Society was held on Saturday afternoon in the society's gardens at Regent's Park, Mr. G. W. Bell presiding. The secretary drew the attention of the Fellows to a magnificent Orchid, the *Dendrobium thysiflorum*, grown in the gardens, the specimen exhibited having a delicious scent, and bearing numerous spikes of between forty and fifty flowers.

SUMMER SHOW.

Best with sunshine, the Royal Botanic Society of London held their annual summer exhibition in the gardens at Regent's Park on Wednesday, May 16. Saving for a few competitive classes, the show resolved itself into what one might see every fortnight at the Drill Hall—a number of trade exhibits. Many of the classes proved abortive, though others had two or three exhibitors.

For a collection of Orchids, Mr. Geo. Cragg, Percy Lodge, Winchmore Hill, was first, and Mr. Ludwig Mond (gardener), Mr. J. D. Clark, The Poplars, Avenue Road, Regent's Park, came second.

Mr. Thos. Abbott, The Holme, Regent's Park, led off for twenty-four blooms of stove and greenhouse plants. Mr. Abbott also won for twenty-four zonal Pelargoniums in pots, beating Messrs. A. W. Young & Co., Stevenage, Herts. In the class for six Gloxinias he was the solitary exhibitor. For six Orchid plants in flower, the honours first fell to Mr. J. D. Clark, his lot including a specimen *Cymbidium*, Cattleya, *Odontoglossum*, *Miltonia*, and *Dendrobium*. For six table decorative plants, Mr. Abbott beat Mr. Jas. Aitkins, 34, Avenue Road, Regent's Park. Both exhibits were good. In the nurserymen's class for a collection of hardy flowers, Messrs. A. W. Young & Co. won easily. This group or entry was highly satisfactory. Mr. J. Grimsthorp, Eastcote, Pinner, followed as second. Mr. L. H. Calcutt, Fairholt Road, Stoke Newington, secured the premier award in the class for a decorated table. Mr. J. Williams, 4a, Oxford Road, Ealing, came second.

For twenty-four cut Roses, Mr. R. B. Cant, of Colchester, was awarded first prize with a capital lot, including Hybrid Perpetuals, Teas, and Noisettes.

A splendid score of bush Nectarine and Peach and Cherry trees came from Messrs. T. Rivers & Son, Sawbridgeworth. The Cardinal Nectarine and Waterloo Peach were extra fine.

Messrs. Carter & Co., High Holborn, London, staged a much-admired group of their lovely Star Cinerarias. These embrace all colours, and are useful alike for cutting and greenhouse use.

Mr. Alfred Smith, Prospect House, Downley, Bucks, exhibited a large collection of fresh and beautiful Roses.

Messrs. Barr & Sons, King Street, Covent Garden, arranged a large display of Darwin Tulips, Peonies, and alpine plants, and nothing further need be said than that the collection could not be excelled.

Mr. W. E. Hartland, Patrick Street, Cork, also sent a magnificent group of early single and Darwin Tulips, remarkable for brightness of colour.

Messrs. William Paul & Son, Waltham Cross, Herts., exhibited pot and cut Roses in very large array. The collection proved a special feature of the show.

A pretty group of *Daphne encaurum* major and an improved variety of the latter came from Mr. A. Knowles, Woking, Surrey.

Messrs. J. Laing & Sons, Forest Hill, S.E., staged a very fine and varied group of stove and greenhouse flowering and foliage plants. The group seemed to include everything that one could desire for the greenhouse or warm stove, embracing Ferns, Crotons, Caladiums, Ericas, Clivias, Azaleas, &c.

Messrs. A. W. Young & Co., Stevenage, Herts, set up a collection of newly-imported Cacti, whose quaint forms and peculiarities caused interest and amusement to the visitors.

From Crawley, Sussex, Messrs. J. Creal & Sons sent a bright array of flowering tree and shrub shoots. The Pyruses, Ribes, Akelbia, and Exochordas were shown in many varieties.

OPONTOGLOSSUM CRISPUM TESSELLATUM.

This is a very pretty form; the sepals white, suffused with rose and spotted with bright purple. The petals are whiter than the sepals and covered more thickly on the basal half with smaller spottings. The lip is white, with some brown spots in the centre and a yellow suffusion on the disc. The plant was exhibited on May 8, and came from L'Horticole Coloniale, Limited, Brussels. Award of merit, Royal Horticultural Society.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editors intend to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITORS OF THE GARDEN, 30, Tavistock Street, Covent Garden, London. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

Names of plants. West Highlands. Forms of *Scilla campanulata* (the Spanish Squill).

FRUIT GARDEN.

Vine shoots injured (A. YOUNG). Our inference, after carefully examining the Vine lateral sent, is that frost is the cause of the browning or injury seen on the leafage and stems. May it not be that the end of the viney where the uninjured Muscat Grapes are is warmer than is the Black Hamburgh end, where the injury is more apparent? We do not know how you may have escaped the very severe frost, which did great harm here and over a wide extent of country at the end of April; but it is easy to understand that Vine shoots near the roof, perhaps being yet too tender to tie down, touching the glass would be scathed by so sharp a frost as that was. The house may have been fairly warm, yet close to the glass roof have been several degrees colder. These young Vine tops grown under semi-forced conditions are most susceptible to the effects of frost, which would be greatly aggravated by the moisture which would inevitably settle on the leafage so near the roof. We know that similar harm has been done in other places by frost, and that further leads to the conjecture that it is the cause of your trouble. Vine scald is of course out of the question, yet the effects are similar. We do not detect any evidence of disease, mildew or otherwise. Do content you together of scathed leaves, but save the laterals so far as you can, that they may break fresh growth and thus produce base buds to fruit next year. So far the flower bunches seem to be quite destroyed for this year, and the crop must be regarded as lost.

KITCHEN GARDEN.

Asparagus beds (S. F. G.). No doubt your old and elevated Asparagus beds are suffering from dryness. During the season of growth, Asparagus, hardy as it is, yet always makes the best growth in mild, open, showery weather. Cold east winds, frosty nights, and very dry weather do much to check growth. You will do your beds much good if you give them a thorough soaking of water, but whilst the shoots are being cut do not add any liquid manure or sewage. When growth is strong, cutting may go on till the end of June, and even later, but if the shoots be weak, it is best to allow cutting to cease about the middle of June, then giving the beds a dressing of coarse salt, and washing it in with a thorough soaking of liquid manure once a week. Of course, the salt dressing must be given once only. In your case, however, it will be well to make a fresh plantation on the level, trenching in the winter and planting next April.

Thinning Potato tops (KATHER). Although some benefit may accrue to the plants if, when several shoots come up from a planted Potato set, three or four of the weakest are pulled out, yet it would have been so much better to have done the work more properly by disbanding the eyes on the tubers before planting. Work of that kind can easily be done by the inside of an evening if, as we advise, the seed tubers be for the winter kept in small, shallow boxes, and then exposed to the light and air. In such case one or two eyes break strong, and those shoots are saved, all other eyes being cut out with the point of a small knife. But in your case, with tops coming up so thickly, and wishing to thin them, allow them to get a few inches in height. Then, standing over the plants, with a foot each

side to keep them from lifting, take hold of the weak stems low down and pull them clean out. Do not leave more than three in any case, and those the strongest.

FLOWER GARDEN.

Diseased Tulips (G. B. G.).—With regard to the enclosed letter, the cause of the diseased foliage of the Tulip sent is neither due to the soil nor to the bulb, but to the weather. The leaves have been attacked by the so-called "fire," and this is generally due to hail or frost following upon bright sunshine. All growers of late Tulips are liable to suffer in this way.

Growing Trilliums.—Will any of your readers give their experience of Trilliums other than *grandiflorum*? The latter grows magnificently with me here, two clumps close together in my rock garden having fifty-one and thirty-seven blooms respectively. I should like to try other kinds if likely to prove satisfactory.—S. T.

Sparaxis pulcherrima (F. C. WOODBRIDGE).—This plant, coming as it does from the Cape, cannot be considered thoroughly hardy in England. Now and then with a favourable season it succeeds, but when severely punished takes a long time to recover. It could not be expected to succeed well at Mundesley (Norfolk). It requires in this country good shelter from winds, rich light soil, and a sunny position. Could it not be grown in a tub or box, and brought under cover in winter? Perhaps the inquirer has not a house to put it in during the winter. He does not say what time of the year he planted it. After flowering is the best time to move; late summer or autumn is its usual time to flower in this country. We have never seen this fine plant more well and strongly grown than in a walled garden near Reading. It was in made soil, whose natural staple is a hungry gravel. The owner of the garden, who if he should see this note will recognise himself as "A. C. B.," will perhaps tell us the secret of his success.

Sea Campion.

"T. writes: 'A friend of mine has sent me a drawing of what she describes as the Sea Campion (*Silene maritima*), but I am convinced that the plant is wrongly named. Will you help me.' The plant of which a sketch is sent is quite different to the Sea Campion; it is the Thrift or Sea Pink (*Armeria vulgaris*). We give a little illustration of the *Silene* to show its character.

Garden Pinks (G. E. M.). No doubt you can purchase good varieties of garden Pinks in pots, and these may be planted out now with safety. If you get such, when you turn them out of pots remove the drainage at the bottom of each ball, but otherwise do not disturb it. The result will be if you place about each root ball in planting some fine soil, pressing down firmly, that new roots will soon be emitted and the plant become established. Pink seed can be purchased from some seedsmen of double as well as single varieties, but you must not expect to obtain of the former such good ones as are in commerce under name. Those you should purchase plant off, and once well established, all that is needful is to pinch out a few nice tops or shoots from each plant and set them as cuttings in sandy soil under a shady wall, putting a handlight over them. Do that early in July. They will soon become rooted plants.

A simple creeper screen (J. F.). It will be wise for you to be prepared to plant in the autumn good climbers, such as *Wistaria sinensis*, Clematises of the Jack-mani type, Honeysuckles, Roses, Jasmines, Aristoclimbs, and similar plants that climb and cover a trellis or fence permanently. All these things you may purchase as strong plants in pots, and if you make the soil good and deep and plant in November, the growth next year will be surprising. But to make a pretty fence or screen get the ground deeply dug and manured, then sow in a very broad, flatish shallow drill seed of Canary Creeper, scarlet climbing Nasturtium, *Convolvulus major*, and Sweet Peas, but not thickly. Add to these at every 6 feet a plant of *Ecrenocarpus scaber* or *Cobaea scandens*, and furnishing the row with tall Fea spray sticks, you will have later a most beautiful combination of flowers and a dense hedge.

Tufted Pansies (JOSEPH). This appellation was given to that section of the Pansy tribe generally known as *Violas* because they are really Pansies, but having more compact, free-flowering and tufted habits than large-flowered Pansies have. Also the term seemed needful to enable many persons to understand that they were not Violets, although all belong to the same family of *Viola*. Really the term *Viola* is a botanical one, and, as we have shown, applies as much to the Love-in-idleness of the Belds, to the great flowered Pansy, to the sweet Violet, and many other things; hence the undesirability of giving the name as a common appellation to a section of the family that has almost hybrid

origin, for the strain has grown out of *Viola cornuta*, *Viola lutea*, and various large-flowered Pansies with which these species have been inter-crossed. Practically the result has been, whilst still keeping the plants Pansies, to create a tufted race.

Bulbs enduring (CLIVE).—Certainly it is the rule to plant Hyacinths, Tulips, even Narcissi and some other bulbs very temporarily in the autumn, lifting the bulbs after the blooming is over, that the places occupied may be filled with other plants. But you may plant such things as the above in places where there is no need to lift or otherwise disturb them, with the full assurance that they will make their annual growth and bloom freely for many years. We have no great love for beds filled with Hyacinths, Tulips, or Narcissi alone, because they are essentially flat and monotonous, but clumps of Hyacinths, Daffodils, and Tulips planted here and there in borders or on grass, which come up and bloom prettily year after year, are a delight. The late section of Tulips, those that bloom in May rather than in April, seem to be the hardiest and best suited for this treatment. They have been found growing and flowering annually for many years.

Propagating Romneya Coulteri (T. R.).—This can be propagated by cuttings of the roots, but failures to increase it in this way are so frequent, that for practical purposes the raising of seedlings is the only way to obtain a stock of this beautiful plant. The principal consideration is to obtain good fresh seed (for it quickly deteriorates) and sow it, if possible, without delay. If sown in pans, ample drainage must be ensured, and a mixture of two-thirds loam to one-third well-decayed leaf-mould and a liberal sprinkling of sand will form a very suitable compost. A cold frame with extra protection in winter is just the place for the seed-pans. Germination frequently takes place in a very erratic manner, and the seed will sometimes lie for nearly a year before the young plants make their appearance. Very great care is needed in removing them from the pans and potting them into small pots, as the *Romneya* greatly resents being disturbed at the roots. To obviate this, the seeds are by some sown singly in small pots, and shifted into larger ones when necessary.

INDOOR GARDEN.

T. W. The plant referred to is probably *Guevina Avellana*, a native of Chili, in which country it forms a tree reaching a height of 40 feet. It is known as the Chilean Nut from its large, edible nut-like seeds, which are much sought after by the Chilians. These fruits afford a ready means of propagating it, but there is no record of their ripening in this country, and, in common with many other large fleshy seeds, they soon lose their vitality; hence imported seeds must be sown with as little delay as possible. It has been stated that cuttings inserted in a sandy soil in a warm house and covered with a bell-glass will root, but it is at least questionable.

GARDEN DESTROYERS.

Diseased Carnations (J. D.).—Leaves sent are very badly damaged by a severe attack of what gardeners term "spot." It is caused by wet in the soil or by an over-moist atmosphere. The plants will now grow out of it if they are alive, but we have known a bad attack to kill many.

Cabbage leaves insect infested (V.).—The beetles that are causing so much damage to your Cabbages, &c., are one of the flea beetles, so called on account of their resemblance to the domestic insect and their powers of jumping. Their scientific name is *Phyllotreta consociaria*, and there are a considerable number of different kinds which mostly attack cruciferous plants, but one species is often the cause of considerable injury to the foliage of Hops. Dusting the plants early in the morning while the dew is on them is efficacious in keeping the beetles away. Finely powdered lime, wood ashes, soot, fine road dust, or, in fact, any powder will do. They may be caught by drawing a wide strip of canvas or some similar material newly painted and nailed to a bath across the plants. The beetles will spring up on being disturbed and be caught on the paint. White paint is said to be the most effective. Syringing with soft soap and water might be of use, especially if the ground were well wetted as well as the plants, as the beetles when they jumped from the plants would fall on to the soapy ground. As this pest causes more injury to quite young plants than to older ones, it is of great importance to push them into vigorous growth as soon as possible. Judicious watering with a solution of nitrate of soda is useful in this respect. The chrysalides of this insect are formed in the soil, so it would be well after an infested crop to give a dressing of gas-lime and in digging to turn the surface-soil down well. G. S. S.

Peach leaves (F. L.). The marks and holes on the Peach leaves you sent are caused by the fungus. In some instances the dead parts of the leaves which have been killed by the fungus have not yet fallen out so as to form a hole, so that they show as a brown mark. The leaves show no sign of any injury by the tinge. G. S. S.

BOOK RECEIVED.

"Minnesota Plant Life." Report of the Geographical and Natural History Survey. Botanical Series III. By Conway MacMillan. The Pioneer Press, Saint Paul, Minnesota, 1899.

PHOTOGRAPHS AND NOTES. We shall welcome very much any photographs and notes sent to us, and hope readers who thus give practical assistance in making THE GARDEN interesting and useful will give their full names and addresses, and, necessarily for the sake of publication, but to enable us to thank them for their kind co-operation in our work.



SEA CAMPION (*SILENE MARITIMA*).

THE GARDEN.

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[MAY 26, 1900.

THE TEMPLE SHOW.

THE historic Inner Temple Gardens, for the thirteenth time, were disturbed on Wednesday last and the two following days by the annual festival of the Royal Horticultural Society, and again we witnessed an exhibition of exceeding beauty, an exhibition which is a great power for good in furthering a love for horticulture in these isles. Flower exhibitions present similar features, especially when of a general character, and the Temple shows are much like one another, instructive and interesting always, but seldom displaying any startling departure in arrangement.

Under a canvas tent, except in the large marquee, it is impossible to achieve good results in the way of grouping, but there is no excuse for the system of jamming everything together as it mere bulk were the essence of beauty.

Hardy flowers in simple bunches with plenty of space to reveal the true character of the exhibits engage more attention from the public than the choke-middle system of attempting to reproduce a mixed border in certain space of staging. Simplicity in grouping means greater interest in the individual flowers by those who pay to see them, and the way rock plants have been shown by more than one firm of recent years has led to much greater interest in this form of gardening. It was a bold thing to attempt a reproduction of a portion of rock garden under canvas, but the attempt has succeeded, promoting too, by its quaint and natural beauty, the better showing of other flowers, both of the hardy garden and the greenhouse.

The exhibition of the present week lost none of the charm we associate with such displays. There were new flowers and flowers grown in a way only seen in Britain, this land of horticulture, in which, ludicrous as it may appear, horticulture has no official recognition. There were Roses, Orchids, hardy flowers, Ferns, indoor flowers of the greenhouse and conservatory, Water Lilies in a special frame with the blue *Nymphaea stellata*, Cacti, flowering trees and shrubs, fine-leaved plants, such as *Caladiums*, conifers, and fruits and vegetables—a display surely representative of the great work of the cultivator and hybridist.

The hardy flowers were delightful. We have never witnessed a more interesting and important display, not merely of the more familiar things in the garden, but of rarer

kinds, likely in the future to brighten the rock garden and border.

We agree absolutely with those who maintain that such exhibitions as this tend greatly to promote a keen interest in an important industry, and we shall be pleased to know that a hall of horticulture is an accomplished fact, but behind all this there is a great work for the society which we think represents horticulture in this land. It is on the eve of a progressive or retrograde step, but as we have already expressed our opinion as to the policy that should be adopted, we write nothing further respecting its future on this occasion.

THE GARDEN now goes to press upon Wednesday, and we can only therefore refer to the more important features of the excellent show held this week in the Temple Gardens, but in our next issue new plants and flowers will be fully considered, with notes also upon exhibits of more than passing interest to those who cherish their gardens.

We congratulate the president, secretary, council, and superintendent of the show, and everyone connected with it, upon the excellence and freshness of the display.

A DAY AT OAKWOOD.

A VISIT to Mr. Wilson's garden at Oakwood is not only an enjoyable means of seeing many good flowers well grown, but always seems to give more practical instruction than can be obtained elsewhere. Within the first three minutes we were shown the secret of growing *Hepaticas*, a family of plants that often fail. The way is to sink stones among them so that the roots may feel their cool comfort. The white Lily also, so perverse in many gardens, Mr. Wilson says may be conquered by kindness—that is to say, by strong manuring. One of the plants most thoroughly at home is *Gaultheria procumbens*, its neat close growth of dark Box-like foliage, with many a twinkle of scarlet berry, covering several square yards with a close carpet. It is on cool, nearly level spaces in peat, with a wet ditch only 18 inches below, so that it never gets dried out. The difficult *Epigaea repens* is happy in the same kind of position both in shade and sun, but will do nothing unless it has the necessary peat and constant moisture.

Lilium giganteum luxuriates in the cool black levels half shaded by the trees of the near wood. A group that must have contained some dozens, of which three or four were forming flowered stems, is a perfect picture of brilliant and luxuriant vegetation.

One of the pools is flowery with *Aponogeton* and *Buckbean*, and a tiny sloping mead adjoining it has brilliant jewels of *Gentiana verna* starring its surface of low-toned green.

The hillside above is full of blooming shrubs, among them the largest bush of *Exochorda grandiflora*, and the best flowered we ever saw. By its side is *E. Alberti*, fuller of its pretty pale green foliage, but more sparing of flower. Double *Gorse* and *Berberis Darwini* occur in a group together and form a brilliant picture of full yellow and deep orange, while above them are many of the flowering trees of May, among them the beautiful native Bird Cherry, a tree that deserves to be planted more frequently in ornamental woodland.

Trillium grandiflorum and other varieties are in thriving patches, as also are many kinds of *Erythronium*. Wide plantings of hardy Ferns are unfolding their fronds, and a wild *Crab* in full bloom displays its white flower and graceful habit against the darker wood. In the black boggy soil below, *Primula japonica* shows evidence of serene well-being and promise of abundant bloom.

Long lines of *Gentiana* bordering a cultivated strip of Apple trees lead to a region of many-aced cool meadow generously planted with *Michaelmas Daisies* and many other good things, all holding their own well among the strong meadow grasses. At one end of this territory ponds have been hollowed and banks thrown up. These are covered with flowering bushes of already many years' growth, while the water is broadly fringed with grand young growth of *Iris Kampferi*, and amply furnished with the rare native *Villarsia nymphaeoides* and other good water plants.

THE EDITORS' TABLE.

DAFFODILS FROM CARLISLE.

MR. R. CARRUTHERS, Eden Grove, Carlisle, sends us a remarkable collection of Daffodils, all well grown. The trumpets were represented by P. R. Barr, which Mr. Carruthers says is a very free bloomer; Emperor, a strong grower and free blooming; Edward Leeds; Henry Irving, a fine flower and sturdy habit; Maximus, which is a shy bloomer at Eden Grove; Viscountess; Golden Spur; Rugilobus, a nice dwarf variety, resembling Emperor; Nams; Obvallaris, and Capax plenus, which lasts a long time and is very beautiful. The following were the representatives of the bicolor trumpets: C. W. Cowan; Dean Herbert, a very fine flower; Horsfieldi, a tall grower, early, and free blooming; Bicolor of Haworth, dwarf and free; Ada Brooke, a free bloomer; Bicolor grandis, dwarf and late, though this year it has followed the other bicolors closely.

Those of the Leeds section Mr. Carruthers sent were: Elegans, almost white; Palmerston, a free bloomer; Mme. de Graaff; Acis; Mrs. Langtry, a beautiful flower; Duchess of Brabant, very free flowering; Beatrice, Grand Duchess and Minnie Hume.

Incomparabilis section. King of the Netherlands, a very free bloomer; Butter and Eggs, free; Sir Watkin, a very fine flower; Beauty, a large flower and very free; C. J. Backhouse, Autocrat, Sulphur Phoenix, Gwyther, Frank Miles and Splendens.

In the Burbidgei section were: Falstaff, Little Dirk, Mercy Foster, very free; John Bain, also very free; Baroness Heath, Model and Vanessa.

Others were Barri Flora Wilson, Conspicuous, General Murray, rather dwarf; Nelson major, Mrs. Backhouse, and W. Backhouse, dwarf and free-flowering; Backhousei Wm. Wilks, Odorus rugulosus, Campnelloe Jonquil, Poeticus præcox grandiflorus, Triandrus albus, and Johnstonsi Queen of Spain, the two latter both grown in a wood.

SWEET-SCENTED GIANT YELLOW BORDER AURICULAS.

MESSRS. STORRIE AND STORRIE, Glencarse, Perthshire, write: "We send you herewith a few trusses of our new sweet-scented giant yellow border Auriculas which were awarded a certificate of merit in 1898, and a silver Banksian medal at the Temple show in 1899. Ever since these originated (some eighteen years ago in a solitary plant of sweet-scented yellow among a batch of ordinary border seedlings) the plants have been wintered in the open, exposed to all weathers, and, as a consequence, all weakly constitutions have been naturally eliminated. At first from 10 to 15 per cent. might succumb throughout the winter and spring, but for the last five years not 2 per cent. have given way, so that now this beautiful race is as hardy as the hardest alpine, suffering neither from zero temperatures nor the perpetual soakings and alternate frosts of the past spring periods.

"Along with the yellows we also send a few trusses of our new nondescript shades, which formed part of our exhibit at the Temple show last spring to which the medal was awarded. These in every case are seedlings from pure yellow mother plants, but their colour-range is so remarkable and distinct from the washed-out shades of the ordinary border Auriculas, that we are now distributing them as a separate group. Year by year, however, the yellows are becoming more fixed in character and the proportion of pure yellows is now nearly 70 per cent.

"At no period of their history has artificial pollination been practised, only careful selection of the finest varieties as seed-bearing parents."

[The Auriculas sent by Messrs. Storrie show all the good qualities that they claim for their flowers. The usual weakness of the border Auricula, a limpness of stem that fails to show up the flower, is here replaced by a stalk of almost columnar strength. The flowers that Messrs. Storrie modestly describe as "nondescript shades" have among them some beautiful tints of olive-brown. This strong race of border Auriculas well deserves commendation.]

DOUBLE ALPINE AURICULA.

From "A. N." Reigate, comes an alpine Auricula with double and in some cases treble corolla. Duplex forms often occur among garden Primulas of the kinds oldest in cultivation. Double Auriculas are known, but the duplex forms are less frequent in them than in Primrose and Polyanthus, though this may be accounted for by Auriculas being much less freely grown. The one sent is not of much importance as a garden flower, the doubling being enough to spoil its symmetry, and not enough to make the rather pretty full velvet

like rosette that constitutes the merit of a double Auricula.

It is indeed doubtful whether any kind of doubling is an advantage in a plant whose beauty consists in a well-coloured petal set off by a clear white or yellow eye. The colouring of this also is of the very commonest darkish dull purple.

HYBRID RHODODENDRONS FROM WISLEY.

SOME blooms of hybrid Rhododendrons of extreme beauty come from Mr. G. F. Wilson. He says of them, "Some Sikkim hardy Rhododendrons have bloomed at Oakwood. The plants were given me many years ago by Mr. Mangles as a help to the Wisley garden, then in its infancy. He had received them from a great amateur grower in Devonshire, but did not know the parentage."

Whatever may be the doubt as to the exact origin of these splendid Rhododendrons there can be none about their beauty. In colour they vary from pale blush to a full rose colour of charming quality. The individual flowers are of bell shape, widely expanded, of fine substance, and 4 inches across.

HYBRID RHODODENDRONS FROM MR. MANGLES.

FROM MR. H. MANGLES comes a beautiful truss of the same class of hybrid, in colour blush, graduating to a deeper rose at the margin. These hybrids, whose fore-runner was the now well-known R. Manglesi (a hybrid of Aucklandi and the old hardy album elegans), proving, as they do, hardy in our gardens, are an inestimable gain to horticulture.

PERNETTYA FROM HARROW WEALD.

FROM MR. KINGSMILL'S richly stored garden come some sprays of berried Pernettya, sent to show how long these pretty shrubs hold their highly ornamental fruits. The berries are of full size and of the shaded pink tinting that is one of the best colourings among the many varieties.

FLORISTS' AURICULAS FROM MR. HORNER.

IN addition to the beautiful self Auriculas of which the Rev. F. D. Horner sent blooms last week, we now receive from him a fine example of high types of the green, grey and white-edged kinds. They are, indeed, delightful things, the jewellery of horticulture.

As Mr. Horner says in a letter that accompanies them, the representations of the two main divisions of the florist's Auricula, namely, the self and the edged flowers, should be seen in company, as the calm and serene character of the one class is the best possible preparation to the eye for the gemmed and sparkling beauty of the other.

THE FUTURE OF THE ROYAL HORTICULTURAL SOCIETY.

THE chief qualities needed to avert future confusion, or worse, are patience and common sense. Fortunately, the society has yet four years between it and its centenary, and twenty years more of the lease of the Chiswick Gardens to run. These favourable conditions as to time reduce the risk of taking any irrevocable steps in haste that might have to be repented of at leisure, or the results of which might fetter the future usefulness or restrict the useful work of the society. The fact cannot be disguised that the danger of precipitate action was imminent at the last general meeting. Had the new bye-laws, covering nine foolscap pages, been taken as read, and the New Chiswick at Limpsfield, in Surrey, of some fifty acres also granted without reference to the approval of the Fellows, the whole matter might have been rushed

through in the dark at the first general meeting, and the Royal Horticultural Society been in far more embarrassing circumstances than it is to-day. Like most of its best supporters, the society has still a perfectly free hand as to the best modes of celebrating its coming centenary and prosecuting its great work in future years. As to the past, present and future work of Chiswick, but scant justice has yet been done to its great exhibition and show of fruit, flowers, plants, trees, shrubs, vegetables, indoor and out. Its great exhibition before the days of metropolitan railways used to pack Chiswick Green with the most fashionable equipages and carriages, and bring some 25,000 visitors to the gardens. There was little risk then nor now of these great shows being localised or metropolitanised. No; they were, and are, in the truest sense national, and this great and venerable society can strike home through the empire with more force and power from London or its environments than from any part of its provinces. Great exhibitions have done more for the advancement of the science and art of gardening than many suppose. The Royal Horticultural Society has owed much of its fame to its unique success on these lines. Were it to drop flower shows it would cease to gratify a national want, and so far cease to be national. Its great fruit, flower, and other shows, however, do not make it more of a merely London show, but more of a truly national one; for surely London, with its five millions to sweeten, enrich and enoble through horticulture, deserves all possible assistance from our leading horticultural society. Neither do many of us agree with you that the best gardening at Chiswick becomes more impossible every year. That soil under skilful culture can be played out or exhausted is a wholly exploded fallacy that no good gardener believes in to-day. It is totally opposed to the mellow experience of those gardeners who furnish with prodigal plenty all the best filled tables throughout the empire. And as to the air of Chiswick, it is not only good, but getting better daily.

I have known Chiswick and its environments pretty well for the last fifty years, and visited the district last autumn. Vegetation in the Royal Society's Gardens and in the villa gardens and orchards outside have shown few signs of exhausted soils or polluted air. Of all the many and latest trials and testings of seeds and plants in the Chiswick Gardens in 1899, only one case of failure is recorded that of Cauliflowers, that buttoned through the drought. Through all the other twenty-three pages the growth and produce are reported upon favourably without a whisper of exhausted earth or polluted air, and yet these two were almost the whole arguments used for a new Chiswick. Some of us cannot well forget that it is not so long ago when the society was entreated to give up Chiswick for South Kensington—surely in no sense purer, better, or equal in any way to Chiswick. As to the latter, instead of becoming more exhausted and polluted, it is becoming more sweet and pure year by year. The reduction of the area of mud through embankments, &c., all along the river, the quickening of the flow of the water, the diversion of the sewage or its purification, the compulsory consumption of smoke, the use of gas in lieu of coal, and also of electricity, for lighting and motor force, are among the most potent sanitary agents in keeping the air pure and the earth sweet for horticultural purposes.

Not a few of the Fellows of the Royal Horticultural Society doubt if the society is to become more national or imperial through becoming more rural. As all roads in the days of Roman supremacy led to Rome, so most of the shortest, surest cuts in horticulture lead to or from London. That, however, is no good reason why these horticultural improvements should remain in the metropolis; as a fact, they do not. Prudent societies make use of the metropolis as a vantage ground from which to teach and distribute the best and newest of all that is known in Nature and Art; and could the Royal do little more than teach five millions of Londoners the love and practice of gardening, its work would not only be truly noble, but also national. The difference, too, among true horticulturists are more apparent than real. The place

of gardens, old and new, is of far less moment than the work done in them. Much of the old work of seed-testing, proving new varieties, have either been superseded, or are no longer necessary. The trade does such work better than any society to-day, on broader and more trustworthy lines. There are still, however, several most useful spheres of work left to the Royal Horticultural Society. Perhaps the first in order of time and urgency is a hall or place of horticulture, and suitable offices for all its officers for all its meetings. The second scheme may surely be towards the establishment of a horticultural college, on a cheap, popular, yet thoroughly practical and scientific basis, suitable to the needs and satisfying the legitimate wants of the daughters and sons of gardeners, foresters, nurserymen, florists, &c. And then there should be provided somewhere the best available collection of fruit, flowers, shrubs, trees, vegetables on different soils, dressed with different manures, worked on different and distinct stocks, for careful scrutiny at all times by the Fellows and their friends. These vital points secured, the testing of seeds, novelties, the distribution of plants, seeds and fruits at reduced prices among the Fellows might be abolished. A firm in Lincolnshire, that tested and tried 600 varieties of Peas, old and new, in 1899 makes a generous offer to the society on these terms: "Should the society decide to remain at Chiswick and would like to increase the utility of the trials, I shall be very pleased to give up a portion of our ground for the purpose, carrying out the work in connection with the trials, and entertain the committee when on their visits of inspection."

Mr. Arthur Sutton has also told all readers of THE GARDEN (p. 352) how his firm tested 684 rows of Peas, and had 1227 Potatoes and other vegetables in proportion last year. Most of our great seedsmen, colleges, county councils, societies and associations are following or leading on similar lines, and the question may pertinently be asked whether such matters had not be better left in the future in the stronger, safer hands of our seed merchants. Under present conditions it is extremely doubtful whether the some thousand pounds spent annually by the society on the testing of seeds and the certifying of new and improved varieties is a profitable investment for modern horticulture. No one can doubt that hundreds are doing the same work as well, while our best seeds have reached almost perfect purity and a growing percentage of some 95 per cent. A revision of work for the society is probably its most pressing need. The battle of roots, stocks, soils, manures, food, flavours, colours, culture, pests, sprayings, health and cleanliness, fertility among fruits, demands immediate skill and care. By taking one or more vital concerns horticultural at a time, the whole may be reached and dealt with in succession. But to rush new gardens of fifty acres, twenty-three miles from London, at an estimated cost of £40,000, an exhibition hall for another £40,000, and a horticultural college for £20,000, seems a likely course to invite failure or spell ruin.

Will the council or anyone say what is the money value of the asset of twenty years' lease of Chiswick Gardens yet to run?

A PRACTICAL FELLOW.

AMERICAN NOTES.

THE OHAHEITE ORANGE.

At this writing (the last of January) no plants in my window are so beautiful as two Orange trees. They are bearing each two and three large Oranges, fully ripe, and quite the size of the little sweet Oranges we buy at market, and I know that they are as good. If all the fruits the plants would have borne had been allowed to mature, the plants could not have lived, I am sure, for every blossom had its tiny green fruit that grew and grew until nearly the size of a Shell-bark Hickory nut, when I picked them off, leaving only two or three, according to the size of the plant. The ripe Oranges are so beautiful and the green leaves, and so much admired that I have let them stay, though the flower-buds are putting out for the next crop. I

have had these plants four years, getting in the first place only mailing size, and in this time have had two fine crops of Oranges, besides all the flowers that they could possibly bear. Our fruitage the second year was bitten, when green, by chipmunks and destroyed, the plants being on the lawn.

CARE OF THE PLANT.

A word about the care of the plant. If close watch is not given, the scale louse, so tiny, and as to colour, almost invisible, will oftentimes hurt the plant. These insects infest the leaves, chiefly underneath, and the body of the plant, and will hide where one would least look. They are easily removed with a wooden toothpick or the finger nail. A florist once told us to use fir tree oil, but we have not tried it. We find by frequently sponging the leaves with pure water, above and underneath, we are not much troubled with them, and the plants are better for the bath, though care should be taken not to come against the tiny buds, often just forming. Their crowning glory is when they are covered with flowers as large as the Southern Orange blossoms and as fragrant, which is generally twice a year. HILEX KERN, in *Vick's Illustrated Magazine*.

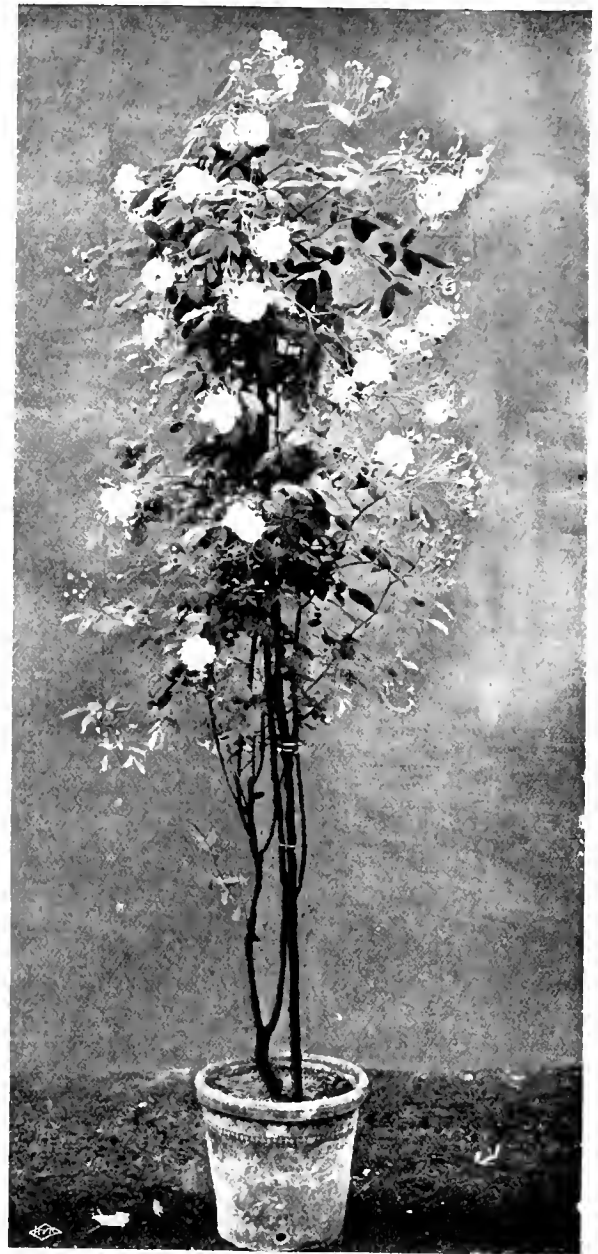
NOTES OF THE WEEK.

National Rose Society.

We have just received the annual report of this society which will hold three exhibitions this year. The southern show will be held at Salisbury, in connection with the Wilts Horticultural Society, on Wednesday, June 27; the metropolitan exhibition at the Crystal Palace, on Saturday, July 7; and the northern show in the Botanic Gardens at Birmingham, in conjunction with the Birmingham Botanical and Horticultural Society, on Thursday, July 19. At the southern exhibition a conference will take place, dealing with the interesting question as to the best methods of employing Roses for garden decoration, and a paper upon the subject will be read by Miss Jekyll.

Cherry season. Good quantities of finely-coloured foreign fruits are now in the market. They are being sold as low as 5d. per lb. to trade buyers, though best fruit is worth 1s. Before another week is over, extensive shipments of the Spanish, and particularly French, fruits will be made. French agents are also pouring large quantities of green Gooseberries into our markets. The home crop will be plentiful, we understand.

Sandersonia aurantiaca.—With all eyes directed towards South Africa the plants of that region are just now of especial interest. This Sandersonia is one of them, and being so distinct and pretty it is greatly admired. It belongs to the order Liliaceae, and forms a small, peculiarly forked tuber, exactly like a miniature *Gloriosa superba*, which in style of growth it much resembles. The slender twining stems, which reach a height of 3 feet to 5 feet, are clothed with bright green lanceolate leaves, thin in texture. The flowers, which are borne singly on long slender stalks from the axils of the leaves on the upper parts of the shoots, are broadly urn-shaped and of a bright orange-yellow colour. Though not very thick in substance they remain fresh for a considerable period. Some time after flowering this Sandersonia



HYBRID ROSE JERSEY BEAUTY (WICHURIANA) [PERLE DES JARDINS].
(Shown by Messrs. Wm. Paul and Son, Waltham Cross, at the Temple Show.)

goes completely to rest, and passes the winter in a dormant state, when it should be kept dry, but not parched up. Early in the new year shake clear of the old soil and repot in a mixture of loam, leaf-mould, and sand. It is essentially a greenhouse subject. T.

Rose Jersey Beauty. Roses that make two or three yards of growth in a season, with a creeping Ivy-like habit, and that produce sprays of buds little less in beauty than a Tea Rose, must surely be welcome to all who have space for their accommodation. For mounds, banks, covering stumps of trees, twining on rustic bridges, and a dozen other similar positions these Roses would be most useful. Rose Jersey Beauty is charming, and if the other kinds recently introduced turn out as satisfactory, I predict for them considerable popularity. The buds of Jersey Beauty are a soft creamy yellow shade; they are about 1 inch in depth and produced in twos, threes, and fours. From the summer growths, the stems yielding the blossom the following year are about 8 inches to 10 inches in length, so that for cutting they will be

distinctly valuable. A bouquet of crimson Roses with buds of Jersey Beauty interspersed would be very beautiful. The expanded flower is quite single, some 3 inches in diameter, reminding one of a Cherokee Rose with just a tinge of cream colour. Jersey Beauty is a hybrid between Rosa Wichmiana and the Tea Rose Perle des Jardins. In addition to the colour of the buds, it exhibits traces of its hybrid origin in the new growths, which are almost as red as a Tea Rose. For the pillars of a lofty conservatory this and the other hybrids would make elegant subjects to plant, and, naturally, the single blossoms would remain longer on the plants under these conditions, protected as they would be from strong currents of air. Budded on tall stems they would form excellent weeping Roses, and if allowed to do so, the growths, after touching the ground, would run about in their natural way, thus forming a unique feature in the rosery or upon the lawn.—P.

Pyrus salicifolia.—This is, perhaps, the best of the true Pears which are cultivated for ornament, more especially for small gardens, as it is a compact-growing and well-balanced tree, and does not attain an unwieldy size or become unsightly with age. It is a native of the Levant, and forms a tree about 15 feet or 20 feet high, with close-growing, short-jointed wood, which can easily be pruned to any desired shape. It is seen to the best advantage when trained as a small standard, the lower branches then becoming pendulous by their own weight, and partly hiding the stem. The small white flowers are borne in corymbs, and when first expanded have conspicuous red anthers. But the chief beauty of this *Pyrus* lies in its leaves, which are highly ornamental during the whole of

the time they are on the plant. They are from 2 inches to 3 inches long, and covered on both surfaces with a dense, silky white tomentum, giving the tree a striking silvery appearance, especially when ruffled by the wind. But while it is worthy of a place in the list of first-rate ornamental trees, its fruit is of no account, being small, woody, and gritty, and having that peculiar dryness which is usually associated with a very bad Pear. L.

Riviera notes. Red Roses in their season are so plentiful as well as beautiful in England, that one is shy at recommending a new-comer, but all who wish for a free-flowering and brilliant red semi-climbing garden Rose will find that Gussan Töplitz fulfils their desire. Being evidently a seedling of the old Gloire des Rosomanes, it is in flower as long as the weather will permit, and it is infinitely better in every way than that excellent old Rose. Paul's Pink Rover in this climate produces magnificent blooms, shading from deep pink to white at the edge. Having never seen this Rose in England I never appreciated its beauty before, but I think that one must have heard of it if its beauty be as remarkable at home. The old proverb, "Everything comes to him who waits," has been well exemplified in the case of our Sweet Peas which were sown very early last September and just failed to flower before the dull cold days of last December checked them. After months of waiting, and after reaching an almost impossible height, they suddenly burst into flower in April, and have well repaid all the delay. Sprays of four and even five flowers are not uncommon, and every bloom is of unusual size and brilliancy of colour. If sprays of five or six

flowers can be produced commonly, the Sweet Pea will be indeed the queen of annual hardy climbers. Lemoine's newer hybrid *Denzias* are still in great beauty; the freedom of *D. Lemoine* and the Apple-blossom colouring of *D. discolor purpurascens* are both great gains, whether grown in pots under glass or in the open shrubbery. The late *gesneriana* Tulips have shown very curiously the severe change in soil and climate from Yorkshire, for many flowers have "broken," as the florists say, and show a white ground with heavy rose-red striping, while more are just like the York and Lancaster Rose, one middle of small stripes, far less ornamental than the pure and solid colouring of the type. I noticed that *Tulipa kaufmanniana* was favourably mentioned in *The Garden* the other day. Here it does well in a cool situation, but does not approach *Tulipa saxatilis* in beauty or in earliness of flowering. E. H. Woodville, *Nie.*

Fruit from Western Australia. The Agricultural Department of Western Australia has during the past season made a series of experimental shipments of colonial products to London. Three consignments of fruit, composed of Grapes, Apples and Pears, arrived, and were reported upon very favourably. The number

of cases was small, as they were sent merely as samples of the fruit that was being grown, and to test the best means of packing and shipment. Unfortunately, the Grapes and Pears in each case suffered too much from the voyage to be of any value. The Apples, however, both for appearance and flavour, were found to be of excellent quality, bearing comparison with the best imported from Australia and Tasmania in both respects.

The flora of Russia.—An attempt is to be made to compile and publish a detailed account of the flora of the Russian Empire. The work will be divided into four parts, relating respectively to European Russia, Siberia, Turkestan, and the Caucasus with the Crimea. The Emperor has entrusted the directions to M. C. J. Korgiushky, of the St. Petersburg Academy, who will commence with the examination of the flora of Siberia, in aid of which a grant is to be made of 21,400 roubles.

Primula glutinosa.—Would it be of any interest to the readers of *THE GARDEN* to know that I have some plants of *Primula glutinosa* which are thriving well, two of which have flowered this year? I brought the plants from the top of the Tognazza at San Martino in 1897, and have grown them low down on a rockery at the foot of a stone in loam and peat, where they are practically shaded from the sun. Some grown in pure peat thrive well, but have not yet flowered. I have also a small plant of *Petrocallis pyrenaica* in full flower which I got in the Tyrol. *Epigaea repens* has also blossomed this year for the first time.—F. A. PIERRE, *Countessells House, Aberdareshire.*

Gardeners' Royal Benevolent Institution.—The annual dinner of this institution took place on Friday week last at the Hotel Metropole, and was a great success. The Duke of Portland, K.G., was in the chair, and the Dean of Rochester was present. In replying to the toast of "Horticulture," the Dean, although 80 years of age, made one of the brightest after-dinner speeches it has been our pleasure to listen to. We were pleased to see the Dean so strong and well. There was a record subscription of £2000. We are pleased also to know that H.R.H. the Prince of Wales has graciously consented to succeed the late Duke of Westminster as president of the institution, and that H.R.H. the Princess of Wales and their Royal Highnesses the Duke and Duchess of York have become patrons.

The Alexandra Palace and Park. The Hornsey District Council recently increased their contribution of £30,000 to £35,000 towards the acquisition of the Alexandra Palace and Park. Mr. Burt stated that he hoped in a few weeks to announce that the whole £150,000 had been raised. He was not at liberty to give the names of the authorities which would make up the amount now required, but it was hoped that Wood Green would give more than the £25,000 promised, and that Tottenham would increase their donation from £5000 to £11,000. The amount now promised is £128,000.

Daffodils and the season. I never remember seeing these bloom so freely as this season. In our own garden, regardless of position, they have been one sheet of bloom, every kind giving its full show. On some patches of incomparabilis growing in open spots in the shrub border I counted fifty to sixty flowers either open or in bud. When grown in this way they are charming to brighten up shrub beds, as they show off well against the green shrubs. Many kinds thrive wonderfully in these positions. The double form of this does well planted in the grass. It is astonishing how the season of any kind may be prolonged by planting in various positions. In some instances I have had them so extended a month. In our garden we have them grown in various positions and soils; some on dry, thin soil, others in the damp, by margins of lakes, and all have bloomed abundantly. I am induced to think the past dry season was helpful in thoroughly ripening the bulbs. As I observed, the common pseudo-Narcissi in the field have bloomed equally freely. Some of the finer kinds we take up out of the border annually, replanting them again in autumn, and these have been most satisfactory.—J. CROOK.



HYBRID CLEMATIS 'COQUET' A. COUENNE, GOSLOW.
(Shown by Messrs. J. Veitch and Son, at Woking, at the Temple Show.)

Sport from *Pyrus japonica*.—Mr. H. Morgan, Coddington, Newark, sends us a very pretty sport from this fine shrub; its flowers are very charming in colour, a soft good pink, not washed out.

Trillium and Apennine Wind-flower.—I wish you could see my Trillium with *Anemone apennina* round it, and close to *Adiantum pedatum* just opening its fronds from a strong tuft.

—S. TAYLOR, *Harethorpe, Uxbridge.*

The American Rose Society will hold its first summer exhibition in the Winter Garden of the Eden Musée, New York City, June 12, 13 and 14, 1900. The secretary is Mr. Leonard Barron, 136, Liberty Street, New York, and treasurer, Mr. J. N. May, Summit, N.J.

Photinia serrulata.—This subject, now clothed in its spring foliage of amber-brown, is a handsome sight when interspersed with other evergreen and flowering shrubs, few of which, with the exception of some of the earliest Rhododendrons, Camellias and Forsythias, have as yet attained their blossoming season. This *Photinia*, though styled the Chinese Hawthorn, does not depend for its attractiveness on its corymbs of minute white flowers, but upon its glossy, Laurel-like leafage, that in its earlier stages assumes a tint of tender maroon-yellow. Large bushes, 10 feet to 20 feet in height, are effective objects in south-western shrubberies during the months of March and April. —S. W. F.

Tulips in masses.—I have just seen a series of large flower beds in which early Tulips are planted, some having the varieties much mixed, some having but two varieties, and some being planted with one variety only. But it was so evident that the free combination of some half a dozen varieties, such as Proserpine, White Pottelbakker, Joost van Vondel, Boule d'Or, and Vermilion Brilliant, with here and there taller flowers of the fine Keizerskroon standing above the rest, made by far the most beautiful show, especially having various coloured Polyanthus for a base. Beautiful as all these Tulips are, yet when planted in single varieties in large beds they have a flat, monotonous appearance, but, planted in mixed form, they are really lovely. Even a few good Daffodils intermixed greatly help to give charm to the combination. —D.

Thunbergia (*Hexacentris*) mysorensis. In the charming old gardens at Belton House, Earl Brownlow's Lincolnshire seat, there are to be found many plants not in general cultivation, and which have been from time to time introduced by members of the family who have travelled. One of the most striking of these plants is a magnificent specimen of *Thunbergia* (*Hexacentris*) *mysorensis* almost covering the roof of a rather low structure kept apparently at stove heat. The numerous pendent racemes had already produced an enormous number of the curious and showy flowers (which reminded one somewhat of the giant forms of *Mimulus*), purple, red, and yellow in colour; and though the individual flowers do not last long, the plant is in full beauty for some months, as new flowers open as fast as the older ones fall, and at the time of my visit most of the racemes had cast the flowers for a length of from 12 inches to 18 inches, while the points were still lengthening and producing more buds. Looking at this plant as growing at Belton, one could not help thinking that its beauties claim for it a far more extended use where there are roofs to be covered in warm houses. It would prove an excellent shade plant for a Eucharis house or for the warmer section of Palms. The plant appeared thoroughly healthy and clean, and its bright green, not over large, palmate leaves have also a decorative effect. —J. C. T.

Clematis alpina. This is one of the first of the more ornamental Clematites to flower, and is worthy of greater attention than it receives. It is a small climber about 6 feet or 8 feet high, and has a pretty effect when covered with its bright flowers. There are two distinct forms of it, one of which—also known under the names of *Atragene alpina* and *A. austriaca*—has flowers of a pale bluish tint, the other, sometimes grown as *A. sibirica*, having

rather smaller flowers of a pure white. Between these two extreme forms there are several others which combine the colours of the two in a greater or less degree. The flowers open in April and May and are about 2 inches in diameter, each consisting of four long triangular-shaped pointed petals, which are rather thin in texture. *C. alpina* will probably prove hardy in most parts of this country in the open, and certainly anywhere on a wall, but wherever planted it should have a position fully exposed to the sun to thoroughly ripen the wood, as it is one of those Clematites which flower on the old wood. Whatever pruning it receives should be done immediately after flowering to allow time for the young growths to become thoroughly ripened before the winter. This is a species which would probably repay the attention of the hybridist, as it possesses many of the characters considered requisite in a parent plant. —L.

The Commons Act, 1899.—A circular has been sent from the Local Government Board to county councils enclosing a copy of another circular which they have addressed to parish councils

1888—*l.c.*, as expenses for general county purposes out of the county fund."

Gesnera cardinalis.—This showy Gesnerad, now in bloom, is of a very accommodating nature, for, according to the treatment given, it may be had in flower at different times of the year. It forms a firm, solid tuber, from which is pushed up a stout stem that reaches a height of 1 foot or nearly so. The large, oppositely-arranged leaves are of a bright green, and so thickly clothed with hairs as to give them quite a velvety appearance. This covering of hairs is not limited to the leaves, but extends also to the stems and even to the blossoms, which are tubular in shape, 2 inches long, and of a bright vermilion tint. These blossoms are borne in a terminal head, from which a succession is kept up for some time. The usual habit of this *Gesnera* is to commence growing in the spring, flower in May and June, go to rest in the autumn, and pass the winter in a dormant state; but these seasons can be varied by giving it a longer or shorter period of rest. When potted previous to starting it should



AUSTRALIAN PITCHER PLANT (*CEPHALOTUS FOLLICULARIS*).

(Shown by Mr. Measures, Cambridge Lodge, Camberwell, at the Temple Show.)

respecting certain provisions of the Commons Act, 1899 (62 and 63 Vict., c. 30), with particular reference to the power conferred on county councils by section 17 (2) of that Act of investing parish councils with powers under the Open Spaces Act, 1877 to 1890, and stating: "The Board may at the same time direct attention to sub-section (4) of section 17 of the Act of 1899, which provides that all the powers exercisable by the London County Council and other local authorities under the Open Spaces Acts, 1877 to 1890, may also be exercised by the county council of any administrative county. The effect of this enactment is to confer on county councils throughout the country the same facilities for acquiring and maintaining and regulating open spaces and burial grounds available for the use of the public for exercise and recreation as have hitherto been exercisable under the Acts in question by the London County Council and the sanitary authorities in London, and by town councils and other urban and rural district councils in other parts of the country. The same sub-section provides that any expenses incurred by a county council under these Acts are to be defrayed as expenses incurred under the Local Government Act,

be shaken clear of the old soil and repotted in fairly light compost, say equal parts of loam and leaf mould with a little sand. —T.

The glories of May.—This is a season of exceptional floral affluence, and never have I seen the Blackthorn and the Gorse—beloved of Linnaeus—so commanding in their strongly-contrasted splendour as they are at present along the sunny shores of this picturesque peninsular parish. The Primrose is also splendidly luxuriant, a golden blaze through all the woods that overhang the sea, to be followed ere long by the memorably beautiful hyacinthine haze. In our gardens we have the Narcissus and Auricula, each of these in beauty, and in fragrance most nobly endowed. Conspicuous among the former are the graceful Star Narcissi; *N. Polyanthus* or *Tazetta*, a native of Greece, of which the heroic Homer and the deeply-reflective Sophocles sang; *N. Empress*, *N. Horsfieldi*, and *N. grandis*, representatives of the marvellously beautiful bicolor varieties; Emperor, a veritable Daffodil king, whose aspect among his contemporaries is dignity itself; *Narcissus poeticus* and its exquisite derivatives, living pictures of grace, diffusing an odour through the cool recesses

of our gardens, at once powerful and refined. These are the latest, and not the least lovely, of this gracious family of intensely fragrant and most fascinating flowers, blooming almost upon the confines of the Lily and the Rose. Supremely attractive during this season of Nature's resurrection, when olden forms of beauty seem to become new, are the flowering trees, especially the Almond, with its lustrous masses of pink blossom, the central glory of my garden, where it blossoms (though transplanted from sunny Hertfordshire) with the greatest profusion. It is at present equally floriferous at Logan House, the beautiful residence of Mr. Kenneth McDonall, the chief proprietor in this parish, who is devoted to the study and cultivation of arboriculture. Considering its wonderful success in this region, it is astonishing that the Almond tree is not more widely cultivated in other parts of Scotland. Here it forms and fully develops without absolutely ripening its fruit. The dwarf Almond also (*Amygdalus nana*) is very ornamental, though it only grows to a height of 3½ feet. Very luxuriant likewise are the Early Rivers, Black Eagle, and May Duke Cherries, and the Czar and Victoria Plums, which look from a distance as if they had been covered with a shower of snow. The only flowering tree with which I have been unsuccessful is the double-flowering Peach, but I am not greatly surprised at

this when I learn from that very reliable work, the "English Flower Garden," that even in the south of England, where Magnolias and Camellias bloom in the open air, it drags out for the most part a miserable existence, as if it were out of correspondence with its environment (to use the language of Herbert Spencer), as undoubtedly it is. Several of my earliest Apple trees, including the Irish Peach, the Beauty of Waltham, and the uniquely beautiful and productive Duchess of Oldenburg, are already unfolding their odorous blossoms in the opening week of May. DAVID R. WILLIAMSON, *Manse of Kirkcaldy, Strathgairn.*

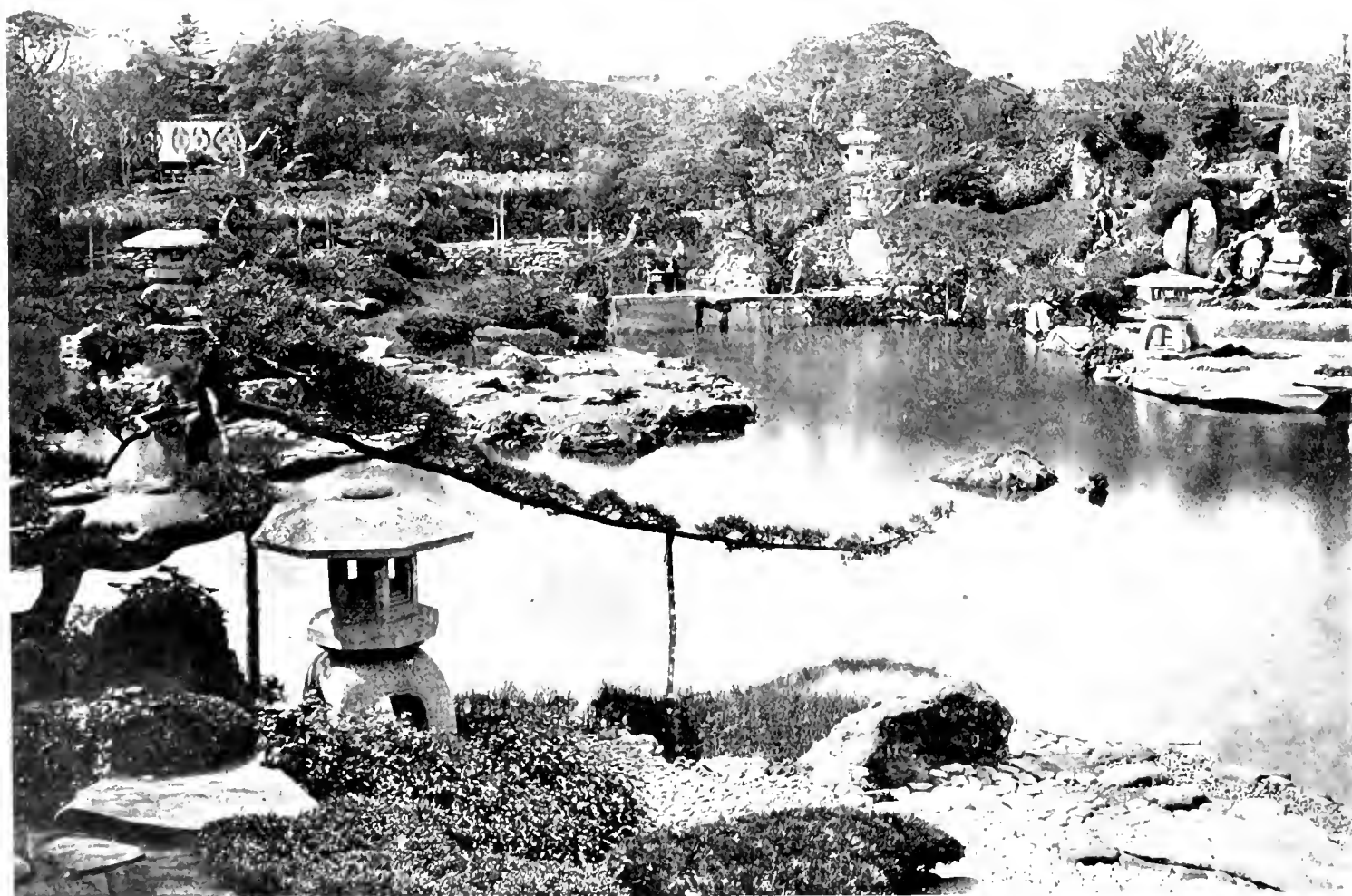
Rhododendron forsterianum.— This is one of the finest of all the white-flowered greenhouse Rhododendrons, of which we have now such a number in our gardens. It was raised some years ago by Mr. Otto Forster, of Lehenhof, in Austria, to whom we owe so many valuable plants. The parents were the Moulmein *R. veitchianum* and *R. Edgworthii* from the Himalayas, the first-named being the seed-bearer. A particularly striking feature of *R. forsterianum* is the large size of its blossoms, which cause it to stand out in a marked manner from its associates. These flowers, which are pure white except a yellowish stain at the base of the upper segments, have the edges of the petals prettily crisped, but in this respect there is a certain amount of

individual difference, probably owing to other cultivators having raised plants from the same cross, and *R. veitchianum* being extremely variable in its crimping, the progeny would differ more or less. Of very free growth, *R. forsterianum* is rather liable to run up tall, to obviate which as far as possible it should be freely stopped during its earlier stages. — H. P.

ROCK AND POOL GARDENS, JAPANESE AND ENGLISH.

It is strange to see the likeness, and yet complete unlikeness, of two ways of treating the same subject, as shown in our illustrations. In the Japanese garden, a kind of informal and, in a way, natural laying out that yet expresses studied and even paraded artificiality; in the English, a bit of wild Nature brought into the garden and tamed into harmony with other near garden ground.

Both, in different ways, express human pleasure in certain arrangements of rock and pool and flowering plant and bush. But in our English gardens we have the great advantage of not being fettered by restriction of horticultural convention, for the gardens of Japan



ARTIFICIAL ROCK AND POOL GARDEN, JAPAN.

are laid out by rule, and the initiated recognise some two or three distinct styles governed by arbitrary laws that may not be broken.

It is indeed well for us that we may form and plant our gardens, following beauty for beauty's sake, and putting into them the quality of personal conviction, which makes all the difference between a garden of living beauty and interest and a mere place where so many plants and shrubs are grown.

THE ROSE GARDEN.

FORCING ROSES UNDER GLASS.

HOUSES for forcing Roses should be built as light and airy as possible and have a southern aspect, the houses running east and west. Some years ago it was thought by most all practical Rose growers that good Roses could only be grown in three-quarter span houses, but experience has taught me that equally as good Roses can be grown in even-span houses—which model of house I have adopted for the future on account of its simplicity in handling and construction.

Soil, the principal thing in Rose growing, should be procured, if possible, in autumn, and that from an old pasture that has never been cultivated I find best suited. Set up your compost heap just before winter sets in of three parts of good sod soil and one part cow manure, not too high, so that the frost has a good chance to penetrate. I generally make mine 3 feet to 4 feet high. Let it remain without any covering, and as soon as the weather is fit in spring and the soil not too wet, turn the heap over and let it remain, say a month or six weeks, when it should have another turning, and it will then be ready for use in the forcing house. When wooden benches are used for forcing, 5 inches in depth will be sufficient. Fill up your benches and give a sprinkling of fine ground bone or wood ashes, but be careful not to use too much—one bushel to a 100-foot house is plenty. Then turn the whole soil, mixing the bone and soil thoroughly with your hand, picking out all stones and rough material. Your bench is now ready for planting, which should be done, if possible, in the months of May to July to obtain the best results.

Select good healthy plants and set them on your benches about 15 inches apart either way, care being taken that the soil in which you plant is neither too wet nor too dry, and that the young plants have a thorough watering before being removed from their pots. On no account allow your young plants to flag on a hot summer's day. When the whole house is planted give a good watering and clean the whole house, under the benches as well as the walks, giving the walks and under the benches a good sprinkling as well, as it tends to keep down the heat, giving a better temperature for Rose growing.

If solid beds are used instead of benches they should be carefully prepared with lots of drainage (I generally use about 15 inches of broken stone in the bottom) and the same process gone through with the soil as described above, with the exception that the depth of soil should be increased to 6 inches or 7 inches.

Now, the house being planted, our care begins. The young plants must be carefully watched. Do not allow the weeds, which will appear a couple of weeks after planting, to get too large. The plants should have a careful syringing about twice a day, and the soil kept in a good, moist way (but not water-soaked), aphids and other insects carefully looked after, and as much air as possible given from early morning until after sunset, when the ventilators should be about half closed down. Try to keep your Rose house temperature in summer one or two degrees lower than the outside temperature, which can be done by using the hose judiciously under the benches and walks. As the Roses begin to grow they need staking. I find



ARTIFICIAL ROCK AND POOL GARDEN, ENGLAND.

No. 8 galvanised wire makes a neat and durable stake. All new growths should be carefully tied and the buds which will appear about this time picked off.

Do not allow your plants to bloom before they have obtained a proper size, which, with good treatment, will be about two months after planting. Mildew, one of the worst enemies of the Rose in summer and autumn, should be carefully watched, and at the least appearance the plants should be dusted with flowers of sulphur, which should be kept on the plants two or three days, and the temperature on sunny days be run up to 85° and 90°. Syringing stops until the sulphur is to be removed from the plants. I cannot lay too great a stress upon the importance of ventilating. Keep as even a temperature as possible. Do not allow your houses to run away up in the 80's before you give air, but start early in the morning, and as your thermometer rises let your ventilators rise as well, for nothing is more hurtful to a Rose than sudden changes, which you are sure to get when you let your ventilators remain closed too long and then open at once to their fullest capacity.

As we come toward autumn, say September to November, the most critical time of Rose growing has arrived. The changes in the atmosphere between night and day are oftentimes so great that at this time our checks most occur. The night temperature in a Rose house should never be allowed to drop below 60°, and even 65° will do no damage at this time of the year. Although it seems absurd, I invariably start firing on a very moderate scale in September. As the weather grows colder of course your fire-heat has to be increased to keep your houses up to the required temperature, which should be from 56° to 58° at night for all Tea Roses, and from 58° to 62° for Hybrid Teas, with the exception of Meteor, which requires a night temperature of 65° to 70°, with the corresponding increase of 10° in the day-time. During bright, sunny weather in late autumn and winter begin ventilating when your thermometer reaches 66° and increase incl. by inch as your thermometer rises.

Watering at this time should be most carefully attended to. Do not over-water and do not let your plants get too dry. I know a good many of my

colleagues advocate keeping Roses on the dry side, but it has been my experience that eel-worms and other diseases have invariably appeared only when I have kept my houses on the dry side, and it is my belief that more Roses have been spoiled by keeping them too dry when we have to fire pretty heavily than by keeping them too wet. But the safest to me is a middle-road policy. Syringe, if possible, on every bright, sunny day, but be careful to withhold the water on dull days in autumn and winter.

About the first week in January feeding of the Roses can begin. I use liquid manure made partly out of horse, cow, and sheep manure, made about the strength of strong tea, of which I give my Roses a liberal drink about every fortnight, using no mulch until the sun gets strong, about April, when I give them in addition a light mulch of spent horse manure from old Mushroom beds.

For aphids or green-fly the best preventive I have found is tobacco in its various ways. Fumigation is not safe when the plants are in bloom, excepting for a few varieties, and it should only be used before the plants begin to bloom. Tobacco stems spread under the benches or hung up along the walks will keep fly down, but the old should be removed and new stems substituted every two or three weeks, for this mode is only a preventive, and the fly once there is hard to remove, unless radical measures are adopted, which generally means the loss of a crop of blooms.

If you expect success in forcing Roses do not forget that the Rose wants to be watched from its infancy just as much as a child in its infancy. Careful training and watching will make a child grow up as a useful member, and careful watching of the smallest details will make a Rose bush under glass tend to give profit and enjoyment to thousands.

To those of my readers who are not familiar with forcing Roses I give below a list of Tea and Hybrid Tea Roses which can be successfully forced in this latitude:

Teas. Bride, Bridesmaid, Mrs. Pierpont Morgan, Mme. Cusin, Mme. Hoste, Mme. de Watterville, Maid of Honour, Ma Capucine, Perle des Jardins, Sunset, Golden Gate, Bon Silence, Safrano, Niphotos, Mme. Chateaux, and Papa Gontier.

Hybrid Teas, American Beauty, American Belle, Mme. Caroline Testout, Kaiserin Augusta Victoria, Meteor, Souv. de Wootton, Pres. Carnot, La France, Duchess of Albany, Mme. Augusta Guinoisseau, Admiral Dewey, Mrs. Robert Garrett and Liberty. ERNST G. ASMES, in *Bulletin of the American Rose Society*.

BRIAR ROSES IN GREENHOUSE AND GARDEN.

CONSIDERING the delightful range of colour available, one is surprised that these pretty Roses are not more frequently met with as pot plants for conservatory decoration. The single forms naturally have a very transitory existence, but the protection of a glass structure enables one to enjoy their beauty much longer than from outdoor-grown plants. It is a pleasure to watch the unfolding of the pretty buds of *Rosa lutea* and its exquisite copper-coloured variety *R. lutea bicolor*. The double kinds, Harrisoni and Persian Yellow, are so intense in colour, that for this reason alone they are worth growing in this way. The new continental variety, Soleil d'Or, a cross between Persian Yellow and the Hybrid Perpetual Antoine Ducher, should prove of much value, as it is said to possess a perpetual flowering propensity which in itself is a distinct gain, and the flower is reputedly superior to the Persian Yellow. A friend of mine who saw this Rose at the Rose conference at Tours last summer assures me that it is a first-rate novelty.

We already have proof in the variety Lady Penzance to show how amenable these Briar Roses are to hybridisation. This beautiful kind, together with some of the crimson and pink Hybrid Sweet Briars, should also be used as a pot plant. Their fragrant foliage and charming flowers are very refreshing in the early spring days.

Janet's Pride is another interesting kind, and one I can confidently recommend. Outside it grows into a huge bush well adapted to form a hedge, so that as a pot plant it would need ample space. To be really successful with all the above for pot culture, plants with good long shoots should be potted up early in October. These plants, left unpruned and plunged outdoors, would flower well in late spring if introduced into a cold house about March. But to bloom the plants earlier the next season part of them would need to be hard pruned the first season instead of allowing them to flower. They would then make some good new growths of considerable length if encouraged. Flowers from this new wood would be superior to those produced from small laterals. When these Roses are grown outdoors it is best to group them, as they look much more effective.

A dozen or more of *Rosa lutea* when some 4 feet or 5 feet in height, surrounded by little bushes of the single crimson Scotch Roses, would make a most charming combination. Hedges of Harrisoni are now freely planted, and there is no better manner of displaying its beauty, unless it be as a weeping standard, for it is naturally inclined to droop. If the branches are brought down arch like towards the stem, they will flower their whole length.

Excepting as standards, all these Roses should be on their own roots. They root freely from layers put down in June. If not procurable as such, it is best to plant out a budded bush, cut it down hard the first year, and layer the new growths. Some of the Austrian Briar Roses do not appear to be very long lived upon a foster stock—at least that is my experience with Persian Yellow. The Penzance Briars strike freely from cuttings if the young wood is inserted under cloches in July.

PHILOMEL.

A MIDGET GARDEN.

WHEN I read the words, "In a small way," at the heading of the interesting series of letters, I chuckled to myself as I thought how people's ideas of "small" varied. If an "oblong" is called small, what would my wee patch be termed? I also wondered if there might not be other girls who, like myself, have no control over the family garden whose love for gardening would find vent in a patch of their own. I have kept the little

bed given to me as a child to "garden" in, and by encroaching on all sides have increased it to twice the size. Even now it is very little bigger than a good-sized hearthrug. But what a pleasure it is! Having very little say in the ordering of the house garden, I grieved for years over the endless red, yellow and blue bedding, which has, however, been lately improved by substituting Camas, Begonias, Lilies, Delphiniums and Antirrhinums for some of the variegated Pelargoniums. Even now it is far from my idea of a garden. I shall never get my way, and do not really want to; for if my way is sweet to me, surely other people's ways—if they care enough to keep to them—must be sweet to them also. But in my own garden, there I can do as I like, and plant the good old-fashioned things, and hope for wonders.

The position, which is north and rather shut in, is at once a joy and a disappointment. In summer it is truly refreshing, when all the gardens around are parched and faded, to look at my little bed, hand-watered early and late, and shaded from all but an early and late sun by a high fence. But in October, to come home from some bare Scotch highland garden, longing to see my *Lobelia cardinalis*, autumn Crocuses, and longing for a few Tea Roses, and to find all an over-run mass of dark foliage, with here and there a few leggy flowers, this is bitter. On the other hand, in spring the reverse is the case, and all the flowers coming late are better and stronger than in summer places. Then *Dielytra*, Poet's Narcissus, Forget-me-nots, lilac and white double Primroses, Wallflowers, with yellow Stonecrop, Aubrietia, Saxifrage, Alyssum and Scilla nutans, all hold up their heads and smile together. My bed is too wide to attend to from the path, so I have made (three parts down) a little walk, which runs along the back of the wide part of the bigger half, and I have myself, with home-made mortar, paved it with big red tiles. On the fence at the back are a Rosemary, an American Currant, Kerria, Honeysuckle, and two Roses, Marie Henriette and Felicite-Perpetue. At the end, under a tall Lilac, my west boundary, is a little mound of earth, with a few stones with Ferns growing between, and at the top I have planted, with its roots deep down in leaf-mould, a *Tropaeolum speciosum*. The sun will never touch it, and it it does not grow, it will not be for the need of being watched and hoped for. Being all on such a small scale, I am able to have a good succession by constant, minute hand-work, parting aside the Crocus leaves to sow Godetia, or putting in tiny Pansy roots between the Scillas. I grow three tall standard Tea Roses, which do fairly well, and two bush, a Hybrid Perpetual and a Monthly, and I have one little Apple tree, quite a baby. Sometimes, I must admit, my zeal and fear of losing any space carries me too far, as when one day last month, missing the shoots of a Delphinium I thought should be showing, I dug where it should have been in order to replace the plant if it were dead. Feeling a good deal of resistance, I hopefully raised the trowel, and brought up the severed heads of two Crown Imperials that had been watched for for weeks. I told myself I was behaving like a child of five, and the sooner I left home for a few weeks and let things have a chance the better.

People say gardening takes up so much time. Well, so it does; but I find I can do all in my little patch in the half hour after breakfast spent out of doors after feeding the dogs, though there are, of course, many days when I miss that, even when I am at home. Twice a year half a day is given to digging and manuring; and though I frequently spend whole days gardening, it is in doing other people's work elsewhere.

It is wonderful what plants will stand in the way of crowding if you give them food enough. Mine have to sit very close. Carnations are one of the exceptions. I respect their stand-offish ways, and have put mine in two green tubs. Foxgloves are my great friends. They take up but little room considering their enormous size, height, and the length of time from the opening of the first white finger-stall to the last. Six feet high is a marvel for one flower-stem. Canterbury Bells, Sweet Williams, tall dark Antirrhinums, blue

Campanulas, Tradescantia, and Iceland Poppies—what a show they make! How often last summer have I stood with my eyes shut, hoping that when I opened them suddenly the garden would appear less familiar, and I should see it as a whole as others would!

Slugs and wireworms are my worst enemies, but I catch them with Cabbage leaves and Potatoes. Cats use one little place as a spring-board for jumping the fence, and by the feet-marks I can see how conservative they are. I have planted a tall Eryngium there, and put nails on the fence where the marks are, and await results. E. C.

Surrey.

WOODLAND AND FOREST.

THE PINE TREE REGION IN BRITAIN.

FOR too long has the impression existed among planters that the home of the Scotch Fir—probably the most valuable timber tree that could be grown anywhere in these islands—lies next to the regions of snow and ice. It has often been asserted, at all events, that the timber of the Scotch Fir is next door to worthless except such as comes from the cold slopes of the Highlands. At the Edinburgh forestry exhibition of 1884, a chalet constructed of Scotch Fir from Dec-side was shown as an example of the superiority of the Highland Fir over that found elsewhere, but as a matter of fact there is hardly a county in Britain from which such an exhibit might not have come. In Scotland itself the principal Scotch Fir districts are not really in the Highlands, but in parts of the north where the climate is equal to many parts of England, and warmer than some of the high inland midland districts of the latter. Where the most extensive forests of Scotch Fir and Larch exist is in Morayshire, Nairn, Banff, the eastern part of Inverness, and in Aberdeenshire. Travelling through any of these counties or sailing round the coast, the country appears, in many parts as far as the eye can reach, to be almost as flat as the fens of Lincolnshire. The climate is dry, warm, and favourable. Wheat is grown to the highest perfection, and exotic fruits are produced in most gardens. There used to be fine Figs grown on the open wall at Cullen, in Banff, at one time. It is here, then, where some of the most extensive forests of Fir exist and where planting is going on successfully, and it was in this part of Scotland where the German forest officers found the best managed woods. "The Black Isle" (Cromarty), on the north side of the Moray Firth, derives its name from the fact that it was once covered with natural forests of Scotch Fir. Here, near Rosemarkie, I was surprised to find shrubs and flowers nearly as forward on March 21 last as I had seen them, the same species, a few days before close to Worcester on the banks of the Severn. The species most noticed were wild Primroses, Anemones, Jasmines, and common garden flowers. Hollies, Laurels, Rhododendrons and Walnut trees appear to luxuriate. On the front of the Hawkhill Hotel I saw, I think, one of the finest Gloire de Dijon Roses that I ever came across. One plant had, in 1898 and 1899, made a growth of close upon 28 feet, and the 1898 shoot was nearly half as thick as my wrist, something like a rake shaft.

We have much to learn about climate in our own country, and a good deal to unlearn about trees. The Scotch Fir forests of this favoured part of Scotland will one day be valuable, and the densest woods we have ever seen in Britain

are there. More attention should, however, be given to hard woods such as Ash, Sycamore and Beech. The quality of the Scotch Fir timber is excellent, but not one whit superior to that grown in Worcester, the New Forest, and in the poor sandy soil of Hants and elsewhere in the south.

MIXED WOODS.

Mixed woods are one of the troubles of the forester in this country. I saw a fine example of the indiscriminate mixture system of planting in the west the other day, and as fine an illustration of the struggle for existence as any Darwinite could desire to see. Sentimentalists may talk as they like about the attractions of mixed woods, but they will not do as the mixtures are composed at present, and sentiment need not be sacrificed in abandoning such a hotch-potch system. On the Continent there are no mixtures of forest trees such as exist here—none—and writers brought up to the German school, who are far more familiar with continental woods than with those of their own country, get wrong in dealing with mixed woods. A mixed wood in Germany, so far as I have seen or read, rarely consists of more than two or three species, and these few are carefully selected with an eye to companionship. No such care is exercised in this country; and if we wanted to set a continental forest officer at his wit's end, we would put him in an English mixed wood where he had to keep all the dozen or score of species going on successfully—and the rabbits as well. A mixed wood and a game preserve are two things which the continental forester is blissfully ignorant of, and when he steps out of his sphere and tells us how he would combine game and timber crops successfully, he unwittingly betrays his want of knowledge. Here is a description of a mixed wood. There is an old Scotch proverb which says, "Aim at a silk gown and you will maybe get a sleeve," and the forester, on the same principle, aims at a crop of timber by planting everything in the expectation that some of the species will survive. The following mixture is of this kind, and all the trees were consigned at one time from a distant nursery and planted alternately in something like the following order: Scotch Fir, Oak, Larch, Beech, Douglas Fir, Elm, Corsican Fir, Sycamore, Spruce, Ash, Fir, Birch, with here and there plants of the less common Pines, some black Poplars, Spanish and Horse Chestnuts, Limes, American Oaks, &c. Leave a wood like this to itself for as great a number of years as would be allowed before thinning in a properly planted wood, and then see what it would be like, and ask any forester how he would deal with it. It would be a wreck. There is not so much difference between pure woods and properly mixed woods as some may think, and there are no mixed woods in Nature of the artificial planter's pattern. We may plant Spruces of different kinds, of similar rate of growth and habit together, the same of Pines, and broad-leaved species of similar rate of growth and shade-bearing power may go together, but any great departure from these rules will involve loss and trouble to a certainty; while mixtures of Pines, Firs, and broad-leaved species are the worst of all unless the species are carefully selected and planted in the right proportions. Where a common Spruce will rush up and overtop surrounding hardwoods, the hardy Scotch Fir and Austrian will perish under the shade of the latter. Fast and slow growers will not succeed for long together under equal conditions, and neither will good shade-bearers and light-demanders live together. The grouping system has not been much adopted in this

country, but it is worth thinking about. A grouped wood is a compromise between a pure and a mixed wood, and consists of groups extending in extent from say a rood to an acre or more of single species. Thus in 50 or 100 acres, for example, all those forest trees likely to grow might be tested on their merits, and if any group failed it could be replaced by another species without encroaching on the rest of the wood and without much loss. J. S.

LEUCOJUM VERNUM.

GRACEFUL and beautiful as are the ever-welcome Snowdrops, there is an especial value in the bold, round, and green-tipped blossoms of the Snowflake that give them a charm of their own. In a cut state early in the year it is even more valuable than the Snowdrop, because of the greater length of stem available. Established patches of these things flower so

results have been conflicting, and the way in which some clumps go on flourishing season after season and then suddenly fail, while others close by do almost the reverse, has been hard to explain. No sooner does one come to a conclusion, than apparently it starts to disprove itself.

All that we seem to know is that the growths from the old garden form (wide-petalled) and those from newly-imported bulbs seem to suffer equally (up to the present I have not seen the late-flowering form attacked); that strong healthy growths are less liable to fail than weaker ones; that the development of the disease, being of a fungoid nature, is intensified by the presence or absence of certain conditions of heat and moisture; and also, and this is the point which I wish to bring forward, that the havoc is largely facilitated by the injury done to the tissues of the stem by late spring frosts. This would serve to account for the more frequent failures in recent years, and to some extent for the apparently capricious way in which attacks are distributed, owing to the shelter of surrounding plants, bushes or walls, both from the effect of the sudden cold, which is often but of brief duration (perhaps only for a short spell just before sunrise), and still more from the mischief wrought by the action of the direct rays of a hot sun on the frozen plant. So far this year we have been pretty free from sharp frost during May, but I have noticed already one or two stems collapsed, and doubtless others will subside later on. If we can find that protection from frost, or shelter from sun when frozen, will tend to minimise the ravages of the disease, then we may hope to be to some extent successful in attempting to ward off so fatal a sickness from our much-valued favourites.

C. SCREASE-DICKINS.

SPRING FLOWERS ON GRASS.

Growing bulbous plants upon grass is not only an increasing practice, but an excellent method of making that part of the garden interesting for the first five months of the year. Although other than bulbous plants can be grown successfully on grass, such as Primroses, Tritomas and Montbretias for the sake of variety, I think the great charm of such work lies in the bulbous section. Anyone with an acre or two of spare grass land adjoining the garden might very easily render this an exceedingly pleasant

retreat, and with but a minimum of cost, as the "keeping" of the grass entails but little labour as compared to what is known as the "dressed" garden itself. The great point about the success of bulb culture on grass is not to cut the grass until the foliage has had time to ripen off naturally. Late in July is quite early enough. From that time until it ceases to grow in the autumn is very much a question of taste and convenience how often it shall be cut. In the autumn it should be kept quite short for the purpose of exhibiting the early Snowdrops in January.

Some persons may think it is useless to plant the bulbs on grass except where they can be stimulated with manure. This is a wrong impression, as a two-acre plot near to where I write, and planted thickly with bulbs of many kinds, has not seen a bit of manure for over twenty years beyond what small particle was put in with the bulbs at various times. I am positive that the display of yellow Crocus blossoms was this year superior to any during the previous fifteen seasons in which they have flowered.



SPRING SNOWFLAKE (LEUCOJUM VERNUM).

very freely and come earlier into the bargain, which is also a great gain. For a month their charming snow-white flowers spring up before us. Planted in rather loose soil on sheltered banks and grassy slopes they give the most pleasing results, and are worth every encouragement. E. J.

THE FLOWER GARDEN.

FAILURE OF LILIUM CANDIDUM.

WILL some of those who are saddened by the periodical failing of this Lily be good enough to observe carefully any plants that may be found with stems bent over or flagging in the morning at this time of the year after a sharp frost at night, if such should occur? For many years I have been trying some experiments in order to ascertain, if possible, the cause, or causes, of this disease; the

On some grass, moss gives a good deal of trouble: it spreads so fast and luxuriates, to the detriment of the grass itself as well as the smaller bulbs like Snowdrops and Aconites. Where moss is a trouble, it is a good plan to scratch over the surface in November with iron rakes, removing as much in this way as possible, choosing dry weather. In this way the bulbs are freed, and have an opportunity of making satisfactory foliage the following spring, and it is upon this one condition that their future success depends in a great measure.

Where moss obtains a firm hold on the soil it is a very great harbour for slugs, so harmful when the Crocus blooms are pushing up. They eat the succulent stems, causing them to topple on one side. Possibly a dressing of soot would not only check the slugs, but improve the bulb growth also if it were sown just previous to the flower-stems rising above the surface. Given earlier, its potency would be gone before the time for the injury to be felt by the flower-stems.

The planting of the bulbs is a simple matter. Snowdrops, Crocuses, Scillas, Narcissi, Tulips, and Hyacinths can be put in with the aid of a stout iron bar, such as shepherds use in pitching hurdles. A hole 2 inches wide at the top and 4 inches deep is made for the smaller bulbs. For Narcissi, Hyacinths and Tulips they should be larger. The holes are half filled with fine soil, such as the refuse from the potting bench, adding decayed manure, vegetable refuse and wood ashes. One bulb is put into each hole, except in the case of Snowdrops, two or three of which will be better. The hole is then filled up with the compost, burying the bulbs not less than 3 inches deep.

Bulb growing on grass affords a splendid opportunity to utilise Hyacinths, Tulips, Narcissi and Jonquils that are yearly cultivated in pots, generally three bulbs together. Instead of throwing these on to the rubbish heap, as is too frequently the case, if holes are dug in the grass with a spade, plant the bulbs just as they are taken from the pots. The soil from the pots affords yearly assistance to them if they are not disturbed when planting. I do not know how long these same bulbs will continue to give an annual crop of blossom, but in front of me as I now write are Hyacinths flowering that were planted in their present position fifteen years ago.

The flowers can be arranged to succeed each

other in the following manner: First there are the giant forms of Snowdrops, Galanthus Elwesi, plicatus and Imperati, followed by both double and single forms of *G. nivalis*. Yellow Aconites in a suitable position, such as at the foot of a tall forest tree, are very pretty on the grass. Next come Crocuses in variety of colour; the large yellow develops first, quickly followed by the pure white Avalanche, Grande Blanche, Mont Blanc and Queen Victoria. The striped varieties, such as Sir Walter Scott, Albion, Cloth of Silver and La Majestueuse, make a brave display, to be equalled a little later by the dark purple Vulcan, Rubens and Purpurea grandiflora, succeeded by the dark blue of Prince Albert, John Bright and Gladiator.

Following the Crocuses, Lent Lilies carry on the display. Patches of these from 3 feet to 10 feet square make golden sheets of colour. Before the beauty of the former has departed the old double Daffodil, *Telamonus plenus*, would brighten the display with its deep golden flowers. This variety should be planted in clumps fully 3 feet square, as masses of this colour are at all times pleasing. Now that Narcissi are so numerous in variety it is more difficult to suggest what to plant. No mistake, however, can be made in including such sorts as *N. poeticus*, *N. p. ornatus*, *N. bicolor*, *N. Horstfieldi*, *N. Empress*, *N. Emperor*, *N. Golden Spur*, *N. obvallaris*, *N. maximus*, and *N. princeps*. *N. Barri conspicuus* is a charming variety on grass, and so are the varieties Stella, Princess Mary, and Sir Watkin of the incomparabilis section. The last named is quite one of the finest of Narcissi, as the flower-stems are so stout, the blossoms standing well above the foliage.

Jonquils are well worthy of attention. The single sweet-scented variety is distinctly pleasing, and so is the large single Campemelle odorus and *C. rugulosus*. Polyanthus Narcissi, such as the early Paper-white, Grand Monarque, Soleil d'Or, Bazelman major, Golden Era and Jamie Supreme, are useful and showy.

Tulips of all sections are admirably suited for this form of growth. Such clear coloured sorts as Vermilion Brilliant, Yellow and White Pottelbakker, Keizerskroon, Chrysolora, Artus, Crimson King, Dussart, and Wouwerman contrast well with the grass. In addition to these there are many other suitable sorts, such as Rose Gris de Lin, Thomas More, Couleur Ponceau, Fabiola, Gramois Superba,

and Joost van Vondel. Double flowered varieties are not so suitable, being more liable to injury from rain and heavy dews, which render the blooms too weighty for the succulent stems; thus they snap off below the blooms. Then there are the various forms of late-flowering sorts of Tulips known as border or garden Tulips; these and Parrot Tulips maintain a display over a long period.

Hyacinths are all beautiful, of whatever colour. In the case of these bulbs the heaviest spikes will require some support, as they are liable by their weight to snap off before fully developed.

Several other subjects could be quoted, but enough has been said to prove how good a feature can be made with this section of flowers in spring. E. MOLYNEUX.

AN ARTIST'S NOTE BOOK.

ANEMONE RANUNCULOIDES.

VERY few families amongst hardy plants are more beautiful than the Anemones. Beginning with early spring, they go through many months. The pretty yellow Wood Anemone is charmingly represented in the accompanying illustration. Here it will be noted what a beautiful setting the prettily divided leaves form for the cups. And in its culture in lowland gardens we may with advantage remember not merely the Buttercup-like form, but equally the conditions under which the Buttercup of English pastures is known to all. The two plants are alike in some respects, as they constitute the floral beauty of pasture, the one by the mountain-side, the other of the British meadow. You may plant the Buttercup and Cowslip in what you will, and you may give them all the attention needful, but you will always lack that which is much to them, if not their all, viz., that close companionship of fibre and herbage so common on pasture land, and which materially aids the most beautiful of those

plants that inhabit the mountain pastures of other lands. In the culture of the yellow Wood Anemone, this and that soil is recommended, and in some particular material it may do well for a year or possibly two, but in my experience it is one of those plants that in a measure pines for the cooling nature of the herbage so common in its native home, where root-dryness, if not quite unknown, is rarely experienced. Not a few alpine flowers retain this cool rooting medium so difficult to imitate in the garden. The flowers of the Anemone appear, and the herbage of the pasture springs up to form a sort of welcome shade to the roots below. Much greater value should be placed on the companionship of roots, root fibre, and herbage, and particularly so of those plants that inhabit mountain pastures more or less, and whose rest is long when compared with the visible side above ground. You may plant the yellow Wood



ANEMONE RANUNCULOIDES.
From a drawing by H. G. Moon.

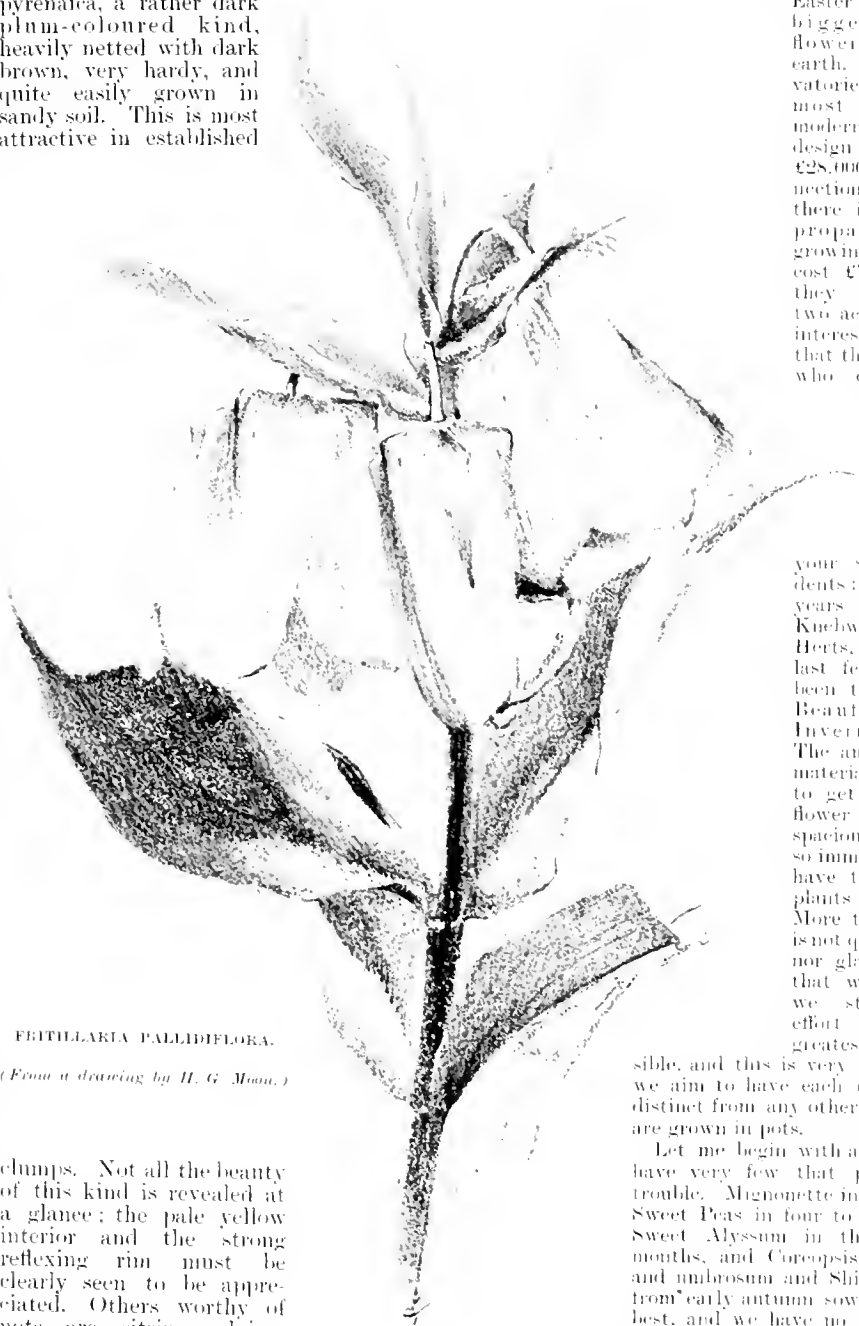
Anemone in a peaty mixture and produce a pretty display of flowers, and in a moister peat you may get even greater vigour, but experience has shown me that the plant will not long live alone. But you may grow this pretty plant perfectly in the company of *Gentiana verna*, *Primula minima*, and such things, particularly if you have these latter in their natural tufts. If so, plant them and sprinkle the yellow Wind-flower amongst them. The entire lot will then make a pretty scene in any rather sheltered or shaded or moist nook the garden affords.

Much, too, I think, depends on the extreme solidity of the soil in such cases, and here, I think, we err very often by much loose planting, especially of the dwarfier and frailer kinds. I have seen this charming Anemone as a carpet plant of great beauty one year, but a year later it had disappeared. The plant seems to greatly dislike disturbance, which is the greater reason for selecting the right place when planting it afresh. Moisture rather than dryness it certainly prefers, but this must not be interpreted to mean wet or soddened soils at all. There is a moisture of the pasture soils in spring and a cooling influence even in summer-heat that are both uniform and genial. This it is that seems best fitted to the continued welfare, as also the longevity of this pretty spring flower. It belongs to South Europe, but has been found somewhat sparsely naturalised in British woodlands. Generally speaking, it is most easily managed in the chalk districts, and if in these it were planted as suggested in cool pasture where the herbage is not luxuriant, a far greater number of successes may be recorded concerning it than is now the case. Especially is it a plant worth naturalising from seed, for in this way pretty fringes of the woodland or the approaches to the rock garden may be permanently beautified.

FRITILLARIES.

THE spring months—March, April and May—are singularly rich in the flowering of many interesting species of Fritillary. It is in this set that we find so many of the varying tints of green and others of a bluish glaucous tone, from which they merge to purple and plum, some chequered, some plain, some broad, almost square-shouldered and spurred, others well shaped, and so on, each one possessing distinct beauty. A great charm about many of these species is their quiet beauty, but with increased knowledge of the plants comes increased appreciation, as they are quite different from a large number of flowering plants. This is observable in the colour, as also the form, while the varied markings that a closer inspection reveals may well form a subject for study. Many of the species, too, are quite easily managed, not only in the border or in the rock garden, but equally so in turf ground or pasture. At Kew during the spring months and also at Long Ditton (Messrs. Barr's nursery) the visitor is almost sure to meet with many kinds in flower. *F. pallidiflora*, of which an illustration is given, is one of the most distinct, as will be noted by its squarely formed shoulders and general outline. This is certainly one of the best, and as such well deserves general cultivation. The flowers are of a pale yellow tone and beautifully chequered, while handsome in form and outline. The species comes from Siberia, therefore is quite hardy, and is rendered the more conspicuous by its distinctly glaucous, somewhat ample foliage. The plant blooms well and regularly, and rarely exceeds 15 inches high. Another species also in flower at this time and

a good companion is *F. pyrenaica*, a rather dark plum-coloured kind, heavily netted with dark brown, very hardy, and quite easily grown in sandy soil. This is most attractive in established



FRITILLARIA PALLIDIFLORA.
(From a drawing by H. G. Moon.)

clumps. Not all the beauty of this kind is revealed at a glance; the pale yellow interior and the strong reflexing rim must be clearly seen to be appreciated. Others worthy of note are *citrina*, *alpina*, and the lovely *Whittalli*, all intensely interesting and delightful. In the general culture of Fritillaries a comparatively dry soil rather than otherwise is the thing to aim at chiefly, an item conceded even when planting in pasture and woodland grass, the roots and herbage extracting much of the moisture that in times of excess may prove injurious. E. JENKINS.

HARDY PLANTS IN POTS.

A LETTER FROM AMERICA.

THE GARDEN of April 14 is just to hand, and in looking over it I am much interested in "V. C. T.'s" note (page 283) about "Hardy Plants in Pots." No one in America grows more hardy plants in pots for conservatory decoration than I do, but my list is very different from "V. C. T.'s."

Here in Schenley Park we have the great Phipps conservatories, by far the largest system of pleasure conservatories, public or private, in the New World,

and in them at Easter we get up the biggest indoor flower show on earth. The conservatories are of the most approved modern plant-house design and cost £28,000, and in connection with them there is a block of propagating and growing houses that cost £7000. In all they cover about two acres. It may interest you to know that the Mr. Phipps who created and donated these conservatories to the city of Pittsburgh is one of

your summer residents; for several years he occupied Knobworth Park, Herts, and for the last few years has been the lessee of Beaufort Castle, Inverness-shire. The amount of gay material necessary to get up a great flower show in such spacious quarters is so immense, that we have to use hardy plants very freely. More than that, it is not quantity alone nor glare of colour that we are after; we strain every effort to get the greatest variety possible, and this is very necessary, as we aim to have each compartment distinct from any other. All plants are grown in pots.

Let me begin with annuals. We have very few that pay for the trouble. *Mignonette* in five months, *Sweet Peas* in four to five months, *Sweet Alyssum* in three to four months, and *Coreopsis Drummondii* and *umbrosum* and *Shirley Poppies* from early autumn sowings are our best, and we have no trouble with them. *Nasturtium* (Lobb's), *Petunias*, *Browallias*, and *Snaphracons* we prefer propagating from cuttings, establishing them early in autumn. *Wallflowers* and *Stocks* come from early summer sowings. *Canterbury Bells*—the *calycanthema* section preferred—we raise from seed sown in April or May, and the plants are potted in September, and well ripened and rested before new year's, then they come in about the middle of April in good order, but they require careful treatment so early to prevent them from rotting in the hearts. In the case of *Foxgloves* we select the best—not necessarily the biggest crowns in September and pot them, and keep the plants cold till new year's. Have excellent success with them. They, too, are apt to rot in the heart in dark, damp weather.

In the way of hardy perennials we try almost everything that we think we can get into good bloom at Easter, and this season have had the following in quantity: *Columbines*, perennial *Candytuft*, *Diclytra* (*Dicentra*) *oximia*, *Moss Pink* and other early dwarf *Phloxes*, dwarf, spring,

and crested Iris, European and American wild Violets, *Pyrethrum roseum* in variety, Forget-me-nots, Pansies, late blooming Hellebores, Trilliums by the thousand, English wild Primroses, Polyanthus, Auriculas, Periwinkle, Dianthus, Astilbe japonica, *Spiraea astilboidea*, Golden Alysoun (*saxatile*), Tree Peonies, *tenifolia* Peonies, single and double, and the old garden (*officinalis*) Peonies, *Helonias bullata*, large-leaved Saxifrages, such as *cordata* and *ligulata*, Bluets (*Houstonia*), and Pitcher Plants (*Sarracenia*). Of the above we have 100 long-spurred Columbines (*corulea* and its white form and varieties are best and easiest to force; *chrysantha* is later and correspondingly hardier), and they are beauties, 3 feet to 4 feet high; *canadensis* is the easiest to force. The Peonies are grand, but they do not last long in bloom; the Tree Peonies fail soonest. The *Dielytra* (*spectabilis*) comes into bloom in a cold frame without any trouble. We use *D. eximia* in a two-fold capacity, first for its flowers, and secondly as a leafy carpet to the *Helonias*, whose pink drumsticks rise up through the ferny leaves in a very pretty way, and also as a carpet for the Lenten Roses whose own new foliage is not enough, and its old foliage is too begrimed with Pittsburgh soot. We have no difficulty with Polyanthus, Auriculas and early Irises. In the case of Moss Pink (*Phlox*), perennial Candytuft, Cushion Pinks, and plants of that nature we use big but compact mats, and stand the pots on other inverted ones to let the plants hang over the edges and sides of the pots. Among our wild Violets, *V. pedata* is a little gem. Nothing is easier handled than Trilliums. We grow most of *grandiflorum*, but also have lots of *erectum* and its white form, and in arranging them use them as a carpet under Lilies and other large shrubs, just as we find them growing wild in the woods. One of our best bits this year has been *Lilium tenuifolium*. We secured 200 extra fine bulbs last autumn, and potted and grew them for Easter. Every one bloomed; some are over 3 feet high, and several have seventeen flowers to a stem. They are beauties, and catch everyone's eye. The Pitcher Plants we use are *S. purpurea* and *S. flava*, and we grow them for their blossoms; just now the flowers of *S. flava* are one of the most striking features in the conservatories. We have a hundred *Shortia galacifolia*, but found it hard to hold back so late—it blooms before starting into leaf growth—and also many *Galax*, which, on the other hand, we had to hurry up to get it in in time.

In the way of Hyacinths, Tulips, Narcissi, Anemones, and the many other plants usually classed with them we grow tens of thousands, but I can hardly class them with the above herbaceous plants. The most beautiful arrangement we have this year is an "old-fashioned garden." One wing 99 feet long by 36 feet wide of a large conservatory is devoted to it and the garden is arranged on the floor. Here there are Apple, Cherry, Plum, and other trees in full bloom; Lilies, Japan Quince, Sweet Shrub (*Calycanthus*), Daphnes, Heather, Mayflower (*Epigaea*), and many other familiar garden and wild shrubs, and hundreds upon hundreds of almost every old-fashioned flower you can think of, all in bloom and all happy together, and absolutely void of any shadow of formal arrangement. And here over this garden more people linger than anywhere else in the conservatories.

But I have long often the Orchids. How I wish you could see our masses of *Cypripedium aculea*, *pubescens*, and *puberulum*! These species are easily forced, and they are compact and have good foliage, and they bear as big and beautiful flowers indoors as outside, and having a little *Selaginella* in

the pans with them, no vestige of earth or pan is seen. Of course *C. spectabile* is the finest species, but it is late, and we cannot get it easily into bloom in winter, and its roots are more spreading than those mentioned above, hence need wider pot-room.

I would like to tell you something about the shrubs we force; but lest I weary you, I will do little more than mention their names. There are double-flowered Almonds, Peaches, Plums, Cherries and Apples. Of the many Azaleas, *mollis* is the best; of the common Scotch Broom we have 200 plants in pots and full of bloom, and they are beautiful. Next year I shall grow Whins in pots. *Calycanthus*, not showy, but easily flowered. Of Daphnes, the little *Cucorum*, red and white *Mezerion*, and the blue *Genkwa*; when forced the latter is much paler than when grown out-of-doors. Of *Spiraeas*, *canadensis* or *Reevesi* is by far the best; next comes *Van Houttei*, then *Thunbergi*. Compact

up from our outdoor nursery six weeks before Easter and plant them indoors just where they are to bloom. Many of the Honeysuckles of the *bellia*, *tatarica*, and similar types, if started early and grown in a cold house, bloom as well indoors as out. All the early *Magnolias*, as *stellata*, *conspicua*, and *soulangiana*, bloom well, but as they lack foliage they need the support of other leafy plants. *Pyruses*, such as *floribunda* and *Parkmani*, are lovely. Of the yellow-flowering Currants (*Ribes aureum*) we use big bushes to fill out-of-the-way gaps, because of their commonness; three to four weeks of a 50° temperature are all they need. *Staphyleas*, while very easily forced, should be home-grown stocky plants, otherwise they are ungainly. *Weigelas* are very easily forced, but to do them well and get good foliage and every blossom that is in them, give them ten to twelve weeks and grow them cold. Give Snowballs much

the same treatment; *Opulus*, *sterilis* and *plicatum* are the best. This cold treatment is necessary to save the flowers and foliage from wilting under warm sunshine when they are in bloom. Of course in the case of plants grown in pots or tubs all the summer this is unnecessary, but as we lift and pot our plants in the autumn, we must grow them cold or fail with them. *Xanthoeceras sorbifolia* is a hardy shrub we force hundreds of, and it is most satisfactory and floriferous; give it two months and grow it cold. Of *Xanthorrhiza* we grow a dozen clumps for its good bushy habit and foliage; it flowers most copiously, but its blossoms are green; out of doors they are purple. In the way of *Deutzias*, *gracilis*, *parviflora* and *Lemoinei* are the kinds used; with *crenata* there is too much trouble. In the case of *Laburnums* and *Wistarias* we find that the plants must be pot grown all the summer to ensure success in winter forcing.

As regards hardy Roses, almost anything can be had in bloom at Easter, but in the case of *rugosa*, *multiflora*, and several other species, the results do not justify the labour and room they require. *Crimson Rambler*, however, is a great success. We grew 500 plants of it in pots all the summer, and they are in splendid bloom now; but these are not a whit better, nor is their wood as long and strong, nor their clusters as big and full as are a lot of plants we dug up in our nursery last October and potted, but these late-potted plants could not be forced early with success.

W. FALCONER.



THE REV. W. WILKS,
Secretary of the Royal Horticultural Society.

WORKERS AMONG THE FLOWERS.

THE REV. W. WILKS.

We are very pleased to give a portrait and account of the Rev. W. Wilks, whose devotion to gardening and the Royal Horticultural Society are so well known. We let Mr. Wilks tell his own tale of his horticultural recollections.

"My earliest recollections are connected with horticulture. I remember when I was only four years old my grandfather's devotion to his garden, and particularly the pride which he took in the black and white Grapes which he grew on a south wall in his garden at Charing, in Kent. The Rev. Joshua Dix, who was afterwards one of the leading spirits of the Royal Horticultural Society, was at that time curate in charge of the parish of Charing, and all my early remembrances are mixed up with him and Mrs. Dix (as ardent a gardener as her husband), who were most intimate friends of my family. My own father was always a keen gardener, his particular fancy being to try all

plants of *Exochorda* are good, so too are *Halesia*, but a few of them are enough. *Fortunei* is the best *Forsythia*; two weeks before Easter we dig it up and take it inside. *Erica carnea* does well in its modest way. *Kalmias* are not easily enough handled to warrant the trouble with them; but *Leucothea Catesbaei* opens beautifully. Of course many *Rhododendrons* are available, but the prettiest thing in this line we have this Easter is a batch of *Rhododendron punctatum*, a species from our southern mountains, and one that is very little known or grown, and which I never before saw forced—short stocky plants, completely covered with small, pale rose coloured flowers. We used them in a bank 100 feet long carpeted with Maiden-hair Ferns and studded with scarlet *Gloxinias*. Speaking of *Rhododendrons* reminds me of the big snow-white Himalayan beauties so lovely with us now, but they are not hardy. The Lilies we dig

the new Pears which France was at that time pouring into this country. About 1850 Joshua Dix moved up to London and became officially connected with the Royal Horticultural Society, but his holidays were always spent in the Kent he loved so well, and to our home garden at Ashford he used to bring or send down all the new plants and seeds sent out by the society. Thus from my earliest years I have been immersed in gardens and in active touch with the inner life of the Royal Horticultural Society.

"My school life served also to intensify my love of Nature, as I was educated under that great scientist and true Christian gentleman, Professor Charles Pritchard, at least two of Darwin's sons being among my immediate schoolfellows. After leaving Cambridge I revelled for a couple of years among the flowers of the south-west of England, and in 1866 accepted the curacy of Croydon, where I was again fortunate in finding in Canon Hodgson an enthusiastic gardener, his forte being Roses and Strawberries out of doors, and Peaches and Nectarines in a large orchard house. Up to the time of Joshua Dix's death I was, by his kindness, a constant attendant at all the Royal Horticultural Society's exhibitions, and in 1867 became myself a Fellow. In 1879 Archbishop Tait moved me from Croydon to Shirley, where I at once began to improve and cultivate my garden, devoting myself principally to Roses, Pears, Poppies, Peonies, Apples, Plums, Peaches, Nectarines, Daffodils, Strawberries, Rhododendrons, Flag-brises, Phloxes, Tulips, Hyacinths, and herbaceous plants in general. About 1880 I became a member of one of the Royal Horticultural Society's committees and honorary secretary of the society in 1886. The society at this time was burdened with debt and con-

sisted only of 1200 Fellows, whose composition money had long ago been spent on tennis grounds and bowling greens for the South Kensingtonians and in maintaining pleasure gardens for their nurserymaids and children. A resolute effort was made by the council to save the life and continuity of the society and to bring it back to a genuinely horticultural policy, with the result that probably never in all its previous history was the position of the society so secure as at the present moment, the number of Fellows having steadily increased up to about 4500, and its financial balance standing at little less than £10,000."

[We may remark here that still greater prospects are now opening before the society if only it will refuse to be tied down to a "little Englander" policy; if only it will refuse to be restricted to being only a society "for providing flower shows for London"—a policy which would be as fatal as was that of the South Kensington of old; if only it will recognise the possibilities which are before it and embrace the opportunity of becoming (as it may if it will) the leading exponent and teacher of horticulture in this country. EDS.]

HISTORY OF THE SHIRLEY POPPIES.

"My name may have become known throughout the world as secretary of the Royal Horticultural Society, but my Shirley Poppies are even more widely known, and that far more deservedly, for there is no country under the sun (except, perhaps, Patagonia and Thibet) to which I have not sent seeds gratuitously, and I am told that in the streets of Yokohama and of Rio, of Vancouver and of Melbourne, of Paris, Shanghai, and Berlin, of Cairo, Philadelphia, and Madrid, Shirley Poppies are freely advertised for sale. They arose in this way: In 1880 I noticed in a waste corner of my

garden abutting on the fields a patch of the common wild field Poppy (*Papaver Rhoeas*), one solitary flower of which had a very narrow edge of white. This one flower I marked and saved the seed of it alone. Next year out of perhaps two hundred plants I had four or five on which all the flowers were edged. The best of these were marked and the seed saved, and so for several years, the flowers all the while getting a larger infusion of white to tone down the red until they arrived at quite pale pink and one plant absolutely pure white. I then set myself to change the black central portions of the flowers from black to yellow or white, and having at last fixed a strain with petals varying in colour from the brightest scarlet to pure white, with all shades of pink between and all varieties of flakes and edged flowers also, but all having yellow or white stamens, anthers, and pollen, and a white base. Having fixed the strain, I distributed it to amateurs and nurserymen alike free gratis for nothing, without favour or want of it to any. To be asked has with me always been to give. My ideal is to get a yellow *P. Rhoeas*, and I have already obtained many distinct shades of salmon. The Shirley Poppies have thus been obtained simply by selection and elimination. By 'selection' I mean the saving seed only from selected flowers, and by 'elimination' the instant and total eradication of any plant that bears inferior flowers. To prevent these infecting the better ones, I am about among my flowers between three and four o'clock in the morning, so as to pull up and destroy the bad ones before the bees have a chance of conveying their pollen to the others. It is the absence of this eliminating work which makes it so difficult (almost impossible) for any but an enthusiast to keep the strain true and pure. Let it be noticed that true Shirley Poppies (1)



Hudson & Kerridge

SHIRLEY VILLAGE AND CHURCH.

are single, (2) always have a white base with (3) yellow or white stamens, anthers, and pollen, (4) never have the smallest particle of black about them. Double Poppies and Poppies with black centres may be greatly admired by some, but they are not Shirley Poppies. It is rather interesting to reflect that the gardens of the whole world—rich man's and poor man's alike—are to-day furnished with Poppies which are the direct descendants of one single capsule of seed raised in the garden of Shirley Vicarage so lately as August, 1880."

GARDENING OF THE WEEK.

FLOWER GARDEN.

FOR the next few weeks summer bedding will engage the attention of the gardener, and much will depend on the preparation of the beds and borders as to the ultimate success. Where spring bedding is not carried out, little difficulty will have been experienced in having all in readiness. The ground should be well manured and either trenched or bastard-trenched during winter, and now, when torked over at this season, should be in a most suitable state for receiving the plants. Not so, however, where the beds have been crammed with plants during the whole year. It is then that extra care is required by way of introducing much fresh material into the beds, and, if it can be so arranged, as much of the old material as possible wheeled away, but I am aware that in many establishments labour is too scarce at this busy season to put this into practice. Nevertheless, it is essential when the best results are looked for, but in any case good half-rotten manure and leaf-soil should be worked in plentifully, and the ground at least bastard-trenched. The beds should be made firm by treading and neatly raked down. In all probability in most cases the style of planting will have been carefully thought out, if not the previous summer, anyhow during the winter, and preparations made accordingly. It is yet rather too soon to plant out many of the most tender subjects, such as *Colerus*, *Heliotrope*, *Iresine*, *Abernethia*, &c., especially in cold and low-lying districts. Dahlias and many other things are far better left where they can be afforded some slight protection in case of cold winds or frosty nights. If the plants once receive a severe check, it will take them a long time to recover themselves.

HERBICIOUS BORDERS

should now be objects of much beauty and interest, as each day something fresh will be in flower. See that the stronger growing kinds do not encroach on their weaker neighbours. Attend to staking and supporting any that may require it, but avoid bunching up too tightly, and allow each individual to retain its natural habit as much as possible. On light, porous soils many of the perennial plants, such as *Hollyhocks*, *Delphiniums*, &c., will be much improved if good mulchings of half-decayed cow manure be applied and thorough drenchings of water given at the roots.

ANNUALS

which have been pricked out should now be placed in their permanent quarters, choosing a dull, showery day for the purpose if possible, and if the young plants are damped overhead for a few days to encourage a free start, the little extra trouble will be quickly repaid. Shags are often most troublesome to annuals, but finely-sifted cinder ashes sprinkled about them are useful, as they easily adhere to the slug and prove most distasteful. E. BECKETT.

Abraham House Gardens, Elstree, Herts.

INDOOR GARDEN.

ROSES.

Providing that the earlier forced Roses have been well fed since the flowers were cut, and some of the week's growth cut away, they should now be

making good new wood, and those who have to depend year after year on the same batch of plants will do well to encourage this by keeping the plants under glass in a good position until the new growths are hardening and the weather has become mild enough to stand the plants outside without fear of damage to leaves or wood. Climbing Roses of the *Maréchal Niel* type that will make long shoots may be cut well back to a base bud and grown on the long-rod system, which is certainly the best for all Roses of this class. While making growth be sure that they are kept free from mildew and from insects; the former may best be prevented by the exclusion of cutting draughts, and as a simple remedy that I have found very efficacious when attacks have come, I can strongly recommend $\frac{1}{2}$ oz. of good soft soap to 1 gallon of soft water, syringing this over the plants at intervals of two or three days till the attack is quite mastered.

AZALEAS AND HEATHS.

Plants of Azaleas, both of the indica and the mollis sections, which have flowered may now be potted. With the former it is often an advantage to give no increase to the sizes of pots used, and to do this it is necessary to reduce the balls. I have found it far better to cut round them with a sharp knife, cutting through all roots as they come, than to prick away the soil piecemeal with a pointed stick, this being the method mostly used. The cut roots heal and grow away again soon, and the plants thus treated will do well, provided, of course, that the ball is not too much reduced. Good greenhouse plant peat with a little loam and plenty of sand forms a good potting material for the plants. After potting they should be stood in a house which can be kept fairly close for the time and syringed morning and afternoon, giving a little shade on bright days. Before potting, see that the balls are fairly moist, and plants about which there is a doubt as to this should be immersed in a pail of soft water for an hour and afterwards allowed to drain before potting. Late-flowering Heaths should also be potted, and the general treatment of these will be pretty much the same as the Azaleas, except that after potting they must not be kept so close, nor should they be syringed.

FORCED PLANTS.

Some of these which have been already well hardened may now be planted out. Spiraeas will be grateful for the protection of a frame or a few mats until they are safe from frost. A moist and rich soil will suit these. Solomon's Seal should not be thrown away, as the old roots will live and make useful crowns in a couple of years. This may be planted in any out-of-the-way corner and enjoys both moisture and shade. Deutzias, if they are to be afforded a season's rest, may be split up into smaller pieces and planted in an open position with a good soil. Guelder Roses and Staphyleas should have a similar position. I do not advise planting out mollis Azaleas, as I have found much the best results attend pot culture until the plants get too big for use under glass. J. C. TULLACK.

Shipley Hall Gardens, Derby.

KITCHEN GARDEN.

GENERAL WORK.

OWING to the drought during April and the early part of May it has been an easy matter to keep down weeds, and if the Dutch hoe can be kept going freely, it will save much labour later on. Many small seeds, however, such as Kale and Broccoli, have not germinated well, and in some cases must be sown again. Even now there is time to make good any losses. Cabbage should also be sown for mid-winter supplies, such kinds as Favourite and Christmas Drumhead being useful for this work. Sow Coleworts, but in the northern parts of the country I have found it advisable to sow a pinch of seed early in June for October supplies, the Rosette variety being the best. Lettuce must be sown every three weeks to maintain a full supply, and from this date it will be well to sow thinly in drills and thin out when large enough. Runner Beans pushing through the soil should be staked, as this protects the tender plants. Marrow Peas sown at all thickly should be thinned before

staking, and the succession varieties may need moisture to assist germination should the rainfall be deficient. It will also assist earlier varieties if a mulch of short manure be placed between the rows to preserve moisture, as in light, thin soils the pods soon age if the roots are dry. All arrears of sowing should be completed. Such seeds as Carrot, Beet, Salsafy, Scorzomera, and Chicory should now be in the soil starting freely.

PLANTING

in May and June demands time and attention, as many plants fail in winter through inattention during the months noted. Brussels Sprouts are an important crop, and are best when placed in their growing quarters as early as possible so as to give a long season's growth. I am aware excellent small late sprouts may be obtained by later plantings, but it is well to rely on the earlier ones for large supplies. To save space at this time of year draw drills 3 feet apart for the sprouts, and plant or sow a single row of salads or Spinach between. These are cleared away by the time the space is needed for the sprouts. Celery is an important crop, and there should be no delay in getting the chief supply in their quarters. Prepare the trenches in advance, so that the soil is in a workable condition, as this prevents delay. Late seedlings should be pricked off, and where the plants are lifted directly out of the seed-bed the seedlings should be thinned. Much the same advice holds goods as regards Celeriac, but this does not need trenches. Early autumn Cauliflower and Broccoli should be got into their permanent positions. Marrows may now be safely planted out on warm borders, though a little shelter is well repaid. Potatoes planted last month must be mounded up. This work is best done as early as possible before the haulm is too long. Land needed for winter green crops should be cleared and dug and planted during showery weather, this being a great saving of labour.

TOMATOES.

The strongest may now be planted out, and as regards position, much depends upon what wall space can be afforded, as grown thus the culture is more simple. The plant is restricted to the main shoots, lateral growth being kept closely stopped. As regards soils, I am not a strong advocate for starving the plants, but on the other hand I would not employ much manure, relying rather on good loamy soil and feeding from the surface as the fruits set. The plants need more attention at the start in the way of moisture, as being turned out of pots, the balls of roots soon get dry and the plants droop. This should be avoided, but, on the other hand, when the roots have laid hold of the soil, less moisture is needed. Plants in the open should be staked as soon as planted, leaving a cavity round each one to convey moisture to the roots; at the same time in thin, poor land mulch the surface soil between with spent Mushroom manure. The plants in open quarters are best restricted to a single cordon growth, though I have seen splendid crops by allowing several leaders to a plant and forming a trellis-work with laths or sticks. Grown thus by the side of walks the plants are both ornamental and useful. A late lot of plants may now be prepared for house work in autumn. Sown now in cold frames, they will make good material for planting in two months' time. G. WYNNES.

Syon House Gardens, Brentford.

FRUIT GARDEN.

POT VINES.

WHEN the Grapes are ripe, to keep them fresh and plump until they are required for use, they must be kept well supplied with water. If this is not done the foliage will become burned by the heat of the sun and the Grapes will soon shrivel. Damp the floor and bare surfaces of the pot vinery on fine mornings to prevent dust rising. When the Grapes are quite ripe, warmth is no longer required, but a cool atmosphere should be maintained by free ventilation.

Young Vines struck from eyes this season and duly potted on into 6-inch pots should by this time be well rooted, and before becoming pot-bound

should be potted on into those 8 inches to 9 inches in diameter. If new pots are used, lay them in water for a few minutes to soak.

Suitable soil for pot Vines is light fibrous loam, enriched with bone-meal at the rate of a 6-inch pottful to a barrow-load of loam, with about one-eighth of the bulk of old mortar rubble added, more or less according to the nature of the loam. Place over the

in a light house fully exposed to the sun, except that some shade should be given for a short time when the sun is bright for a few days after potting. After they have taken hold of the new soil ventilate freely during the day, leaving on a few inches of ventilation at the apex of the house during the night.

They may be grown along the front of a house touching, and the canes trained to a trellis within a foot of the glass. Trained in this way they form a suitable shade for plants, or they may be grown on the floor of a house with the canes trained erect

While growing they require frequent tying, and the points of side shoots should be pinched, leaving one leaf. The points of the leading shoot should be taken off when they have grown to the length required, which will be according to the shape of house they are intended to be fruited in next year.

This is a time when young Vines struck from eyes this year may be planted in borders in the same way as Vines one year old were planted two months previously, with the exception that they do not require shaking out, but only to be planted before the roots become at all pot-bound in the 6-inch pots. Where planting has to be deferred for a month until the fruit is cut from the early vineery, Vines now potted into 8-inch or 9 inch pots will by then be in a suitable state for planting.

G. NORMAN,
The Gardens, Hatfield House, Herts.



CELMISIA MUNROI.

(Shown by Messrs. J. Veitch and Sons at the Temple Show.)

drainage the most fibrous part of the loam and pot firmly, using a rammer of such a thickness as to pass freely between the pot and the roots without damaging the latter.

CUT-BACK VINES.

a term used for those now in their second year of growth, that were shaken out and potted into 8-inch or 9-inch pots, as recommended in a former calendar, should by this time be sufficiently rooted for putting into 11-inch or 12-inch pots. The soil for these, and for all potting purposes, should be broken by hand, the size of the pieces varying according to the size of pots.

Throughout their season of growth great care must be exercised in watering—not to allow them to suffer for the want of water, neither should it be too freely given. Vines so treated can never produce good fruit. If the soil is in the most suitable condition at the time of potting, *i.e.*, only moderately moist, after the operation give tepid water in sufficient quantity to reach the whole of the soil. Afterwards test them as often as required by rapping the pots with the knuckles, giving water to those with a hollow sound.

Syringe for keeping the foliage free from red spider once only on fine days in the afternoon; at other times, to maintain a growing atmosphere, damp down bare surfaces once or twice daily. Young Vine canes should be grown firmly and short-jointed

CORRESPONDENCE.

TULIPA KAUFMANNIANA.

[TO THE EDITOR OF "THE GARDEN."]

SIR, One is so often in agreement with your able contributor, Mr. Jenkins, that it is pleasant to find that he is able to speak so favourably of this noble Tulip, which has been a favourite with me since it first flowered here some years ago. I can endorse all that Mr. Jenkins says in favour of its distinct beauty and its easy cultivation. It has always reminded me also of some of the Water Lilies, its form, its substance, and its colouring all uniting to give one this impression. Its habit is also in its favour, as it is dwarf enough to prevent it from falling an easy prey to the boisterous winds which are so destructive in the early season in which it blooms. It is also very early. This year it was a fortnight or three weeks before any other Tulip in my garden. I grow it in a warm border and in sandy loam. It is left in the ground all the year. Its only drawback with me has been that it seems but slow of increase, an objection in the case of a flower which is as yet too expensive to admit of being planted in any number, except by those who are more gifted with this world's goods than the majority. Still, those who try it are not likely to

regret the cost of a bulb or two when it comes into bloom. Its colouring is chaste and far from gaudy.

S. ARNOTT.

STATICE LIMONIUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—Your correspondent "A. H. T." will be glad to know *Statice Limonium* still grows abundantly on the cliffs here; it also occurs less abundantly at Lulham Bay. The rare *Lithospermum purpureo-ceruleum* is still abundant at its station near here.

Sidmouth.

A. M.

QUEEN WASPS.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—Writing from North Wales (page 320), Mr. Taylor speaks of wasps as being especially numerous during the last season in most places. This certainly was not the case in South Devon, where wasps were conspicuous by their absence, the fruit, in consequence, being almost entirely undamaged by these pests, which as a rule are very plentiful. Possibly the cold weather occurring in April and May accounted for their non-appearance, but until I read the note referred to I was under the impression that this gratifying scarcity was general. The plan of setting a price on the heads of queen wasps alluded to by Mr. Taylor has, I imagine, been in vogue in numerous districts for many years past.

F.

NARCISSUS TRIANDRUS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, "Jay Aye" asks on p. 320 if *N. triandrus* "likes a shady home and a bed in which the wet can never lie." One presumes that *N. triandrus* albus, commonly known as Angel's Tears, is the variety alluded to. *N. t. pulchellus* being a more robust growing form, often succeeding where *N. t. albus* fails. On the north-west coast of Spain, where *N. t. albus* grows by the thousand, it is found flowering with equal freedom on open hillsides, beneath Fir trees and along the foot of the steep banks, sometimes 10 feet and more in height, which rise on either side the narrow lanes that wind upward to the hills. In the first case it is in full sunshine, while in the two latter its site is naturally a shady one. The soil in which it grows is a mixture of peat and disintegrated granite, which, though very wet during the winter and spring rains, is so porous, that the moisture contained in it is never stagnant. In this country heavy and retentive soil is particularly fatal to success, which can best be achieved by planting in a raised position in the rock garden in gritty, porous soil where the drainage is perfect.

S.

COVERINGS FOR SLOPING BANKS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, On page 331, amongst other suggestions for clothing sloping banks, the employment of *Cotoneaster microphylla* was advocated. This subject is covered during the winter months with innumerable crimson berries, but its effect is marvellously heightened if the golden-flowered Winter Jasmine (*J. multiflorum*) is associated with it, the yellow of the flowers and red of the berries forming a bright and attractive contrast invaluable in the dark days of the year, when so little in the way of colour is available in the open air. *Periwinkles* (*Vinca*) make a pretty covering for a steeply-sloping bank. Lately, in South Devon, I saw such a one thickly mantled with the white form of *Vinca* minor in full bloom, the bank being from end to end a galaxy of snowy stars.

S. W. F.

LILIUM GIGANTEUM IN KIRKCUDD-BRIGHTSHIRE.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I am glad to observe that the Rev. D. R. Williamson has written the interesting note upon this Lily which appears in your columns of April 7. The plant is so impressive when in flower, that those who have not seen it in perfection have missed one of the finest sights that the garden of

hardy flowers can give. As I had the pleasure of seeing when in bloom the fine specimen at Cavens House, in this county, which has been mentioned by Mr. Williamson, and which grew to a height of 14 feet, I may be permitted to add a few notes upon this plant. It was, I understand, about four years old, and was grown under favourable conditions. It was planted in the angle of two walls running respectively almost due east and west and north and south. The walls are 11 feet or 12 feet high, so that the plant, which thus had an east and south exposure, had every shelter when growing. The place was well prepared by a plentiful addition of manure, and while in active growth liquid manure was occasionally given. When growth began in spring, the plant was covered at night with a hand-light. The Liliium was truly magnificent when in bloom with twenty-one or twenty-two flowers on it, but it is well to say that neither before nor since have the plants at Cavens produced such fine spikes. Growers are naturally anxious to have plants in bloom as early as possible, but this is no gain with Liliium giganteum, as young bulbs which flower generally produce small spikes. Mr. Cooper, the gardener at Cavens, was to be congratulated on his success with this specimen, and I dare say no one regrets more than he that he has never again obtained the same results. As he told me some time afterwards, "Many of the bulbs produced spikes like walking-sticks," so poor were they compared with the magnificent plant referred to.

I do not think that we in the north can, as a rule, boast of any greater success than is obtained in the south with the careful treatment adopted by Mr. G. F. Wilson at Oakwood, or in the wood at Munstead Wood. I have flowered Liliium giganteum myself, but I confess my success has been but moderate compared with that of many.

Careotheca, by Dumfries, N.B. S. ARNOTT.

THE BEST APPLES.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—I am rather surprised no gardener from Devonshire has joined in this debate, considering it is such an Apple county, and that such grand fruit as regards size and colour are produced here, many of your readers having seen the meritorious collections from Sidmouth that have been staged at the Crystal Palace fruit show for some years past.

In giving a selection below it must not be taken for granted that these varieties will give satisfaction elsewhere because they do well here. Soil, situation, as well as position go a long way in deciding the merits of many sorts. What one has to do is to observe and ascertain, as far as possible, the varieties that crop most freely and grow kindly, are fairly free from canker, of good flavour, and yield a succession of fruit for the kitchen and dessert-table say from August to the end of May—nearly as long as Apples in good condition can be looked for. When this has been found (and it will take a few years to fathom this), such varieties as give satisfaction should be encouraged by planting a few young trees annually, or grafting some of the healthiest and youngest trees one considers are worthless for your supply.

For the earliest dishes in the dessert class we find the following much appreciated: Quarrenden, Lady Sudeley, Mr. Glalstone, and Kerry Pippin, the latter not mentioned in your revised list, but a real good Apple, and bears well—in fact, took the Veitchian prize for flavour at one of the competitions; for mid-season, Cox's Orange Pippin, King of the Pippins, American Mother, Ribston Pippin, Margal, and Wyken Pippin; while for late use we depend upon Blenheim Orange, Adam's Pearmain, Sturmer Pippin, Scarlet Nonpareil, Allen's Everlasting, and Lord Burghley. The best cooking kinds that suit our requirements are as follows: Duchess Oldenburg, Lord Suffield or Lord Grosvenor, Ecklinville Seedling, Golden Spire, Emperor Alexander, Bismarck, Frogmore Proflig, Tom Putt, Gloria Mundi, Peasgood's Nonsuch, Warner's King, Golden Noble, Mere de Ménage, Beauty of Kent, Rymer, Altriston, Annie Elizabeth, Sandringham, Tyler's Kernel, Newton Wonder, Bramley's Seedling, Tower of Glamis, Lady Henniker, Wadhurst Pippin, Betty Geeson, Lane's Prince Albert, Wellington (syn. Dumelow's Seedling), and Schoolmaster. Rather a long list, some will say, but they all grow and crop well here, and the best policy is to stick to those varieties which thrive in the locality.

J. MAYNE.

Bicton Gardens, E. Devon.

RECENT PLANT PORTRAITS.

"FLORILEGIUM HARLEMENSE" (parts 12 and 13) contains portraits of the following bulbous plants:

Plate xxxiv. Hyacinth King of the Yellows, a good solid spike of clear yellow single flowers. It is rather a deeper shade than Ida, and has a shorter and more compact spike of flowers. It is also later blooming, and therefore good for succession, though not so well adapted for forcing purposes.

Plate xxxv. portrays three beautiful single early Tulips—Gouden Standaard, Bruid von Haarlem and Le Matelas, all well known to English growers.

Plate xxxvi. shows three beautiful varieties of his xiphoides or anglica without names.

Plate xxxvii. portrays Hyacinth Sir William Mansfield, a single purple or plum-coloured flower somewhat resembling the variety Haydn. It is said to have a faultless habit of growth and to be a fine large bulber.

Plate xxxviii. shows two double-flowered early Tulips—Rubra maxima and Couronne d'Or; the first a fine scarlet self, the other a good yellow slightly shaded with red.

Plate xxxix. portrays a group of Ranunculus asiaticus superbissimus, most elegant and fully double flowers, named respectively Empereur du Maroc, Mont Blanc, Grand Conquerant, l'Étincelante, Queen Victoria, and Golden Gem. These flowers are intermediate in size between the Persian and the Turban Ranunculus, possessing all the beauty and refinement of the former with much of the size of the latter. It is much to be regretted that they are not oftener seen in our gardens.

W. E. GUMBLETON.

NOTES FROM NURSERY GARDENS.

PANSIES AT TAMWORTH.

IT is doubtful whether any other establishment in the United Kingdom has a larger display of the Pansy than Mr. William Sydenham at Tamworth, Staffs. In this spot they appear to luxuriate, the climatic conditions, together with a splendid depth of good soil, meeting all the requirements of these useful plants. A good many acres are devoted to them, the free-flowering tufted kinds evidently being largely in demand judging by the enormous stock. Hundreds of thousands of Tufted Pansies (Violas) are raised each year. One hundred and fifty-five varieties of the Tufted Pansy are grown, and it is most interesting to see the most popular kinds. Of the yellow rayless varieties there is now an abundant supply, a few years having sufficed to raise many fine sorts quite eclipsing the older type of rayed flowers. Pembroke, raised here a few years since, is grown in enormous quantities, its large bright yellow rayless flowers being sweet-scented and developed on long stems. Another excellent sort is Melampus, a flower of rich yellow and rayless, and this plant possesses a good tufted habit, and the flowers stand out above this on stout footstalks, making a delightful picture. For massing in beds and borders this variety is unequalled. A still richer yellow is A. J. Rowberry, a lovely rayless flower, but without the true tufted habit these plants should possess. As a matter of fact, the habit of the last mentioned more resembles the fancy Pansy type of plant. A new sort after the style of A. J. Rowberry is Isolda, which has large, deep yellow flowers, deepening almost to an orange colour in the centre. The habit is fairly good. Kitty Hay, distributed in 1896, is a splendid rich yellow rayless flower, and is undoubtedly one of the best bedding sorts in cultivation. The plant flowers profusely, and also possesses a most desirable habit of growth. A variety often sought after is Mrs. Wm. Greenwood, a pleasing canary-yellow self, and a most effective plant when in condition. Sydney is said to be a seedling from Pembroke and A. J. Rowberry, and may be described as a much brighter rayless yellow flower than the first-mentioned of its parents above. In habit it is identical.

Of rayed yellow flowers, the old sulphur-yellow Andwell Gem is still good, its creeping-like style of growth commending it to many. Illustrious is one of the latest additions to this class, developing freely very large rich yellow blossoms, neatly pencilled, and its habit of growth is good. The plants are very striking when massed. Endymion is a pretty soft yellow—almost a primrose-yellow—flower of large size and profusely displayed. The habit leaves something to be desired, although it is not so coarse and unruly as are many others. A useful sort is Bouncee, a pale straw-yellow flower, very free, and with a nice tufted habit. Lizzie Paul is



CARNATION H. J. JONES.

(Exhibited by Mr. Jones, of Lewisham, at the Temple Show.)

another free-flowering sort and a most effective bedding plant. Primrose Dame is a wonderful plant, primrose coloured, with a rich orange eye, and faintly edged. The habit is fairly good, though rather vigorous. Stephen is a plant of dwarf growth, and bears rich yellow flowers freely.

Tufted Pansies of a white kind have made great advances, one of the daintiest being White Beauty, introduced last year. The rayless flowers are of medium size, pure white, with a suffusion of yellow on the lower petal. The style of growth is quite unique, being spreading, with bright green foliage. The plant is also free flowering. Blanche is the largest of the rayless white flowers, a better description of its colour being pale cream-white with a neat yellow eye. The habit of growth is fairly compact and dwarf, and the plant blooms most persistently. Masterpiece is a pure white self of most refined appearance. Unfortunately, the stock of this charming variety is very scarce. There is a good batch of Dr. Stuart's Sylvia, the first and most noteworthy rayless white flower raised. A capital batch of this plant was flowering quite freely, denoting its especial value for massing. The habit of growth is excellent. The most remarkable of the cream-coloured flowers is Devonshire Cream. This is a Tamworth seedling raised in 1897, and probably one of the freest of the free-flowering Tufted Pansies in commerce. From early spring until the autumn each little piece blooms most persistently, and when grouped in beds and borders is a most effective plant. Of blue sorts the number is limited, the old True Blue, which some describe as an imperial blue, being effective. The flowers are of medium size, rather heavily rayed, and the form leaves much to be desired. However, it makes a useful group of colour in the border and the habit is good. Something better in rayed blossoms is seen in Blue Diamond, a variety of this season's introduction, and likely to supersede others. The flowers are large, of good form, neatly rayed, and of a true blue colour. The habit of growth is good. Mr. A. D. Parker is a seedling something in the way of Blue Gown, but of a deeper colour—blue, faintly tinted mauve. Its habit and blossoming propensity are all that one could wish for. Rose-coloured flowers leave much to be desired, the only sort worthy of notice being Amy Barr, which is a pale rose-pink with a white veined centre. It is free and the habit good. There is a good field here for raisers, as there are very few sorts indeed at present catalogued, and the colour is one that is serviceable in the garden. A pretty flower is Rolph, which may be described as of a blue-heliotrope colour. It is singularly neat in form, of good substance and is neatly pencilled. As an example of what a Tufted Pansy should be this is a very good representative.

Of edged or margined flowers, Mr. Sydenham has a high opinion of their usefulness in the garden. A variety (Lark) raised by him and distributed in 1899 is a delightfully free-flowering plant and a most continuous bloomer. The neatly rayed flowers are very large, of oval form, creamy white, with a prettily arranged margin of deep heliotrope. The habit is not so dwarf as that of some others, yet it is good. Special attention has been given to a batch of seedlings from Lark, and a charming variety obtained therefrom. One of the most striking is Hawk, a large flower of creamy white, with a broader margin than the parent flower, and of a much deeper and more pleasing shade of colour. The flowers, too, are rayless, which gives them a most refined appearance. There are others of which it is too early to give any definite information. Flowers of purple-crimson are not so often seen now a-days. Very pretty, indeed, was a bed of Aene, a rich purplish-crimson, and one of the most notable flowers of this colour in the trials at Regent's Park a few years ago. The flowers from a florist's standpoint are not, perhaps, all they should be, but for the garden they are superb. It is an old sort, but will require a lot of beating. The Meuris, another old variety, was interesting; its rich plum colour, contrasted with the upper petals edged white, was beautiful in a large bed by itself. A curiosity is Mandarin, and always seen in fine condition early in the season. It is a deep yellow rayless flower with upper petals of rich

bright maroon, the lower petals being faintly clouded with a blackish margin altogether a unique flower. The habit is rather unsatisfactory, however. Joseph is another striking flower of old gold and brown shades of colour. It is hoped ultimately to get much better representatives of this colour, and, judging by the number of seedlings of this sort raised, it will be accomplished in the near future. We are also promised at no distant date a glorious reddish-crimson or something more glowing and intense in colour. Already there is a near approach to this colour, and should Mr. Sydenham be successful in this, he will confer a boon on many gardeners anxious to utilise these flowers for special garden effects.

Of course there are numerous varieties of high quality which it is not possible to mention in this notice of a visit extending over several days. The fancy Pansies alone, of which some 200 varieties are catalogued, should have special mention, the sorts embracing some of the most remarkable of these richly marked and highly coloured flowers. Tea-scented, Noisette, H.P. and Moss Roses and Lord Penzance's Hybrid Sweet Briar receive great attention. Special attention is given to Pyrethrums. Autumn-flowering plants are not forgotten, the early-flowering Chrysanthemums in useful variety being largely grown.

Altogether the display was most interesting, although the season was quite a fortnight later than in the south. These gardens are charmingly situated, and special pains have been taken in arranging the various subjects.

D. B. CRANE.

THE KITCHEN GARDEN.

ASPARAGUS CULTURE.

WE are now in the midst of the supply of this deservedly popular vegetable, and many owners of gardens, while enjoying it, will undoubtedly be forming resolutions for extending their plantations, or paying greater attention in future to established beds. Such ideas are right, but I am afraid that they are not always carried out fully; and invariably when the season is over and Peas take the place of Asparagus, the beds of the latter are practically left to take care of themselves. While the merits of Asparagus are being discussed in many households a few notes bearing upon its better cultivation may prove interesting, and lead some to give more generous treatment to so valuable a crop.

In undertaking its cultivation a common error is made in setting out the beds to receive the roots. These are generally marked off 4 feet to 5 feet in width, and then four rows of plants are crowded into the space. It has only to be remembered what a mass of roots even a seedling Asparagus plant will make the first year to convince one of



AZALEA MOLLIS GEORGE CUTHBERT

(Shown by Messrs. R. and G. Cuthbert, Southgate, at the Temple Show.)

the space necessary for each to form a strong clump capable of extending and lasting over, say, ten years. Unless sufficient space be allowed, the site planted soon becomes a crowded mass of roots, which quickly absorb both the moisture and nutriment in the ground. The plants may not actually die, though many are short-lived grown under these conditions, but they certainly have a struggle for existence, especially through hot, dry summers.

Add to these disadvantages the further one of raised beds, and one should not marvel if the "grass" produced is thin and of poor quality. In most gardens, however, raised beds are the rule, and we would not suggest that they should be altered, but what we would urge being done at once is that the alleys between them be filled up level, or even a little above the level of the beds, with decayed manure, leaf-soil, or rich compost. The object of this is to conserve moisture in the soil, and so assist the roots to make as strong a growth as possible when the time to cease cutting arrives. The plants at that time are somewhat exhausted by constant cutting, and if the soil is dry and there is an absence of rain, the latent buds only push feebly, and it is indirectly to these we have to trust for the following season's supply. If the current year's growth is not strong and attains the height of from 5 feet to 7 feet, the buds formed at their base will be correspondingly small and the next May's cuttings will be weakly.

A sprinkling of some artificial manure, soot, or salt in small quantities applied during showery weather will have a marked effect on subsequent growth, while as regards liquids, that from the stable or farmyard may be used freely, or even waste water from the household could be utilised

with good results instead of allowing it to run down the drains to waste. Anything that will stimulate growth is best afforded while such growth is being made or directly before it, then the agencies employed are absorbed at once by the roots to the benefit of the crop generally. Surely such treatment is better than leaving the plants to take care of themselves through the heat and drought of summer, dressing the beds with a thickness of rank manure in the winter, when the ground is, perhaps, frost-bound and the roots inactive. In this case half the goodness of the manure is wasted, and the heavy dressing prevents the pulverisation of the surface soil by the frost - no small matter with Asparagus beds; the ground beneath remains cold and wet until late in spring, growth is retarded, and not infrequently the soil becomes baked hard and dry under the influence of sun and wind when the manure is raked off into the alleys, thus preventing the young shoots from pushing through.

Before leaving the case of established beds I would draw attention to the importance of protecting the summer growth after it has reached the height of 3 feet. In many gardens we see such growth lying flat on the ground, or broken off by the end of August either by winds or heavy rains. The season of growth is thus shortened by many weeks, as in most instances it continues to grow until the end of September. When prematurely broken off, the crowns cannot but be weakened. I would, therefore, advise growers to guard against this and afford some means of support. Some may think it unnecessary labour, and that good Asparagus can be grown without it. So can Peas, Beans, Raspberries, Hops, and many other things, but who can say supports are not really necessary to grow each to its best, though not more so than with the crop under notice? Thickly planted beds are often laid flat long before the foliage is ripe, and how best to keep it in an upright position is the question. In such cases I should suggest thrusting short, stout Pea sticks in between the plants and round the sides of the beds in such a way that the shoots are prevented from swaying about or falling over.

FORMING NEW BEDS.

It is somewhat late in the season to write on such work, but my remarks on this part of Asparagus culture may be borne in mind for another season. I have referred above to the necessity of giving the plants plenty of room. If I were called upon to make an extensive plantation for market purposes, I should set the plants out 1 yard apart each way. This would take £840 to the acre. Even at this distance, under good cultivation, the roots would soon meet, because they have only really to extend 18 inches each way, which they would probably do the second year after planting in suitable soil. Having to force a quantity of roots every year, planting has to be done annually to maintain the stock. We plant on rich, deep ground in lines 1 yard apart, and about 2 feet between the plants. We notice after the second year, when lifting them for forcing, that the roots are interlaced, but as they are shortened somewhat when placed in the forcing pit no harm follows.

Our permanent beds are planted on the level, as the soil being light we suffer from drought. The rows are 1 yard apart, which allows the men to wheel manure between them. We are now engaged in making the beds with half decayed manure from the cow yard. This will keep the ground cool and moist, however dry the summer may prove. It rains follow, so much the better, as they would wash the plant food into the ground, and the straw part left on the surface will check evaporation.

The tall shoots - some we have measured reaching 9 feet - are kept in an upright position until they turn yellow, and the time arrives for cutting them down, by means of stout stakes driven into the ground along the lines at intervals of a few yards, with some strong cord stretched from one to the other over either side of the shoots. The stakes are permanent, and it is easy to run the cord along. I know of no crop which

pays better than Asparagus for good cultivation, neither do I think there is any vegetable more appreciated, but the miserable produce many appear to enjoy could be greatly improved by following at once the suggestions I have made above. It may not be possible to equal the size of "grass" sent over from France, but there would be no difficulty in surpassing it for quality. Size combined with quality should be the object, and both may be obtained by generous treatment.

Before closing our remarks a word of caution may be given as to the use of salt. Asparagus being a native of the sea-coast, and naturally accustomed to soil impregnated with salt, many form the erroneous opinion that heavy annual dressings are necessary. With some soils, those of a heavy and retentive nature, salt should be carefully avoided, as its addition will tend to make the staple colder. Even on light, hungry land it should be used sparingly, slight sprinklings being given during showery weather at this time of the year. We have seen beds made quite white with it during March with a view to killing weeds, we believe, and stimulating growth. The application should certainly destroy the former, and in doing this may also prove too strong for the roots of Asparagus; but as regards hastening the growth, the very opposite is the case, as the presence of salt tends to keep all soils cold, so that growth is retarded. It also tends to cause the soil to run together, and then the "grass" often becomes contracted in trying to push its way through the hard crust. Plenty of manure beneath, with a light porous soil above, will produce Asparagus in this country equal to any that is imported, and when used soon after being cut it cannot be surpassed for quality.

There may be many who read these notes regret that they have not the advantages of growing their own Asparagus, and have reason to complain of that which they purchase being tough or stringy. This generally results from the "grass" having been cut several days, perhaps, and exposed to sun and air. In such cases I would advise immersing the bundles in cold water several hours before it is prepared for cooking. What previously looked limp and shrivelled will plump up by the soaking, and its quality when sent to table will be greatly improved thereby.

Goodwood.

RICHARD PARKER.

CHICORY AS A VEGETABLE AND SALAD.

Many persons would not think of growing Chicory for use as a vegetable, but it is valuable, as it is not only a relief from the usual run of vegetables, but in seasons of scarcity is a welcome addition. Chicory is grown so readily, that one need devote but small space to its culture. On the other hand, it is worth growing well, and there is no better time than May to sow for next winter's supply. On the Continent this root is a great favourite, and is cooked in a variety of ways. This is not the case in this country, as in many gardens it is not grown, and in others merely used as a salad. There are not many varieties, and some are poor, but no one will make a mistake if they sow the Witloof, the large-leaved Brussels and favourite continental variety, and doubtless a great advance on the old common form. There is another equally good selection but little known. This is the one called Christmas Chicory, and as a salad it is very fine; it is a large grower, and less bitter when fully matured than the ordinary variety. A large rooted variety is also grown on the Continent under the name of Magdeburg or Coffee rooted variety, but I do not think it equal in any respect to the kinds noted above.

The Improved Broad leaved is one of the best for use as a vegetable, but I prefer the Witloof for salad. The value of this root as a vegetable or salad is that it can be grown by anyone. Glass is not needed, as the plant is quite hardy; indeed, I have frequently seen excellent roots completely spoiled by placing them in too much heat. I am aware the usual advice is to force in a Mushroom house, but much depends upon how the Mushrooms are grown, as very little heat is needed. The best produce is obtained from a cool cellar or out house -

indeed, any building which is frost-proof and quite dark. Excess of heat makes the leaves woolly and thin, and the succulent nature of the plant is lost. Roots placed monthly in soil or boxes, in a cool dark place, in sufficient quantities, from October to March, will give a regular supply, and if used as a vegetable the top growth should be cut in a compact state before the outer leaf unfolds, and cooked in the same way as Seakale. It is surprising what a quantity of cutting material a dozen roots will provide. The grower must be careful not to over-water at the start if the roots are strong; little moisture will be needed until growth is quite active, and even when grown in heat the young growths damp badly if given much moisture. If liked in a green state for the salad bowl the plants may be exposed to the light, but the flavour is better if blanched as advised. I have seen excellent heads by placing roots in pots and covering over with another inverted pot a size smaller so that light was excluded. Grown thus the roots may be placed under stages or out-of-the-way places and a supply obtained.

I have stated that May is a good time to sow seed, and the root when fully grown resembles a Parsnip and needs land deeply dug. It well repays liberal dressings of manure, given some time in advance of sowing the seeds. This root does splendidly after Celery, as the deep culture and food needed for Celery are just the thing. The seed should be sown in rows 15 inches to 18 inches apart and the plants thinned to half that distance in the row. Many good cultivators drop the seeds at the distance named. This saves time in thinning. In the autumn, October or November, the roots may be lifted, and in lifting it is well not to break any portion of them. They are then laid in closely together and are easy to get at when needed, as in severe weather it is an easy matter to cover with litter. On the other hand, they may be left in their growing quarters, but at times they suffer from damp in wet soils.

SALADS.

These form an important item in all gardens, and may be had in quantity from June to October with care in sowing and selection of varieties. Of course tropical summers interfere with even the best culture, and to guard against this the grower will do well at this date to reserve land for the July and August supplies, such as a cool and well-manned border. It is a safe plan from this date to sow Lettuce every fortnight in small quantities. Lettuces that do not run so quickly are best for summer use, such as Marvel, a red-edged variety; also Continuity and Standwell, all Cabbage varieties; and in the Cos section such kinds as Intermediate, Champion, Brown, and the Balloon Cos are among the best. There will be no difficulty in having other salad materials from this date, and Radishes should now be sown in cool or moist quarters. Small salads, such as Mustard and Cress, may be sown under a north wall every ten days, and if Endive is much liked, a small sowing may be made every three weeks. It is not well to sow in quantity, as the plants run if not well attended to in the way of food and moisture. After July this does not apply. G. WYTHES.

SOCIETIES.

THE SELBORNE SOCIETY.

The annual meeting and consecration of this excellent society was held recently at 29, Hanover Square. The chair was taken by Mr. Bryce, M.P., owing to the unavoidable absence of Lord Avebury. The adoption of the annual report was moved by the Rev. Professor Henslow. The report contained a summary of the society's work during the year, and stated that great success had attended the Saturday afternoon visits during the winter to places of natural history or archaeological interest. Sir Robert Hunter seconded the motion, and pointed out that the society sought, among other things, to promote the study of natural history among the younger members of the community. He was pleased to note that excellent work was being done by certain municipal authorities in the preservation of natural beauties. The report was adopted. Mr. Bryce, who afterwards addressed the meeting, referred with regret to the disappearance in this country of rare types of birds and plants, and to the dissemination of landscapes by advertisements. The society was doing excellent service in assisting to check these abuses and in spreading the love of natural

history. It was working in combination with organisations having kindred objects, and that combination was especially valuable when Parliamentary action had to be taken. Other speakers addressed the meeting. Lord Avebury was re-elected president, and other officers were appointed. Nearly 300 guests were present at the conversation.

ROYAL HORTICULTURAL SOCIETY.
FLORAL COMMITTEE AT CHISWICK, MAY 16.
MORE ABOUT THE TULIPS.

THE floral committee met at the society's gardens for the fourth time this year on Wednesday, the 16th inst., for the purpose of further inspecting the Tulips grown for trial. Although the Darwins formed the bulk of those in flower, all the varieties, irrespective of class, were considered, and several awards recommended to mid-season kinds which the committee considered deserving of special recognition. Altogether fifteen sorts were recommended, of which nine were Darwins.

Picotee.—From Messrs. Barr & Sons, Long Ditton, Surrey; Messrs. Hogg & Robertson, Dublin; and Mr. H. J. Jones, Lewisham. This is a dainty May-flowering Tulip and very effective in masses. It grows 18 inches high, and its flowers, with elegantly recurving petals, are creamy white in the bud state, gradually passing to pure white, with a distinct and pleasing margin of rose-pink to each petal. It is also known as Maiden's Blush, but Picotee is the name under which it is most frequently seen.

Royal White.—From Messrs. Barr & Sons. This belongs to what is popularly called cottage garden Tulips, and is one of the most lovely of white varieties in blossom at the present time. It is sturdy in habit and suited for edging beds with, as its average height is only about 6 inches. Its exquisitely shaped Water Lily-like flowers, with long pointed, substantial petals, are of the purest white when fully expanded, and the centre is pale yellow. For keeping up a succession of white Tulips, Pottebakker White, Joost van Vondel White, and Royal White form an admirable trio. **Golden Crown.**—From Messrs. Krelage, Haarlem; Messrs. Barr & Sons; Messrs. James Veitch & Sons, Chelsea; and Mr. H. J. Jones. Some confusion exists between this and Golden Eagle, a totally distinct variety with canary-yellow flowers. In Golden Crown the flower is large, with rather sharply-pointed petals, bright golden-yellow, edged with orange-red and occasionally marked with scarlet. A bed of it creates a telling effect in bright sunlight, and for planting in masses in parks and pleasure grounds few Tulips are better adapted. It is a gem among late bloomers, and its flowers last a long time when severed from the plants.

Rose Blanche.—From Messrs. Hogg & Robertson and Mr. H. J. Jones. Some persons dislike double-flowered Tulips, and certainly many of them are not desirable, but the one now under notice is far superior to any other white variety with which we are acquainted. The shapely Peony-like flowers with incuring petals are very full, pure white, and borne on stiff stems, which rise 9 inches or 10 inches above the ground line.

Summer Beauty.—From Messrs. James Veitch and Messrs. Barr. Here we have a Tulip that should be planted extensively, as it is quite distinct, of good form, and very effective. It grows 1 foot high and bears large rose or heliotrope-coloured flowers, flaked with crimson and cream-white. The centre of the flower is light blue. It is also met with under the name of Striped Beauty.

Gesawerin Bontou d'Or.—From Messrs. Hogg & Robertson, Messrs. James Veitch & Sons, and Messrs. Krelage. Amongst late-flowering sorts this holds a prominent position. It grows about 18 inches or 20 inches high, and its beautifully-formed, medium-sized, rich yellow flowers, borne on substantial stems, are excellent for placing in vases indoors, as they remain fresh for several weeks. Fine for massing.

DARWIN TULIPS.

Broadly speaking, these are not so bright in colour as the early-flowering varieties, but they are useful for keeping up a succession of flowers. They are admirably adapted for naturalising in grass, planting in parks, shrubby borders, and beds. As the flowers are borne on very long stems it is important that they should not be planted in very exposed situations, as rough winds frequently do considerable damage. This section owes its origin to M. Krelage, of Holland, an enthusiastic grower of bulbous plants, who has done much to enrich our collections of hardy plants.

Fraulein Auber.—From Messrs. Hogg & Robertson. This is a remarkably fine variety with large, beautifully-shaped flowers, varying in colour from deep violet to mauve, with a light centre. It averages 2 feet high.

Amber.—From Messrs. Hogg & Robertson. In growth this is not quite so tall or sturdy as the last-named, and its bold, cup-shaped flowers of perfect form are violet-purple, shading to heliotrope, with a blue centre.

Dandies.—From Messrs. Hogg & Robertson. Few Darwin Tulips are more effective than this. Its large, well-developed, crimson-mauve flowers, with a blue centre, are carried on stout stems, and are very enduring.

Ree II. D. Dombatta.—From Messrs. Hogg & Robertson. Here we have a sturdy variety well adapted for massing. It grows 2 feet high, and its bright red flowers, touched with purple on the outer petals, are very handsome. The centre of the flower is black.

Guilford Day.—From Messrs. Krelage. The average height of this uncommon variety is 2 feet, and the exquisitely-shaped, bright rose-coloured flowers, with a white band down the centre of each of the three inner petals, are quite distinct, and remain attractive for a long time. The base of the flower is white.

Professe M. Postre.—From Messrs. Hogg & Robertson. This is a tall and vigorous grower, averaging 26 inches high. The flowers, with substantial petals, are scarlet, suffused with rose and stained with rosy carmine on the exterior. The centre of the flower isinky blue.

Enoque.—From Messrs. Krelage. The flower of this variety is of superb form and the colour rosy scarlet, the inner petals striped with white down the centre, and a flush of

purple on the outer petals gives additional beauty. The plant is of a sturdy habit, and the flower, with a white centre, is borne on an erect stiff stem.

Mrs. Fairweather Sanders.—From Messrs. Krelage. This is one of the largest of the Darwin Tulips, and in its way one of the best. It generally exceeds 2 feet in height, and its flowers, of excellent form, are very substantial, the petals broad and well rounded, and the colour a trifle deeper than the last-named. The centre of the flower is white.

Phœnix.—From Messrs. Hogg & Robertson. This is another variety of great beauty, with bold, well-shaped, rosy-scarlet flowers stained with carmine on the outer petals. The base of the flower is blue-black.

THE TEMPLE SHOW.

The exhibition of 1900 in the Temple Gardens will not easily be forgotten. It was a display of unusual excellence, more interesting and beautiful even than the noble shows of the past twelve years, and we hope the society will reap substantial financial advantage. As we go to press on Wednesday we cannot do more than make general reference to the display, but may refer to the plants shown of which illustrations are given. Unfortunately, during the afternoon of the first day the weather was not favourable.

Colonia Maura.—This is a remarkable plant, very bold and striking, a native of New Zealand, and hardy in the milder parts of this country. Its flowers, as our illustration suggests, are produced singly on a strong stem, and are white with a bold yellow centre.

Rose Jersey Beauty.—This is a very interesting hybrid between Rosa Wichuriana and Perle des Jansins, and has something of the habit of the former creeping species.

Crochallus foliolaris.—From Mr. R. J. Measures, of Cumberwell, is referred to at some length in the description of Mr. R. J. Measures' interesting exhibit of insectivorous plants.

Azalea mollis Mac. George Colburn.—This is one of those beautiful golden-orange forms of *A. mollis*, from Messrs. R. and G. Colburn, of Southgate. Few shrubs are of greater importance than the varieties of this Azalea for their rich warm colouring.

Carmation II. J. Jones.—This was shown by Mr. H. J. Jones, of Ryecroft Nursery, Lewisham, and was described in THE GARDEN, p. 287. It is a flower of warm clove colour and sweet scent.

FRUIT.

Messrs. Rothschild, Gunnersbury House, Acton (gardener, Mr. Hudson), had a grand collection of fruit trees in pots, also boxes of gathered fruit. Amongst the latter were very fine Royal Sovereign Strawberries, Amsden June Peaches, Early Prolific Plums, and a half-dozen varieties of Cherries, the Bigarreau de Schreken, Governor Wood, and Early Bigarreau being very fine indeed. Pot Vines were also a feature, being laden with bunches. The Royal Muscadine was very fine. Very fine trees of the Cardinal Nectarine, the trees in many cases having each over a dozen fruits. Early Rivers Nectarine was also staged in splendid condition, but carried less fruit than Cardinal. Cherries were remarkable, and the varieties named above were mostly shown, but mention must be made of Belle d'Orleans, Frogmore Bigarreau, and Bedford Prolific. Plums were largely staged—Early Prolific, Transparent Gage, Early Purple Gage, and others, the whole forming a magnificent collection.

Messrs. Rivers and Son, Sawbridgeworth, staged a collection of Nectarines in pots, the variety being their Cardinal. The trees were in splendid condition, being heavily cropped, the fruits large and finely coloured. They bore each from two to three dozen. There can be no doubt but that the Cardinal Nectarine is one of the finest for forcing. The same firm also had three new Peaches—the Duchess of York, the Duke of York, and Prince Edward, also very fine Nectarines in baskets, the variety being Cardinal.

Messrs. Binyard, Maidstone, staged a fine collection of Apples, with a few stewing Pears, in all, 100 dishes. There were also very fine fruits of Gasconique Scarlet, Cox's Orange Pippin, Blenheim Orange, Sandringham, Beauty of Kent, Sanspareil, a very good dish, also Mother Apple, Buckingham and Calville Rouge. Amongst the cooking kinds were dishes of Afriston, Annie Elizabeth, Limes Prince Albert, Newton Wonder, Washington, Striped Beautin, Lord Derby Stone's, Bramley's Seedling, and many others.

Sir J. Pease, Bart., M.P. (gardener, Mr. McIntosh), exhibited a very fine collection of forced fruit, including Early Frontignan Grape, with very fine Early Rivers Nectarine, Lemons in variety, Melons, Apples (the Melon being fine), Royal Sovereign Strawberries, Downton and Bigarreau Cherries, with fine Brown Turkey Figs, Plum The Zar, and Tomatoes.

Mr. A. Henderson (gardener, Mr. Bastin) sent an excellent collection of Melons—British Queen, Hero of Lockinge, and a new seedling, British Queen Strawberries, Hale's Early Peaches, Apples, and a few vegetables, but we certainly do not admire these staged with forced fruit.

Lord Wantage staged a very pretty collection arranged with Fortunes Yellow Roses. There were some good Grapes, comprising Black Hamburg, Foster's Seedling, Madresfield Court, and Buckland Sweetwater; good Melons, Nectarines, Apples, Tomatoes, Oranges, Cherries, Strawberries, and fruits of *Monstera deltoidea*.

Mr. J. Watkins, Popham Farm, Heronton, had a collection of Apples, comprising 100 dishes of well-kept fruit, splendid in colour, including some varieties rarely seen at this time of year. Gasconique Scarlet was excellent, as was Graham and Sanspareil, Beauty of Kent, May Queen, Schoolmaster, Bess Pod, Brown's Seedling, Grieve's Pippin, King of Tomkins County, Newton Wonder New Bess Pod, and many others.

VEGETABLES.

Messrs. Sutton, Reading, had very fine pyramid of Peas, Early Giant and Bonfield, both splendid forcing varieties.

Mr. S. Mortimer, Rowledge Nurseries, Farnham, staged splendid Cucumbers in eight varieties, the Sutton Peerless being very good, also A and Marvel.

Messrs. Carter, High Holborn, London, showed a good collection of vegetables, including Cucumber Earliest of All, Duke of York Tomato (very fine), Bolton Mastepiece

Bean, Telephone Pea, and splendid First-crop Potato, with Daisy Pea in pots and Blenheim Orange Melon. The new Long Forcing Turnip was specially fine.

Mr. J. Harwood, Colchester, staged some well-grown Asparagus. This exhibit was most commendable, as it was superior to imported produce, being green.

Mr. W. Poupert, Twickenham, sent four varieties of Giant Rhubarb.

HERBACEOUS AND ALPINE PLANTS.

Mr. T. S. Ware brought a host of good and showy flowers, among which not a few of the old favourites were conspicuous. For instance, masses of the rich double crimson-red Wallflower, as also the double orange-kind, at once caught the eye with their massive and well-flowered spikes of bloom. How these old favourites of the past quickly kindle enthusiasm to-day is a little surprising, but none are more welcome, none are more delightful in their perfume. Particularly showy and good were the Darwin and other Tulips that in May, long after the bedding Tulips have departed, ever make a fine display. There was a large array of these, and very fine. Especially good among the dwarfer plants was Aster alpinus ruber, a comparatively rare and beautiful plant, with heads of flowers 3 inches across of a warm rosy red. *Cypripedium acaule* was very good, the strong flowers well developed and boldly disposed. A not every-day plant is Pentstemon Scutleri, with deep mauve flowers that make it especially welcome on the rockery at this time. The ever attractive Edelweiss was in good flower, and the glorious and showy cloxinia-like blossoms of *Heuryleila Delavayi* render it a gem of the first water. Here it was free, vigorous, and robust, the very essence of a good hardy plant, and one that is likely to attract attention for many years to come. *Oreis fusa*, one of the best and most amenable to general culture, was here in splendid form, a large pan being crowded with handsome spikes. Peonies, too, were in great abundance, while among the dwarfer alpinos we noted *Phloxes*, *Saxifrages* of several sections, particularly, and *S. latioscandula superba*. *Myosotis rupestris* is ever a delightful plant, and it lost none of its charm even amid the great wealth of flowers at this remarkable exhibition. *Erenurus himalayensis* was, among other things, very striking.

For many years Messrs. Backhouse and Sons, of York, have earned for themselves a household word by the conspicuous beauty and charm of their miniature rockwork exhibits, and this time, though less probably in extent than on some former occasions, it was just as charming, just as replete with beauty and choice things that only very few firms now bring to an exhibition. Not a few of the plants were gems indeed, and as such we describe the lovely and unique *Primula Reidi* with its drooping snowy bells of the purest white, several of them in quite a small umbel, though individually the flowers were large and very fine. The habit of this unique plant is more like one of the shaggy Hawk-weeds, so totally different is it from the many of its class. Another rare thing also probably well-nigh unique is *Silene acaulis grandiflora plena*, which we do not remember seeing on any former occasion. The more than lovely masses of blue *Eritrichium*, like an exquisite Forget-me-not, was indeed a prize, not a single flower or two, but quite lovely little carpets or tufts, and bearing evidence of being at home. *Saponaria cynoides alba* was very charming, pure white, and forming sheets of blossom. Rich and intensely lovely is the vernal Gentian, *Lithospermum granifolium*, with pendent blue flowers that render it charming among first-class alpine flowers. Perhaps in effect none were more surpassingly imposing than *Androsace sarmentosa*, in large pans freely covered with blossoms; the variety *Chumbuy* was nearly, but it is not so free and probably less robust. *Dianthus Freyi* is an alpine Pink of rare beauty, so small, so beautifully formed, and yet so crowded with flowers. This is quite a gem. Some choice *Ranunculi* were also noted, and among them *R. parvasibolia* and *R. cortusoides* were very showy. The white, solid-looking flowers of *Podophyllum Emoli* were very fine amid the yellow anthers, and so rarely is it in such good condition. A very conspicuous plant in this group was the true *Cistus ladaniferus*, the large white blossoms over 3 inches across and very fine. This plant must not be confounded with *C. cyprius*, which is often sold for it. An exquisite little thing is *Androsace argentea*, one of the most minute of all the tribe, and having white flowers. These are but a few of the many things in this group, all of which were finely arranged amid rocks in the most natural and artistic manner, while the background of small Pines, Bamboos, and such like tended to that realism of the model garden that shows much care and forethought in the carrying out of the idea as a whole.

Mr. Amos Perry, Wincelmore Hill, had a capital lot of the merrier hardier things disposed in the bolder and showier bunches that attract attention at a glance. Some of the more conspicuous of these were masses of *Trollius* and Tulips in an almost endless variety of colour and form, helping the extent as also the gaiety of the group in a very remarkable way. Richly coloured masses of *Heuryleila Delavayi*, very fine and strong, made a most striking array of beauty. The old Fair Maids of France was also strongly in evidence, masses of the pure white flowers being noticeable. Very good were double yellow Wallflowers, and rich crimson Poppies amongst other things added taste and splendour to the entire group. Some very striking hybrid *Gentians* were in this lot, *G. Helldreichi litorea*, *G. montanum arantianum*, *G. a. magnum* being of this order. These forms mark a decided step onward in these showy, free-flowering plants, plants, too, that may be indeed, should be grown by all who love a garden, and who prefer free-flowering, perfectly hardy things. An exquisite *Columbine* is *Aquilegia Stuarti*, deep blue and palest white in combination, rendering it most striking and effective. Rarely has this plant been seen in such fine form as this, the flowers bold and telling beyond comparison. A new break in the crimson oriental Poppies is P. Fringed Beauty. In this the segments are deeply cut all round the edges, while a big black blotch at the base of each renders the whole flower very showy and not a little artistic. *Fritillaria recurva* was excellent, and a great pan filled with *Lewisia rediviva* revealed this, as in all probability it has never been seen before. The purest white

flowered form of *Ranondia pyrenaica alba* was noted here, and a fine pan of the Himalayan Edelweiss, less pure perhaps than the Swiss form, but yet good and acceptable by reason of its greater freedom. One of the most impressive plants in Mr. Perry's group was a fine mass of *Oenothera speciosa* rosea, the clear rosy flowers of a deep and sparkling hue that is not easily described verbally. It will suffice that it is a most lovely thing, wonderfully free and quite hardy, and what more is wanted in the garden? Several hardy *Cypripediums* were also well shown, especially *C. pubescens*, *C. acule*, &c. *Thalictrum orientale* is a white-flowered form of much beauty, quite distinct from all. A singularly delightful carpet plant is *Acena Buchananii*, with that pretty silver-grey tone over all its leaves. It is a dense-growing plant that is a welcome change in the rock garden. *Erigeron salusignosus* is the finest of all the early composites, and the lilac-blue flower heads render it a very fine as well as attractive plant. There were many showy Globe Flowers also, but those mentioned already will show both the quality and the extent of Mr. Perry's fine group in this occasion.

M. Van Tubergen, Haarlem, Holland, had several new Irises and Tulips. Of the first, *I. paradoxa* and *I. Barnume* were best, while of the Tulips, *T. galatica* is a very beautiful yellow. These, it is probable, we may refer to again.

The Messrs. Barr and Sons, of Long Ditton and Covent Garden, invariably make a rich and varied display of hardy things that ever possesses the merit of being representative, and on this occasion it fell nothing short of its predecessors. Hosts of cottage, decorative or garden Tulips, masses and banks of the more sombre and so-called Darwin Tulips, were all here in great array, and created a feast of colour beauty that not only finds admirers, but retains them in admiration of the feast displayed before them. It is not possible with the limited time at our disposal to go into details of these, for they embraced every kind worthy of culture, and these, too, in fine and bold bunches. Irises, particularly of the Spanish section, created quite a new feature among the group, the blue and light blue shades, with porcelain and other shades being most attractive. Apart from these there were many hardy things of the best and showiest kinds, and a small rockwork exhibit arranged with the smaller and dwarfier growing alpine. These, for the most part, were of the usual order of such things, and embraced *Saxifragas*, *Sedums*, *Scrupervivums*, *Phloxes* of the alpine set and the like. Some very beautiful *Calochortus* were charming, as also *Iris arenaria*, a clear yellow, though very dwarf kind, *Tulipa Batalini*, a lovely soft yellow species, was also noticeable. *Adonis amurensis* was very fine, and not less so *A. pyrenaica*, while amid all, Fortin's Lily of the Valley made a welcome impression in purity and by the boldness of its bells. At one end a collection of dwarfed trees of Japanese growth was also staged.

Messrs. Jackson and Sons, Woking, had a very nice lot of the more showy things, both herbaceous and rockery plants. Of these, *Aphileja glandulosa* was pretty. *Betonica grandiflora* is not a frequent plant, but it is distinct in its being so early. Among rarer things that were especially well done were *Phytolacca canosum*, which is especially valuable in the sunny crevices of rockwork. *Edraianthus dalmaticus*, of which there was a charming pan, was full of bloom. It is probably the best species of this family and the most freely flowered, the heads of purple-blue being fine and distinct. *Anemone sylvestris plena*, *Hemerocallis Mordendorfi*, *Iris susiana* and *Ochris foliosa*, were all in capital form. Several plants of *Priemula luteola* were in flower, and so good an exhibit should tend to make it better known; while *P. sikkimensis*, not far removed, was also represented by several flowering examples. *Onosma lauricum* is a good plant in this lot well worth noting.

Messrs. Paul and Son, Chesham, had a comprehensive group of *Rhododendrons* in great variety, many trusses of each sort well displaying their worth. These, with many hardy things such as *Trollius*, the showier kinds of perennials, and some good *Anemones* making a goodly display.

A wonderful collection came from Messrs. Wallace, of Colechester. There were many rare Lilies and good bulbs and other plants that are here got together. The Lilies alone would have made a feature in any exhibition, for not only were they good and well grown, they were also numerous, and not a few rare things included also. Indeed, in brief, it was an exhibit of rare Irises, Lilies and of beautiful hardy *Cypripediums*, of lovely *Calochortus* and *Brodieas*, and many other things besides. These were set out in blocks. We have only to note that the Lilies included such as *rubellum*, *Hansonii*, *szvatianum*, *Martagon album*, *davuricum*, and elegant, to say nothing of such as *longiflorum* in variety, *canadum* and others. Of the hardy *Lady's Slippers* there were *calceolus*, *occidentale*, *spertabile*, *pavilorum*, *acule*, and others, all charmingly grown. The collection of rare species and forms of Iris was alone remarkable, particularly *I. Korolkowii concolor*, *I. Leifeldii*, *I. paradoxa*, *I. Lupina*, *I. susiana*, and others too numerous to detail. A very interesting hybrid Day Lily is *Hemerocallis luteola*. It is a cross between *H. aurantiaca major* and *H. Thunbergii*, with somewhat of the characteristics of both species. The *Incavilla Delavayi* in this group were very fine and superbly coloured, while apart from all this came Tulips in galore. Tree Ferns in abundance, rich and clastic in many varied colours, to say nothing of *Nias* and such like plants, that individually were teeming with interest. Grand spikes of *Elaeagnus* were also noted.

Messrs. Kelway and Sons, Langport, Somerset, had an exhibit, the strong feature of which was the Tree Ferns in many lovely and indescribable tints, some soft, some rich, others clastic, or glistering in their pure or melting shades, yet forming in the whole a bank of much beauty. Many flowers were of enormous size, as well as of great beauty in colouring. There were also some of the earliest of the herbaceous kinds, mostly single forms, and these with a varied assortment of perennials and *Pyrethrums* and the like made a most imposing bank of floral wealth and boldness.

Messrs. Joseph Chad, Crawley, Sussex, had a small rock garden exhibit filled with good free-flowering alpines of the more showy sorts, together with a rich and beautiful collec-

tion of Tufted Pansies and such things. These latter were very fresh and good looking and very bright in colour.

Messrs. Jamoch, Dersingham, brought a very fine exhibit of Lily of the Valley grown from retarded crowns, the flowers very clean and pure on bold and sturdy stems. They were splendidly grown, and evinced the highest possible culture in these fragrant and popular flowers. The group was backed with flowering Lilies and other plants. Samples of the retarded crowns were also shown to show the mode of keeping them prior to forcing.

The Guildford Hardy Plant Company had, as usual, a pretty rock garden exhibit set up with excellent judgment and taste, particularly in the disposal of the smaller species among the rocks. The alpine and rock shrubs employed were very numerous and suitable, embracing in the former such as *Junipers*, *Retinospora*, *Pinus*, *Veronicas*, *Abies*, and such like. Among the alpine were some lovely masses of *Homostoma corulea* and *H. e. alba*, full of bloom. Perhaps one of the most exquisite was *Androsace sarmentosa villosa*, a charming deep rosy carmine, wonderfully free and most effective. This was so placed that it covered a tiny ridge or ledge of rock at its summit, and traversing a slope to the south was rendered as charming as it was natural and picturesque. *Campanula tridentata* is a rich purple flower with very large bells, though quite prostrate, or nearly so, in growth. The inimitable and indescribable blue of the *Eritrichium* was here again seen to advantage. *Scrupervivum arachnoideum rubrum* is the finest of the Cobweb Houseleeks, and was shown in profusion, the reddish crimson of the rosettes being especially good. Another good and most distinct plant is *Cerinth alpinum*; it is a Borage-root, and in appearance half way between a sponge and the *Arnica*; its flowers are drooping, crimson at the base of corolla, and yellow in the remainder. In the same group, *Haberlea rhodopensis* was very fine, yet, perhaps, not so finely flowered as in the same group a year ago, when a grand plant was shown of this rarity. Regarded as a whole, this group was most satisfactory both in design and general arrangement, testifying closely to an intimate knowledge of the habits and requirements of the species so freely employed in such an arrangement.

Mr. M. Pritchard, Christchurch, set up a fine group of the best hardy things, many of which do so well in that much-favoured district. A few of the more important and unusual in the group were *Aquilegia Stuartii*, *Iris Polmanii*, *Dianthus alpinus*, very beautiful in colour and so dwarf in habit. Very curious, too, is *Eritrichia pyrenaica*, and the rich yellow of *Ranunculus graminifolius* makes a pleasing show. The dwarf Forget-me-not (*Myosotis rupeola*) was very lovely; its miniature tufts full of blue flowers that are most charming. *Ranondia pyrenaica alba* was also noted here. Besides these there were good and bold masses of *Trollius*, perennial *Comflowers*, *Anemone Halleri*, *Pulmonaria*, and, not least, the scarce *Oxalis campephylla*, with snowy white flowers in a boson of glaucous leafage.

Messrs. Isaac House and Son, Westbury-on-Trym, Bristol, brought up a lovely lot of Tufted Pansies and such like plants, mostly grown in pots and pans. A chief feature of this lot was the exceptional freshness of the flowers, the whole being very bright and clean-looking. Golden Fleece is of a rich golden hue, very compact and of good form; *Marchioness* is of the purest white; *Lady Keith* is of the Magpie type and very pleasing, Mrs. Haig being of a rich purple, very deep; while *Kitty Bell* is a delicate rose, charming in the extreme.

The Messrs. Hopkins, Meck Cottage, Knitstoad, Cheshire, had an interesting group of *Auriculas* and *Polyanthuses* among other things. Of the former, *Golden Queen* is of a most vigorous type, while among the *Polyanthuses* was the old and rare variety *Rex Theodore*, the blue kind *P. elatior corulea* being also represented by a single plant. Many alpine, dwarf hardy border and edging plants were also in this group.

Messrs. Carter, High Holborn, also had a small rockery exhibit, in which an abundance of small alpine were displayed to advantage.

Messrs. Rogge and Robertson, Dublin, had a fine display of Darwin and other Tulips, a huge bank of these being resident with beauty.

Mr. H. J. Jones, Lewisham, had a mixed group of Spanish Iris, *Nias*, Tulips, and the like in much variety, the stems well disposed, and displayed good taste in the arrangement.

Messrs. G. Van Wagon and Knip, Haarlem, Holland, contributed a group of *Astilbe japonica* in several varieties, though not on the whole, we think, sufficiently distinct for individual naming. All the kinds were very free and robust and well grown.

ORCHIDS.

Messrs. Stanley, Ashton and Co., Southgate, had a most attractive and pretty group. In the centre at the back the *Miltonias* were neatly arranged in cork. These were surrounded by graceful *Oncidiums*, which in turn were intermingled with *Laelia purpurata* in numerous and varied shades of colour. The *Cattleya Mossiae*, as is usual with this firm, were very conspicuous. The most distinct among the many good forms was a handsome white variety, *C. M. Wagneri* (Hassall's var.), the flowers being fine in substance and form. *C. M. St. L. Lipton* is white, with faint tinges of pink in the centre of the lip. *Cypripediums*, *Lycastes*, *Odontoglossums*, *Epidendrums*, and other interesting species were also included.

Messrs. E. Sander and Co., as usual at this show, had a most extensive and varied group, which was neatly and tastefully arranged. The *Cattleya Mendeli* at the upper end comprised some of the most varied and beautiful varieties we have seen. *C. Mossiae* were also well represented by most of the white and dark varieties. The different varieties of the *C. M. Reinckiana* section were most attractive. *Zygopetalum grandiflorum* was very attractive. *Odontoglossums* included many good forms of *O. crispum*; many finely spotted varieties were included. Among the many forms of *O. Pescatorei* was a finely-spotted form under a bell-glass. The hybrids included a grand form of *O. excellens*, many varieties of *O. Adriane*, *Miltonia*, *Bleumna*, some remarkable varieties of *Laelio-Cattleya callistoglossa* (*purpurata* -

Warszewicz), *Cypripedium Gertrude Hollington*, and fine varieties of *C. Godefroye leucobulum*.

Messrs. J. Charlesworth and Co., Beaton, Bradford, had a most extensive and beautiful group. The various species of *Cattleya* were grouped together and made a fine display. The special features were *Dendrobium nobile murrhinum*, with delicate pink skinned flowers of unusual size and substance; *Cattleya Skinneri alba*, *Laelia purpurata* Novelty, with almost white flowers; *Cypripedium Mary Beatrice*, a dark hybrid of the *C. Lawrencei* section; *Lycaste Ballie* (*Skinneri* - *plana meurasiana*), showing the intermediate characteristics of the parents, *Cattleya Schroderae heatonensis*, a delicate form with a distinct rose suffusion, was very attractive.

Mr. J. Cypher, Cheltenham, had a large group arranged with his usual taste, the varieties of the different sections being mostly grouped together in a most effective manner. *Epidendrums*, *Dendrobium nobile*, and *Laelia purpurata* made up the background. The varieties of *L. purpurata* represented some exceedingly dark varieties. *C. Mossiae* and also *C. Mendeli* were fine. The most striking among the latter were *C. M. Oddity*, an almost white variety of great size and substance, but having a deformed lip. Another variety of this species had a deep purple margin only on the front lobe. Among the numerous species and hybrid *Odontoglossums* was *O. lochristyense* (Cypher's variety), a charming form with large pale yellow flowers, spotted with bright brown.

Messrs. Hugh Low and Co., Bush Hill, Enfield, had a choice display made up of many charming and beautiful forms of *C. Mossiae*, *C. Mendeli*, and *C. Skinneri*. *Laelia purpurata* and other species were well represented. The special Orchids included *Odontoglossum crispum xanthotes* (Low's var.), almost white except the yellow on the disc, and a few brown spots on the disc. *O. C. Britannia* is a beautiful form with rose suffusion and large bright brown blotches. *Cattleya intermedia alba*, *Vanda Agnes Joaquim*, *Cymbidium T. Ansoni*, a natural hybrid probably between *Hookeria* and *hoyanum*, *Cypripedium lawrenceanum hycanum*, and *C. Aylingii* were well represented. Some good forms of *Odontoglossum excellens* and the rare *Dendrobium sanguinalis* were also included.

L'Orticole Coloniale, Ltd., Brussels, Belgium, had an extensive group of *Odontoglossums* in variety and a collection of finely flowered and varied forms of *Miltonia vexillaria*.

Messrs. B. S. Williams and Son had a group of *Vandas*, *Cattleyas*, *Odontoglossums*, &c.

Messrs. Backhouse had a group of *Odontoglossums*, *Laelia purpurata*, and *Cattleyas* in variety.

M. Claes, Brussels, sent a collection of *Odontoglossum crispum*.

M. Peeters, Brussels, sent a choice collection. In the back was a finely-grown plant of *Enophiella preterisiana*. *Laelio-Cattleya canhamiana superba* with an intense purple labellum, several good spotted varieties of *Odontoglossum crispum*, and other interesting orchids were included.

M. Vuylsteke, Leochristy, Belgium, sent *Odontoglossum Rolfei* (*harryanum* - *Pescatorei*) in variety, and a variety of *O. crispum-harryanum*.

Messrs. J. Veltch and sons sent *Laelio-Cattleya G. S. Ball* (*cinnabarna* - *Schroderae*), with rich orange flowers.

Sir E. Wign, Bart., Clare Lawn, East Sheen, had the finest group in the show. The *Cymbidiums* were finely flowered and arranged at the back. The *Cattleyas* and *Laelias* were of unusual quality and finely flowered; some good white *Cattleya Mossiae* forms and a beautifully flowered plant of *C. Skinneri alba*. Among the *Miltonias* the most striking variety is *M. vexillaria Memoria G. D. Owen*, which has a large blotch of deep purple in the centre resembling a moth. *M. Bleumna* was also well represented. Several botanically interesting plants were shown.

Sir T. Lawrence sent his usual large group (not for competition). The plants were finely grown and neatly arranged. One of the most striking among the many fine things was *Miltonia Bleumna nobilior* with fifteen flowers.

Mr. W. A. Gillett, Fairbank Lodge, Hants, had a group, the chief feature being some finely flowered plants of *Odontoglossum polyanthum*.

M. Jules Hye sent a remarkable hybrid *Odontoglossum* in *O. Souvenir de Victor De Com* (*harryanum* - *luteo-purpureum*), a good variety of *O. Adriane*, and *Cymbidium hycanum*.

Mr. H. Little sent *Laelia purpurata littleiana*, a white form with purple blotches on the lip.

Mr. A. W. Law-Schofield sent *Cypripedium Beatrice Mary*.

Mr. E. Ashworth, Harefield Hall, sent a white *Cattleya intermedia* and a spotted *Odontoglossum crispum*.

Mr. S. Corkson had *Phajus Corksonae*.

The Marquis de Warem showed some remarkable varieties of *Cattleya Mossiae*.

Mr. Ludwig Mond, Regent's Park, exhibited a group of finely flowered plants.

INSECTIVOROUS PLANTS.

A very comprehensive collection of these interesting plants was exhibited by Mr. R. J. Meares, Cambridge Lodge, Flodden Road, Camberwell. *Dionaea muscipula* (Venus Fly-trap) was represented by a fine specimen. *Darlingtonia californica* with its quaint pitchers was most interesting. The New Holland Pitcher Plant (*Cephalotus follicularis*) included six finely grown plants. The *Sarracenia* contained most of the best species and hybrids in cultivation. A good plant of *Nepenthes macleodiana* with its deep purple pitchers showed in striking contrast to the green foliage surrounding it.

NEPENTHES.

About a dozen finely-grown plants of these Pitcher Plants came from the Duke of Northumberland, Syon House (gardener, Mr. Wythes). The plants were finely grown and well pitched considering the season of the year.

[A description of several important exhibits must unfortunately remain over until next week owing to pressure upon space.]

THE GARDEN.

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[JUNE 2, 1900.

GROUPING RHODODENDRONS FOR COLOUR.

NOW that Rhododendrons are in bloom it will be well to point out the great advantage of having them well grouped for colour.

There will be many who are contemplating a planting of them in the autumn and visiting the nurseries in order to make a choice. It will be an immense gain to the future beauty of their gardens if they will now take the trouble of first making up their minds as to a scheme of colouring, whether of one group or many, and in the nursery fixing upon the bloom of some one variety as a central type of the colour-scheme, and asking for a flower which should be carried in the hand. Then it can easily be seen whether or no other varieties that are individually admired will accord with this in colour. Of each kind that is approved and noted a bloom should be taken.

The range of colouring of Rhododendrons is so wide, that if this precaution is not taken the intending planter is sure to go wrong, as, for instance, a flower that among shades of rosy-amaranth may look a pure pink, if removed from their neighbourhood and put beside a real pure pink, that is seen among white or scarlet-rose, will be found to be quite out of harmony. This width of colour-range will also enable the buyer to choose the combination that best pleases his eye, whether of clear pink with white and rosy scarlet, of the few shades that incline to salmon-rose, of the strong and very numerous amarantths, or the cool purples which go best with the clear whites, and whites tinged with purple.

In the nursery also he will best get an idea of the habit of the plant, and should ask to see them in the older state, when they have developed their true shape and style of growth. For though the hardy Rhododendrons, with a few recent exceptions, are developed from two wild kinds, namely, the ponticum of Asia Minor, with purple flower and narrow polished leaf, and the catawbiense of the Southern States of America, the seedling varieties have broken into plants widely varying in habit.

Some form full tall towering bushes, while others incline to a small tree form, displaying a distinct trunk and bare branches, and others to an almost prostrate habit. Some are always small and compact, while others spread far and wide, making a rapid yearly increase by means of annual growth of 1 foot to 15 inches. There

are also early and late kinds: and this should be remembered in composing the groups, so that each group may flower approximately at the same time, for it is distressing to find one plant in a group fallen while the rest of it is in perfection.

There is no need to despair if anyone who loves good colour schemes should inherit or otherwise become possessed of ground in which Rhododendrons have been planted in the usual haphazard way. For of all shrubs we have they are the easiest to transplant up to at any rate the age of twelve years, and with a little clever engineering and a moist peaty soil, even to a greater age. Their roots are close at home, and they lift with a compact ball that makes them very easy to deal with; the chief difficulty is to avoid breaking the brittle branches.

It would be a pleasant task to take in hand this conversion of a young collection of healthy plants now in flower from a state of colour-muddle, where each plant harms its neighbour, to one of delightful colour harmony, and planning a fresh and better arrangement for the autumn. It would be best done on paper, planning the intended clumps accurately and numbering the place for each; then if a corresponding number-tally were fixed to each bush at planting time, it would go straight to its place.

It should be remembered that it is always well to keep the true purples away from the other colours. They are beautiful by themselves or with whites, and look their best in half-shady places.

An ideal place for a good planting of Rhododendrons would be a shallow dell where the soil is damp and peaty. Easy grassy ways should lead between the planted clumps, and to relieve the monotony of the one plant alone it would be well to have some groups of silver-barked Birch.

WANT OF VARIETY OF SHRUBS IN GARDENS.

ON page 356 of THE GARDEN of May 19, a correspondent writing of *Berberis stenophylla* wonders why shrubberies should be filled with Privet and Laurel when such shrubs as the above can be readily obtained, and why our private and public gardens should be so frequently filled with uninteresting evergreens.

This is a question that has puzzled me for the last thirty years. Can anyone give a reasonable explanation? Can it be pure laziness? It is certainly not absolute indifference to the beauties of good evergreens and

deciduous shrubs when seen doing well. For instance, certainly fifty people this spring have admired greatly and asked the name of so common a shrub as *Spiraea Thunbergi*, and yet I do not suppose one of them will ever take the trouble to get a plant of it for their own gardens.

The owners of villa gardens are perhaps the worst offenders. Walk up street after street of one of the so-called villages ten to twelve miles south of London, and what do you see, even at this glorious season of the year, beyond an everlasting succession of Laburnum, Lilac and pink May, with the invariable undergrowth of Laurel and Privet! With villa gardens, however, the not unreasonable explanation may be given that the occupier has probably no continuous interest in the garden, and that the gardens are made by the builders, the tenant having no right to remove even a Laurel, but what *can* be said of gardens held on long lease belonging to those responsible for them!

With the greatest respect to the directors of THE GARDEN past and present, I have always been of opinion that, even by them, the gospel of variety in flowering shrubs has not been sufficiently, or at any rate persistently enough, preached. True, there have been articles from time to time about shrubs, but these have been chiefly about overcrowding and mutilation. Cannot the importance of *variety* be pressed home occasionally!

No doubt during the past quarter of a century, thanks greatly to Mr. Wm. Robinson and his followers, there has been a wonderful advance in gardening generally, but the flowering shrub branch of gardening has been comparatively neglected.

It is not by any means a question of demand in excess of supply. Nothing would be easier to get up than a large stock of even some of the choicest of shrubs, and probably any nurseryman would admit that no stock could be got up more cheaply, but what is the use of preparing plants for which there is no market! Naturally this brings me back to my point, viz., the ease with which a garden, however small, may be made beautiful by the use of flowering shrubs. If only some eloquent preacher would impress this upon the multitude, somebody might make a fortune over it, and the whole kingdom, at any rate so far as its gardens are concerned, be made more beautiful and certainly far less monotonous.

In speaking of the ease of propagation I must except Bamboos, the demand for which seems at last to have exceeded the supply, and those very few nurserymen who were keen enough to forecast the demand must be coming well-deserved money. Certainly there is a steadily increasing demand for these beautiful plants, and I presume the result will be that in a generation or so they will be grown everywhere, and in the end Mr. Freeman Mitford, the author of that fascinating book "The Bamboo Garden" will be cursed for ever having

drawn attention to the use and beauties of this most graceful family, because by then they will be "fashionable," with the result that they will even oust the present dearly-loved ubiquitous Privet and Laurel.

Only that I know that nothing a mere amateur gardener could wish would have the slightest effect upon the ultra conservative professional mind, I would have added a word of warning not to go beyond "an intelligent anticipation of demand," but even without venturing to give advice I might mention, as a matter of general interest, that I have before me as I write a most interesting catalogue of a company formed twenty-six years ago, containing a list of considerably over a thousand "hardy Ferns and shrubs, with instructions as to how, when, and what to plant," with the not altogether unnecessary addition that "all the species in this list are grown for sale by the company." The company was started on sound lines by some experienced men, who, having secured 270 acres of land in a choice position in Surrey, first proceeded to make a beautiful garden of choice shrubs and trees, so that visitors could see for themselves what to select, and then propagated so plentifully, that they were able to offer at so-called popular prices shrubs and trees which it would not be easy to obtain to-day. Personally I benefited, for I have growing here *Bambusa Metake* (purchased in 1876 at less than it could be obtained for now) besides several shrubs and trees of great beauty; but the company, being considerably in advance of the times, was a disastrous financial failure, and I was informed that in supporting his strongly-expressed view that if the public could be supplied with something beautiful at the same price charged for the tediously everlasting Privet and Laurel, they would buy it, the prime mover in the scheme lost over £10,000. So much for the taste of the general public.

Probably by now the whole of the 270 acres has been built over, but some years ago I visited the spot that had been a nursery garden to find splendid specimens of flowering Ash and other fine trees, with a wilderness of choice *Andromedas* &c., as undergrowth. The sight was beautiful, but one's feelings were somewhat mixed.

A. KINGSMILL.

Harrow Weald.

THE EDITORS' TABLE.

FLOWERS FROM NEWTON ABBOT.

I AM sending you a little posy of old-world flowers with one modern introduction among them. The two *Muscari* are great favourites of mine. *M. comosum monstrosum* is, of course, well known, but much too little grown. Hanging over red stones, as I have it, it looks lovely. The other one—called, I believe, *luteum*—is seldom seen, and is perhaps more curious than pretty, though the tassel of male flowers at the end of the spike is very brightly coloured. The double *Lychis* is another good thing for the rock garden that is almost forgotten. My variety, rescued from a cottage garden, is of far better colour than any I have seen elsewhere. The *Veronica* is—what? I want to know its name. We grew it in masses in our old home, and it is a useful plant, because it is so restful in colour; in fact, it strikes a shade of colour that is uncommon in the floral world. I put in the Bachelor's Button and the *Saxifraga granulata*, not because they are uncommon, but because they belong to the same age as the rest. The Buttons have been very fine this year, but they soon drop in a blazing sun. The old white *Columbine* is, for massing, to my mind the

best of the whole tribe, and yet one sees more of the new hybrids, which require a good deal of looking into before their beauty shows. The *Geranium* came from Cheshire, I think, and is a funny old thing of no great beauty, but worth a place in a collection of old-fashioned flowers. I do not know what it should be called; do you? Perhaps the spray of *Victoria Myosotis* may make you think it worthy of mention. Now that it is as cheap as *dissitiflora*, I cannot understand why it is so little grown. The two forms do not admit of comparison either for habit or colour, and *Victoria* has practically double the number of petals as well. As now is the time to sow the seed, a few lines of commendation may lead some few people on the right path.—B. D. WEBSTER, *Newton Abbot.*

[With this letter comes a charming picking of the flowers named. The *Geranium* with dark red-brown flowers is *G. phœnum*, a European plant naturalised in some parts of England. The *Veronica* is a form of *V. gentianoides*.]

DARWIN TULIPS FROM HOLLAND.

A MOST interesting collection of Darwin Tulips comes to us from Messrs. Krelage & Son, of Haarlem, to whom we believe we owe this very latest and distinct group. Each flower was supported by a stem of great solidity, stout and thick, but this is well. A slender-stemmed Tulip seems to ask for the protection of grass or some quiet place in the rock garden where it is not exposed to the buffeting of wind and rain. This late-flowering race is likely to become of much importance in the near future in our gardens. Messrs. Krelage send a vast number of varieties, some of pure self colours, others more or less shaded, but we enjoy much the selfs, especially when of bright colours. *La Tulipe Noire* is almost black, so intense is the colour. A most interesting collection of the strangely picturesque Parrot kinds was also sent, and we have never seen more brilliant flowers. *Cranioisi Brilliant*, *Perfecta*, the golden-yellow *Lutea major*, the scarlet *Amiral de Constantinople*, and *Café*, yellow, dashed with red, were in the throng. It may interest our readers to know that forty-four varieties were sent of the Darwin and Parrot kinds.

TULIPS FROM IRELAND.

MR. HARTLAND, of Cork, sends us another interesting collection of May-flowering Tulips, amongst them *Fulgens lutea*, a remarkably handsome kind of rich yellow colour; *Emerald Gem*, with quite the fragrance of the Sweet Pea; the beautiful *Fulgens maxima lutea* and *Gesneriana pallida lutea*, of bright yellow colour; *Elegans maxima lutea*, which grows 3 feet high, and dies off gold and cerise; *Orion*, red, with orange edge; and *T. Marjoleti*, a small Tulip, pale yellow, with carmine markings on the side of the segments.

"IN A SMALL WAY."

NOTES FROM AN OBLONG GARDEN.—VIII.

SOME three years ago, when "Wilson" blue Primroses were very precious, I bought three plants from an advertiser in some non-gardening paper. The first season one did not bloom; the others turned out to be—one a dark rich beautiful blue, the other an exquisite light blue between sky, porcelain and Cambridge. There were no seeds ripe this first year; the next summer I saved and sowed two pods, one from the pale blue and the other from the hitherto unbloomed plant, which was a dark blue. The resulting dozen plants are now in full swing in

the Oblong, but, alas! there is not one sweet light blue among them. Eight are reds, one is a pretty shade of blue-lilac, not showy, one a darker shade of the same, one a nice purple, and one a washy lilac-purple. These are results in a small way with a vengeance! But so far as they go they do not encourage home seed-saving. The chief merit of the plants is their positively enormous floriferousness. They are one mass of bloom, tightly packed all over, obliterating the leaves, and are dense clumps of colour, not very gay, but pretty enough in their way. I have just counted 66 blossoms on one tuft not quite 7 inches across, all these in perfect condition. Some bought seed of the blue variety, sown later, has produced plants whose blooms are all very rich and deep self colours, with good yellow eyes, and grand in size, but up to the present not one real blue. I want a whole bed of those China blues! There was one plant of this delicious hue in the botanic gardens here—I think the spring before last—among a number of others of different shades, and I heard that some wretch stole it, to the great grief of everybody concerned except himself, for he was never found out. This spring the curator had to mourn the loss of a handsome tuft of *Galanthus plicatus*, planted close to a group of ordinary Snowdrops, in order that the public might compare the two varieties. Apropos of which I may remark that if you meet boys selling Crocuses in comparatively small numbers in a suburb or a county town, it is generally wise to draw a policeman's attention to their identity.

The Apennine Anemone, the lovely fulgens, and the St. Bridgid all flowered together here. They are in quite different places; the blue darling in a neat cushion close to a Violet bed, in partial shade of the right-hand further Apple tree; the Anemone fulgens to the right of the great Sweet Briar bush in the hither end of the South African border; the Poppy Anemones in the hottest, sunniest corner by the steps. It is not an ideal spot for the latter, as it gets very dry at times, but they are in the most rollicking health at present.

Some chequered Fritillaries are growing out of the mat of Apennine Anemones and the partnership is effective, the Snake's-head standing well up above the "wooden enemies!" A little colony of *Puschkinia libanotica* close by in the grass flowered much later than the rest of the sunny border, but was far less effective, smaller, and evidently ill-suited to its position, while the border blooms were remarkably fine and large. I have made a delightful discovery. The Fortune's Yellow Rose I planted from a pot last year against one of the sunny buttresses is full of flower buds. It was an extra-sized plant, and I wanted it to do well most particularly because everybody told me it was such a shy bloomer and would never do in these parts. I do not think this will be a first year flash, to be succeeded by death or stagnation, for the whole Rose is quivering with life and bursting with shoots and leafage. It kept quite green and lost few, if any, leaves all the winter, and it was very carefully planted and will be well mulched later.

I must give up *Polyanthuses*, I think. They have so little pluck, lying down and wallowing in such an abject manner the moment they feel the sun. Coloured Primroses cheek by jowl with them stand up bravely, never turning a leaf, and there are those feeble-minded things, great healthy clumps too, abasing themselves and pretending it is flaccid, gasping August. The yellows are worse than the reds, but even the latter are contemptible when Sol appears.

Tulips have done very well this year. I suppose all bulbs liked the roasting heat of

last summer. I had a rather large bed of mixed sorts, planted in groups of five; this is the bed where the Fuchsias go later, and it gets very little sun. The Tulips do not seem to object to shade at all; the blooms were later than those in sunny places, but stood better, and were ever fleshy and full of substance. The effect of the bed, however, was patchy, as was to be expected, the Van Thols appearing first, then some clear yellow Tulip whose name I do not know, and "the lane" in a rush. Cottage Maid is, to my mind, the sweetest Tulip that grows. The rosy Apple blossom pink of her petal tips and the delicious cream and lemon chalices, in which she offers gold powder to the sun, are the dream of a poet materialised, and she is a nice, compact, sturdy little flower, with a big head and tiny leaves, and strength to stand upright on her stalk. Of course I have the gorgeous Parrots and splashy flaunting May beauties; but if I might only have one Tulip, it would be the Maid. She was well set off by a triangular patch of *Triteleia uniflora* close by, which looked like a swarm of white butterflies all poised of a height over some particular attraction. Nearly all the planting is done now. I go round every day with my poor humble margarine bucket full of best potting soil, my trowel, grubbing mat to kneel on and sundry boxes of seedlings, and fill up corners, but this is only play-work. Seedlings do love a little of the very best nice rich soil to give them a start, and the green-painted margarine bucket does the work of a successful crammer in supplying pabulum for the novice. I do not care much for annuals in such small gardens as this where space is so precious, but I have a few ready for corners. The pretty *Myosotis striata celestina*, single Asters, Aster Christmas Tree from Germany, Cosmos and *Nemesia* tell the tale: chosen because the soil here, though it is not heavy, suits the Aster family splendidly.

M. L. W.

Bathwick Hill, Bath.

STRAWBERRIES FOR EARLY FORCING.

THE BEST VARIETIES.

THE work of forcing Strawberries so far out of season as to have ripe fruits early in February is sufficiently arduous and trying to make one always on the alert for any means whereby an improvement may be effected. Assuming that the cultural details are attended to with proper care and skill, it is clear that if better results are to be obtained by the grower (if these are capable of improvement), the variety of Strawberry selected will have to play an important part. Having grown several different well-known varieties side by side during the past spring in order to test their respective merits for early forcing, others may perhaps be interested in the opinions formed of them and their characteristics. It is, however, only to early forcing that these remarks apply. Probably if the following mentioned Strawberries had been placed under glass in late March or early April, there would not have been so great a difference in their qualities. Doubtless there are many cultivators who hold different views concerning the merits of some of these varieties. This is inevitable, for it is well known that whereas in one district or even garden a certain variety will succeed far better than others, exactly the reverse may be experienced by cultivators in another locality. With us, for instance, British Queen has never proved satisfactory; after a few years the plants dwindle away, presumably owing either to unsuitability of soil or atmosphere, or both.

It should be mentioned that very dull weather prevailed during the greater portion of the first few weeks after the plants mentioned below were placed under glass, thus accounting for the apparently long time that elapsed before the

flowers were produced. The varieties under trial were the following: Royal Sovereign, La Grosse Sucrée, President, British Queen, Waterloo, and Keens' Seedling. On the 26th of January fifty plants of each (with the exception of Keens' Seedling, of which there were but forty) were placed under glass in a temperature of 55°, raised after a week to 60°. This is probably a somewhat higher temperature than many maintain to start their Strawberry plants, but local circumstances have to be taken into consideration. The first variety to come into flower was British Queen. On February 18 there were two flowers open upon a plant of this, though, strange to say, the number remained the same for ten days afterwards. It was not until March 1 that more flowers expanded: six were then open. No less than eleven plants of British Queen were of no value, either through being totally blind or producing puny, badly-formed blossoms. Of the remaining thirty-nine, twenty-seven were in flower by March 6, the other twelve opening shortly afterwards.

Next in order came President, with one flower out on February 20, and this was quickly followed by many others; thirty-eight were open on February 27, and by March 3 forty-six were in flower, the remaining four being blind.

La Grosse Sucrée first opened on February 23. On March 1 forty-two blooms were out, and the full number (forty-four) were in flower by March 6, the remaining six being useless.

Also on the 23rd of February, exactly four weeks from the time of starting, Keens' Seedling, similar to the two last mentioned, opened its first flowers. Twenty-one were expanded on February 27, and by March 6 the full number of good ones (thirty-three out of forty) were fully open.

Royal Sovereign did not come into bloom until the 28th of February, being the last one to do so. By March 6, however, thirty-six plants were in flower, and five more quickly followed, thus leaving nine blind ones.

Waterloo was an utter failure, as might perhaps have been expected, considering that it is one of the latest to ripen out of doors. The flower-scapes were very slow to develop, and the individual blossoms still more so: even when they did appear they were useless.

The percentage of healthy flowering plants of each variety was as follows: President 92%, La Grosse 88%, Keens' Seedling 82½%, Royal Sovereign 82%, British Queen 78%. President, closely followed by La Grosse, thus has the highest average, British Queen the lowest, Royal Sovereign and Keens' Seedling being almost equally good. Notwithstanding the excellent start made by President and Keens' Seedling, so far as the production of flowers is concerned, the ultimate results without doubt marked Royal Sovereign and La Grosse Sucrée as the most suitable and satisfactory. The former produces strong scapes, bearing numerous large flowers that have plenty of pollen, and set remarkably well. In order to have plants of La Grosse Sucrée at their best so early in the season it is essential that they should have plenty of light, otherwise the flower-trusses, instead of developing properly, often remain hidden amongst the leaves, a state of affairs detrimental to the fertilisation of the flowers. For a first early Strawberry, to be started in November, Royal Sovereign is to be preferred to these two; its flowers are borne upon longer and more vigorous scapes than those of La Grosse Sucrée, and are, therefore, not affected to the same extent by the dull, sunless weather invariably experienced at that season. A point in favour of La Grosse is that it does not require nearly so much room for development as does Royal Sovereign. The latter variety, as is well known, grows very freely and produces much more foliage, thus needing a larger amount of space. The fruits of these two Strawberries are totally different in colour and appearance, so that it is a matter of opinion as to which is the better. Well developed fruits of La Grosse Sucrée are slightly smaller than those of Royal Sovereign, of a deep crimson colour, and very sweet. The fruits of the latter are bright red with prominent seeds, lacking the fine flavour of the former, though more freely produced, and of handsome appearance.

Keens' Seedling also has an over-abundance of dark green foliage and bears numerous flowers—small and weak compared to those of Royal Sovereign—that set fairly well. The ripe fruits are small, of very pleasant flavour, and of quite a dark colour. British Queen has proved the least satisfactory; the flowers were few, badly formed, and set but indifferently. Though one of the best flavoured Strawberries in cultivation, if not the best, its constitution is certainly such as to render it unfit for early forcing. President produced numerous flowers, but they were weak, small, and far from satisfactory.

Doubtless if more favourable weather had been experienced during early spring some of these varieties would have done better, but as the chief value of a Strawberry suitable for early forcing lies in its weather-defying capabilities, the fact of the above-mentioned ones proving of little worth marks them as unsuitable for the purpose under consideration. Later in the season, as the days lengthen and the sun increases in power, they probably would succeed under pot cultivation; in fact, I believe there are few Strawberries that would not. We have forced a few plants of James Veitch this year, and found them to do very well. The flowers are large, of good substance, and set easily; the fruit is pleasant in flavour, though its colour—rather a dull red—is not of the best.

H. H. T.

NOTES OF THE WEEK.

Lifting summer-flowering Chrysanthemums in bud.—It may be of interest to some to know that the so-called summer-flowering Chrysanthemums can be lifted when in full bud into their flowering quarters. This, where a small garden space has to be considered, is of great advantage. Last year my Mme. Desgrange and Mrs. Hawkins were grown all winter and summer on a north border. In September they were moved to an old-fashioned border in front of my cottage, which I try to keep gay as long as possible. There they took the place of the Zinnias which had lost their looks, and they made a great show until late in November. I should perhaps add that they had not been stopped, but were disbudded after removal, the result being much larger flowers than is usual in this variety and of fine colour. I left some plants in their original quarters for cutting from, but the blooms were not nearly so fine. As a rule these Chrysanthemums flower in August and early September, and in consequence are lost sight of in the wealth of flowers we have at that time. My north border treatment may recommend itself to some of your readers.—EVE.

Lilium thunbergianum Orange Queen.—This is one of the newest and most attractive of the numerous varieties of *Lilium thunbergianum* or elegans, for it is very generally met with under both specific names. The variety Orange Queen is characterised by particularly broad segments of considerable substance, which form a fine rounded flower. The petals are of a clear orange-yellow, slightly dotted with crimson on their basal half. This variety was shown by Messrs. Wallace, of Colchester, at one of the Drill Hall meetings last summer, and at the recent Temple show it received an award of merit. A good display might be made by the forms of *L. thunbergianum* alone, as, taken altogether, it is one of the most variable of Lilies, the different varieties being from 6 inches to 18 inches in height, while they vary in tint from the pretty buff shade of alutaceum to the blackish blood-red of Horsmani, which is also known as hematocroum. Besides those above mentioned a selection of the best would include: *Marmoratum aureum*, reddish orange, plentifully spotted brown; *pietum*, yellow, splashed and flaked red; *atrosanguineum*, rich crimson; *Alice Wilson*, light yellow, flushed red; *brevifolium*, reddish salmon; and *Van Houttei*, bright, glowing crimson; while to those fond of double flowers the variety *staminosum*, in which the centre of the bloom is filled with enlarged petaloid segments, will prove attractive, but to many it appeals only from its distinct appearance.

National Rose Society.—A special general meeting of the National Rose Society will take place at the rooms of the Horticultural Club, Hotel Windsor, Victoria Street, Westminster, on Tuesday, June 5, at 3 p.m., to elect an hon. treasurer in the place of the late Mr. T. B. Haywood.

Anemone ranunculoides.—It may encourage some of your readers to grow *Anemone ranunculoides* to know that with me this thrives year after year on the driest part of my rocky, *Gentiana verna*, if planted near it, would soon be smothered. Under the impression that *Anemone ranunculoides* would thrive anywhere, I had intended to divide it and move it, but now I have read the interesting article in your last number I will leave well alone.—F. A. S., *Coed Efa, near Wrexham*.

Rosa gigantea.—I have only just observed that "S. W. F." (May 28, 1898) in THE GARDEN inquires about the plant referred to by me July 23, 1892, as then growing on the W.S.W. wall of my house. It has been entirely unprotected now for some years except mulching, and the main stem is some 15 feet high, and, after feeling the spring frosts, is now making long shoots in all directions. It, however, shows no sign of blooming, nor has it ever done so since it was planted in May, 1891.—J. R. D., *Reigate*.

Tulipa elegans pallida (Leyden Bonnet).—I was greatly struck with this lovely Tulip as seen in the borders at Glasnevin Gardens recently. It is soft pale maize in colour, grows to the height of *Tulipa vitellina*, of great substance, and tones off nearly white. There is a very fine collection of self-coloured single May-flowering Tulips got together at these grand old gardens. Tulip The Fawn. —What a unique colour that of a dove or young fawn! It is of tall, erect, stiff habit, and in shape like *T. Bontou d'Or*. I noticed this too in the collection at Glasnevin.—VISITOR.

Conferences at the Paris International Exhibition. During the great International Exhibition in Paris arrangements have been made to hold a series of conferences. Among those of special interest to readers of THE GARDEN are the following: Sylviculture, June 4 to June 7; Roses, June 14 and 15; agricultural instruction, June 14 to June 16; arboriculture and pomology, September 13 and 14; botany, October 1 to October 10; Chrysanthemums, November 3 and 4. Temporary horticultural shows will be held on June 13, June 27, July 18, August 8, August 22, September 12, September 26, October 10, October 31.

Japanese Horticultural Society. For some years past this society has published a monthly journal, but being printed in the vernacular of the Far East, it has been a sealed book except to those who have an acquaintance with the Japanese language. At one time an index of contents was given in English, but this was discontinued for a long time. Having just received the numbers for the current quarter, we are pleased to notice a return to what is, at any rate, a useful precedent. Each number now contains a summary of contents in French, so that a European reader who desires to take special notice of any article in the journal will be able to judge whether it is worth while having the same translated.

Plum prospects. Reports have been current that the immediate prospects are such that Plums may prove a glut in the markets during the coming season, gauged, I think, more from the wealth of blossom than actually swelling fruits. At the time of writing one cannot with certainty determine what the extent of crop may be, but in this garden, at any rate, where Plums are somewhat extensively planted, the prospect is not by any means bright. Just as the trees pass out of bloom and embryo Plums form, one is apt to congratulate himself that the promise is so favourable. Some seasons justify such thoughts by actual results, but here it has been several years since severe thinning had to be resorted to in order to make the necessary balance. At the time of writing, Plums on the earlier and mid-season sorts are of the size of Hazel Nuts and are

few, while quantities there are only but slightly above their first stage after passing out of bloom. It remains to be seen whether these make any advance and become matured fruits. The trees are mostly large, fan-trained wall specimens, while cordons occupy buttresses or strengthening pillars, and in some seasons bear heavy crops. It is yet early to determine what crops are likely to be from either wall, garden, or orchard trees. Frost and cold winds were prevalent in some districts during the period of bloom, although frost was neither frequent nor severe at the time. The pistils of the open flowers were found in quantities in a damaged state after the frost, and this being so, nothing less than their failure could be expected to happen. There were, however, plenty of unexpanded blooms to assure a full crop, and it is many of these that lead to uncertainty in estimating future probabilities. Besides the action of these cold and damaging winds there is the danger of loss from aphid visitations, the outcome of such varying temperatures. The blossom of Plums is very tender and extremely susceptible of injury from spring frosts, and it would seem that few seasons pass without this inflicting some injury on them. Often, too, there is high winds amounting sometimes to heavy gales at Plum time, and whether these are of a cold nature or not the petals suffer, and if these are forcibly removed they cannot have performed their natural functions, and the crop is thus reduced to the extent of such damage. Fish-nets hung over trees in windy weather are, unless well fastened down, worse than useless, because they are dashed against the open bloom and sometimes carried back over the wall. This is an impossibility if they are properly secured. W. S., *Wills*.

An effective bed of Tulips. A most effective bed was one planted with Arms of Leyden and Cottage Maid. The former is 2 feet high, and is a creamy white shaded with rose of the same tint as Cottage Maid, and is more like a May-flowering Tulip, but they both flowered at the same time. These were planted in a Rose bed, and the colour was far finer than in those growing in a less carefully prepared border, the rose colour being more vivid and the stripes wider. In my beds of late-flowering Tulips, Golden Eagle, which was so fine last year, has degenerated, and is this year very small, while a deep rose-crimson is as good as ever, and 2½ feet high.—EVE.

Monstera deliciosa flowering out of doors. It may interest your readers to know that we succeeded in flowering the *Monstera deliciosa* out of doors during last summer. Having a fairly strong plant to spare, I directed the gardener to plant it in well-prepared soil in the green grass out of doors. It developed steadily, throwing out fresh leaves which were fully formed, and, finally, towards the end of the summer two good flowers made their appearance from which the green fruit were just formed. The plant was then moved to a more sheltered position in the garden and lived throughout the winter. We shall endeavour to grow it on this summer if possible. R. H. BEAMISH, *Ashburn, Glenthorn, Cork*.

Deutzia gracilis hybrida rosea. To M. Lemoine, of Nancy, we are indebted for the pretty hybrid *Deutzia Lemoinei*, which has proved so useful for flowering under glass, and now another from the same source was noticeable among Messrs. Veitch's exhibits at the Temple exhibition. The plants shown formed dense tufted masses and were profusely flowered, so that in all probability this variety will be just as useful as the others for forcing. A notable feature is the pink tinge of the exterior of the blossoms, which is of course more conspicuous just before they expand, and it is probable that in the open ground this tint would be more pronounced, as coloured flowers which develop under glass are always paler than those fully exposed to light, air, and sunshine. T.

Burpee's golden-yellow Tropæolum Sunlight. This is a very fine variety with deep golden yellow flowers produced freely. It is tall growing, somewhat after the habit of the crimson varieties of *T. lobbianum*. From imported seed a dwarfier variety also occurred which may be

regarded as an improvement on *Coolgardie* which was sent out a few years ago. I have found the above come true from seed as far as colour goes, but some difference in habit. To ensure having the best form a selection of the best should be made from the seedlings, and if planted out in a cool house, cuttings may be obtained early in the new year, which not only come into flower earlier, but the very best forms may be perpetuated. By saving seed from the selected plants year by year some improvement may be made, besides securing clean healthy stock.—A. H.

Tulip with three flowers on spike.—Miss A. Clabrough, Rose Cottage, Four Oaks, Sutton Coldfield, near Birmingham, sends us a Tulip stem bearing three flowers, a curiosity, we think, and worthy of record.

Rubus deliciosus.—The seeds from ripe fruit referred to (July 15, 1899) have produced several young plants in the open ground. Some sown in a pot have so far not moved. This is the first time it has ever produced ripe fruit since I planted it, some twenty years ago.—J. R. D., *Reigate*.

Lambeth Palace grounds.—An important addition to the open spaces available in Lambeth for recreative purposes was made on Saturday, when some ten acres of the grounds attached to Lambeth Palace were, thanks to the acceptance by the London County Council of the kindly offer recently made by the Archbishop of Canterbury, thrown open for the public use. The grounds will admirably serve one of the poorest parts of the parish, in which the population is exceedingly dense and the death-rate correspondingly high. It is understood that the Council, in whom the grounds are now vested, propose to make gravel paths, to plant shrubs, and to lay out flower-beds in suitable spots. The grounds have appropriately been named "The Archbishop's Park."

Schizanthus wisetonensis.—This pretty annual, which was so well shown at the Temple show by Messrs. H. Low & Co., of Clapton, should become a popular favourite. For early flowering it may be sown in the autumn, about the end of August, and grown on in a cold frame until frost sets in. If grown on in a position where the plants get all the sun and light possible and sufficient fire-heat to keep off frost, sturdy plants may be had. Some years ago *Schizanthus retusus* was a favourite, and for several years in succession a nice batch was seen at the Royal Horticultural Society's Chiswick Gardens. Care is necessary in order to keep the plants well through the winter. Watering is an important factor. Those who do well with *Mignonette* would hardly be likely to fail with this, for similar treatment will suit it admirably, the only difference being that it should not be potted so firmly, and the plants will require stopping from time to time until they become formed.—A. H.

Notes from Ireland.—The weather for May can best be described as variable. The early days were fine, although the sharp east winds were fairly constant with scarcely any rainfall; towards the middle of the month we had a spell of summer weather, and lately we have had much rain with a slight fall of snow, which, I think, was confined to the metropolis. The genial weather has given a pleasant look to the country. Peonies are looking very well and promise a fine show, although the varieties are not as extended as one might desire, especially in the tree section, which is probably the best class, as they produce flowers of great substance and size. The orchards have been a pretty sight. Everywhere the trees were wreathed with flower, giving evident signs that the fruit crop will be exceptionally heavy. We have not had such a profusion of bloom for a long time. The vegetable garden does not look so promising. This, however, is on account of the late planting consequent on a late winter. Peas are looking well. A variety that is likely to become a great favourite in our gardens is *Gradus*. It is dwarf and of vigorous habit, and about as early as *William L.* and if it is suitable for table use, its future is assured.—A. O'NEILL.

The Darwin Tulips.—It is to be feared that the merits of the Darwin Tulips have been obscured by ordinary Breeder Tulips being sold in their stead, and by an erroneous impression being thus given of the brightness of their colouring. Soon after their introduction I had seen in various quarters what professed to be Darwin Tulips, but which were far from being so effective as one would have expected from what one reads about them. I ventured to express an opinion unfavourable to these flowers, an opinion still warranted by some of the flowers supplied by some as Tulips of this strain. I have, however, for the last two seasons had an opportunity of growing a selection of these Tulips of the true stock as sent out by the Messrs. Krelage. These are very beautiful in the garden, and vastly superior to so many of the ordinary Breeders which can be purchased so cheaply. As one often finds it is better to pay a higher price and to have the proper article. There is really no comparison with the cheap Breeders so common, and some of which appear to have been palmed off as Darwins. Of course, no reputable firm would do this, but some may have been misled by wholesale dealers. Of the Darwin Tulips, the lighter coloured forms have the best effect as garden flowers. At a little distance they are extremely effective, and on coming near one is struck by the beauty of their colouring. I now anticipate a brilliant future for the best of these Tulips.

S. ARNOTT, *Carschoorn, by Dordrecht.*
Boronia elatior. Though not nearly so well known as the richly coloured *B. heterophylla* or the deliciously fragrant *B. megastigma*, this is a very ornamental greenhouse plant, and one that flowers after the other members of the genus are

over. It is rather more free in growth than the others, and forms an upright-habited bush densely clothed with bright green pinnate leaves, while the drooping rosy red blossoms are very numerous. Besides those above mentioned, another very pretty species is *B. serrulata*, whose flowers are of a rich rosy tint. This last is the most exacting in its cultural requirements of the *Boronia*s, all of which need a compost consisting principally of sandy peat, firm potting, and much the same treatment as the numerous garden forms of *Epacris*.—H. P.

A show of fancy Pansies, Violas, &c., will take place in the Castle grounds, Tamworth, in aid of the Castle Purchase Fund, on Whit Monday, June 4 next. A liberal schedule of prizes has been provided.

Asphodeline Balansizæ. A plant grown here under the above name has just commenced to flower. It is remarkable in many ways: its height is only about 12 inches; the lower part of the stem is thickly clothed with very narrow leaves, the upper 6 inches a mass of closely packed, semi-transparent papery bracts, from among which the pure white flowers just emerge. Their time of opening is about 4 o'clock in the afternoon. When they close I know not, but the next morning they are closed for ever! It is by no means a showy thing, but is strangely distinct.—T. SMITH, *Newry.*

Cheiranthus versicolor.—We have not too many of the Wallflowers with the habit of this pretty little plant, which is so well adapted for the rock garden. It is not so well known as *Cheiranthus alpinus* or *C. Marshalli*, both recognised favourites of those who follow the cultivation of alpine flowers. Neither of these can well be spared from a good collection, their pale and orange-yellow

flowers being very pleasing indeed. Of somewhat similar habit is *C. versicolor*, though with me it proves more perennial in its habit than the others. I have had a good plant of it on one of my rockeries for a considerable number of years, and though it occasionally loses some of its branches in hard winters, it has remained a large and attractive plant. Its colouring is pleasing, and is noticeable for the variation it presents from the time of the blooms first opening until they pass away. One cannot well describe the combination of colours a plant shows when well in bloom. Opening a clear yellow, it passes through a deeper yellow streaked with brown to a terra-cotta, which again fades to nearly white before the blooms finally decay. All the stages are represented often on the one head of bloom at once. A.

CULTURE OF NELUMBIUMS IN THE OPEN AIR IN ITALY.

IN a recent number of the *Paris Revue Horticole* the head gardener of the King of Italy gives an interesting account of his method of culture of these stately aquatics in the royal garden at Monza, in Lombardy, the Windsor of Italy. He says: "The *Nelumbiums* are a class of aquatic plants to which many people do not give sufficient importance, from an idea that they are delicate: this idea is quite erroneous. After the famous *Victoria Regia*, the *Nelumbium* are certainly the most majestic water plants that can be grown, not only for the decoration of aquaria both in greenhouses and



MOAT FILLED WITH NELUMBIUM SPECIOSUM BY THE CASTLE WALL, TOKIO, JAPAN.

in the open air, but especially for affording cut flowers. The flowers should be despatched from twenty-four to forty-eight hours before their first opening, while they are still in bud. Under these conditions, even in the hot season they can undergo a journey of almost twenty-four hours. The buds, as they are wanted, are artificially opened by hand, and those unacquainted with them exclaim when they see them, "What fine rose-coloured Magnolias!" The decorative importance of these flowers induced me to try three different methods of culture in the open air in the royal gardens at Monza. The first was begun in 1895 in the tank of the orangery garden. This tank measures 12 metres (about 39 feet) in diameter, with about 3 feet 3 inches of water in its centre. I planted five rhizomes of the rose-coloured and the white *Nelumbium* in slimy river soil which had been exposed for a year to the full power of the sun and also to winter frosts. The depth of the soil was 40 centimetres with a diameter of 6 metres. It was surrounded by a belt of large worn stones. In December I lowered the water to cover the rhizomes with a thick bed of dry leaves kept in their place by heavy stones. After that the tank was always kept full of water in order to prevent the ice ever reaching the tubers. Up to the end of the following March the tank was not cleaned; by this means the *Nelumbium* withstood the 12 Centigrade of frost without injury. In July I had the group photographed, and found flowers measuring 34 centimetres in diameter, with stout stems which measured 2 metres 40 centimetres in height. The trial had been a complete success and the plants ripened good seeds. My second trial was in the flower garden and intended especially for cut flowers. The tank was 40 metres long by 4 metres broad and 50 centimetres deep. I put in it 30 centimetres depth of soil prepared as above described and gave 15 centimetres of water. Then in May I planted my *Nelumbium* which I had prepared the previous year; all these plants came into full bloom in June, 1897, and they produced an extraordinary quantity of flowers. We cut many hundreds of these flowers which bore the journey from Monza to Rome and from Monza to Turin without injury even during the heat of July. Under this second method of culture *Nelumbium* are of smaller stature than under the first. Their height reaches to above 1½ metres, the stems are thinner and harder than those first mentioned, at the same time they are better suited for long voyages and for the longer lasting of the flowers, which in some instances extended to eight days. If the flowers of *Nelumbium* are allowed to open where they grow, their size, their colour, and their perfume are superior to that of flowers cut in the bud state and artificially opened when wanted. The plants of *Nelumbium* which I grow in the flower garden remain towards the month of November entirely without water. I cover the entire tank with a thick layer of straw and dry leaves, and the rhizomes remain completely at rest till the following March. At this season we remove their winter clothes and begin to let in water by degrees so as to let it get warmed by the sun. After three years of this culture the plants pass well through the winter with only the above-named protection from frost. In 1898 I gathered a large quantity of perfect seed and resolved to try to grow these plants as annuals. I began to sow the seed in the tanks of the warm house in February, March, and April, 1899. The seeds germinated well in wire baskets destined to convey the young plants without disturbance to the open air, but the result was not satis-

factory, and all these young plants decayed. I then sowed seeds in May in a specially prepared tank in full sun in the open air with a depth of 10 centimetres of water; these seeds germinated perfectly and produced plants of an extraordinary vigour, with foliage 1½ metres above the water, and produced fine flowers from the middle of September of the same year. Thus without fear of contradiction from my horticultural brethren I can assure them that the annual culture of *Nelumbium speciosum* is possible at Monza, in Lombardy, in a latitude of 45° 7' and 27' of longitude. I will conclude by saying that the *Nelumbium* in order to succeed well requires plenty of room, for a single plant can produce stolons which in five months reach a height of 8 metres (about 26 feet), floating in the water with beautiful flowers with very short stems up to the last eye at the end of the runner. Naturally such a plant cannot be compared with those grown in small tanks or tubs. Above all you should not attempt to mix *Nymphaea*s with *Nelumbium*s, for the greater vigour of the one would smother the other before the end of the season. I may add that the water should always be kept free from weeds. I also grow *Nelumbium luteum*, *album*, *pekinense*, *rubrum*, *Osiris*, *speciosum*, and *roseo-album*. The most vigorous of them all is *N. roseo-album*. W. E. G.

[The *Nelumbium* in Japan is referred to in the article, "The Flower Gardens of Japan," p. 304.—Eds.]

THE FLOWER GARDEN.

LATE BORDER TULIPS.

THE late border Tulips which have reached you from Mr. Hartland, of Cork, are well deserving of the praise you give them. I have grown a number of them for some years, being tempted to do so by the sight of cut blooms. Some are now in bloom here, and others are not open as this note is written. Most of them are very bright and all are very beautiful. Among them one likes much that called Shandon Bells, which is almost unique with its carmine blooms splashed with creamy white. This Tulip changes much in the various stages, from the time when the blooms show colour until they fade away. Golden Crown is an old garden Tulip which has been in my garden for at least fifteen years. During all that time I have not lifted and dried it off, and it remains as fine as ever. It is more effective than the fine Golden Eagle, for which the former is sometimes procured. *Didieri alba* is another beautiful Tulip which seems to like my light soil and flowers annually. In fact, one feels disposed to write at greater length upon these brilliant flowers which help to compensate one for the loss of the Daffodils which have gone to rest. They are charming things, and are not, as some suppose, only flowers to be seen at a distance, for closer inspection reveals new beauties which are only visible when one studies the tints and shadings they display. S. A.

AQUILEGIAS AND THEIR HYBRIDS.

I AM often surprised to find that the *Aquilegia* is not more widely grown in Scotland, which by reason of its cool and moist climate is peculiarly adapted for its cultivation. The older and less attractive *Columbines* indeed are not seldom discoverable in cottage gardens, where they have been for years; but the finer American and Asiatic forms, such as *Aquilegia californica* or *A. glandulosa*, except in the gardens of the aristocracy (and only there in rare instances), are but seldom to be seen. They are, indeed, almost as uncommon in certain parts of Scotland as the beautiful Almond tree, which luxuriates in my garden, and fully develops without adequately ripening its fruit.

The *Aquilegia* is undoubtedly one of the finest

flowers adapted by Nature for garden decoration. It is, as I know from long experience, of sufficient hardiness after it has been strongly established to stand the strongest frost. Of more artistic form than the *Viola* and much stouter in growth, it only yields to its fair rival in two directions, perfume and durability; for, as I have indicated, it is even more effective when adequately grown and almost as floriferous. This is especially true of *Aquilegia chrysantha*, the golden *Columbine*, which flowers for a marvellously long period in a shady situation, such as I have generally assigned it, and produces a vast number of gracefully formed long-spurred blooms. Of all the grander *Aquilegias* this is the most durable and the most reliable. Here it has flowered profusely in the same situation for seven or eight years. The Rocky Mountain *Columbine* (*Aquilegia coerulea*), which is even more fascinating, is, I regret to say, not equally long-lived, though it often flowers a long time in cool situations. Its normal colours are white and blue with green-shaded spurs—the lovely variety entitled *A. coerulea hybrida*, with its delicate yellow hues, having been the result of hybridisation with *A. chrysantha*. One of the most beautiful of the American *Columbines* is *Aquilegia californica*, whose predominating colours (if they can be described) are saffron and deep orange; it has exceedingly handsome spurs. The plant, however, I have found somewhat capricious and difficult to grow; it is also, like many of its companions, short-lived. It should be treated as a biennial, and seed of this variety, of *coerulea hybrida* and several others should be sown every year. It will grow well, should its environment prove congenial, the first season, and bloom very moderately during the next.

Aquilegia canadensis, which, notwithstanding its name, was first introduced into this country from Virginia, is according to my own experience much more reliable than *A. californica*; it is also more effective for this special reason, that it is a much more vigorous grower and produces a larger number of scarlet-orange flowers. *Aquilegia glandulosa* is a native of the Altai Mountains, in Siberia; its colour is akin to that of the Rocky Mountain *Columbine*. This is an early-flowering *Aquilegia* and richly ornamental. To the same class pertains the fine hybrid *A. Stuarti*, which bears the name of that eminent raiser of highly fragrant miniature *Violas*, Dr. Stuart, of Chirside, in Berwickshire, to whom I owe many of my most admired flowers. *Aquilegia Stuarti* was, he tells me, the result of a successful cross between *A. coerulea* and *A. Wittmanni*. It is somewhat difficult of cultivation, requiring careful attention and a deep fertile soil.

Among the most gracefully effective of modern hybrids, quite rivalling the finer American *Aquilegias*, are those introduced by Messrs. Veitch. Many of these are, like Helen of Troy, "divinely tall and most divinely fair."

D. R. WILLIAMSON.

Kirkcubbin, Stranraer.

FLOWER NOTES FROM BELGROVE GARDEN, CO. CORK, IRELAND.

Kniphofia præcox (true).—This beautiful early-blooming species has been quite exceptionally fine with me this season, ever since the beginning of the month (May), and a strong clump of it has now seventeen fine heads of flower open and several more yet to come. It is an exceedingly scarce plant to find true. What is usually sent for it by nurserymen (when it is asked for and they have not got it and cannot find it elsewhere) is *K. recurvata*, the next earliest to bloom, but quite six weeks later and of a taller habit of growth. *K. præcox* is one of the evergreen species, and is, unfortunately, not so hardy as most of the family. The hardest frost we have ever had here during the last fifty years (in 1895), when the thermometer registered 29° of frost, killed the foliage to the ground, but did not injure the roots, acting rather as a tonic, and the plant bloomed finely the same year.

Achusa Borealiæ variegata. The prettiest plant now in flower in my garden is a strong tuft of the above hardy herbaceous border plant. The young shoots of beautifully evenly variegated leaves,

bearing at every axil towards their summit numerous small flowers of a most lovely shade of pure blue, resembling closely those of *Omphalodes verna*, have an effect, contrasted with the variegated foliage, which is quite charming, and is much admired by every visitor to my garden. This plant should be included in every good herbaceous collection.

Pasadenia caerulea (figured in the *Botanical Magazine*, vol. 118, t. 7249). This is, I believe, the only blue-flowered Asphodel in cultivation, and is now in great beauty in my cold greenhouse, one pot having three fine branching spikes. Though I have grown it for many years past, I have never before seen it so beautiful.

Cyrtanthus Tuckei.—For the possession of this fine bulbous plant I am indebted to the kindness of the Regus Keeper of the Edinburgh Botanic Garden. It is apparently a very free bloomer, as my plant, which has been kept entirely in a cold house since I got it last summer, has now two fine spikes of bloom, each of which bears on its summit a bunch of from twelve to seventeen pendulous tubular flowers of a bright orange colour. It is quite an ornamental and showy species and well worthy of cultivation.

Watsonia iridiflora Arderni (from Port Elizabeth).—This free-blooming iridaceous plant from Natal is now in beauty in my greenhouse, where its absolutely pure white flowers on a tall branching spike are much admired by all who see them.

W. E. GUMBLETON.

SYMPHYANDRA HOFFMANNI AND S. PENDULA

THE notes by Monsieur H. Correvon which accompany the illustration of *Symphyanthra Hoffmanni* in THE GARDEN of April 28 will, I hope, draw a little attention to these *Symphyanthras*. *Symphyanthra Hoffmanni* has been in my garden for several years, and is usually liked by visitors who know something about flowers. The photograph (page 303) gives a capital idea of its general appearance and of the pretty effect it produces. With us in Scotland, so far as I know, it is only a biennial, but it produces self-sown seedlings so abundantly, that there seems little fear of its ever being lost with the ordinary cultivation of gardens. With me it does not seem to require either sun or rock, and comes up in the borders and flowers without any trouble. Of course we have cooler summers than on the Continent or in the south of England, and what suits it here may not answer there. By an error, not difficult to understand, it has been distributed by some as *S. Kaufmanni*, and I have met with it under that name in more than one garden.

Symphyanthra pendula is remarkably little seen, although it has been introduced for a number of years now. I find it a true perennial here, but, unlike its congener, *S. Hoffmanni*, it is rather fastidious in its ways. I grow it on a rockery facing east where it gets but little sun, but where it flowers quite well. It is, however, a favourite with slugs, and requires to be protected from their attacks whenever possible. I must confess to thinking that it is a pity that its flowers are not purer in their colour, as the yellowish tinge they have makes them a little dingy at times. It is, however, a very distinct plant, which looks at its best when trailing over a ledge or from a crevice in the rockery. In my garden it likes a fair amount of water in summer. Either of these two are, I think, preferable to *S. Wimmeri*, and I have not yet had the good fortune to possess *S. Ossetica*.

Caresthorpe, by Dunfermline, N. B. S. ARNOTT.

IN A SOUTH DEVON GARDEN.

IN Mr. Archer Hind's garden at Coombefishacre House many interesting flowers have been in bloom during April. Of Anemones, different varieties of *A. fulgens* have displayed their vivid colouring, the large form of the Wood Anemone (*A. nemorosa grandiflora*) and its double variety (*A. n. plena*), as well as the pale blue *A. robinsoniana* have flowered well, while *A. ranunculoides* has borne its golden blossoms. Besides the foregoing two old varieties of *A. hortensis* have been in bloom; one, Mrs. Arnold Harrison by name, raised by that lady in the neighbourhood of Liverpool nearly a century

ago, has a well-defined white eye with the outer half of its petals of a deep rose-purple tint, the blossoms in size and colouring bearing a certain resemblance to the florists' *Cineraria*, though differing in form owing to their pointed petals, while the other, Military Scarlet, is furnished with petals of a brilliant vermilion and has a small white eye. The Prophet Flower (*Arnebia echioides*) was bearing a profusion of its yellow, black-spotted blossoms, which spots have the peculiarity of disappearing altogether after the flower has been expanded a short while, and leaving it of a uniform primrose tint. *Clematis calycina*, which has been in bloom since January, is bearing downy seed-vessels in place of its white, purple-spotted flowers, and the giant bushes of *Erica colonodes*, 7 feet and more in height, are slowly becoming less decorative. The Crown Imperial (*Fritillaria imperialis*) and *F. persica* have been in bloom, as have numbers of *F. Meleagris*, the white variety of which is charming when naturalised in the grass.

Ionopsidium acaule is still in flower, as are *Iris cristata* and *I. lacustris*. The Summer Snowflake (*Leucojum vernum*) is in full bloom, some plants growing in the grass close to the waterside flowering every whit as freely as those in cultivated ground. Another slightly later variety of this Snowflake with larger bells is also expanding its blossoms. *Lithospermum prostratum* is covered with its deep blue flowers, which lose little by comparison with *Gentiana acaulis* ensconced in an adjacent nook, and *L. purpureo-ceruleum*, that grows wild on a headland not many miles distant, is also blooming freely. *Morisia hypogaea* is bearing its bright yellow flowers, and a fine plant of *Mertensia virginica* is holding many a curving spray of clustered bells of softest blue. A clump of *Narcissus triandrus pulchellus*, that has increased in vigour during the past seasons, is this year bearing no less than thirty-two bloom scapes. This *Narcissus* is of far harder constitution than is its relative, *N. triandrus albus*, which so frequently dies out in the open garden. A few seedling *Narcissi* of high merit have also expanded their blossoms. *Nuttallia cerasiformis* was in flower during March and the early part of April. *Orobanchium* is in bloom, and some herbaceous Peonies from Spain are showing colour in their buds. Breadths of *Phlox limifolia* are sheets of bloom, and *Polygala Chamæbuxus purpurea* is still in flower, as are many of the Scillas. A fine tree of *Pyrus Malus floribunda* is studded along the length of its spreading sprays with rosy blossom, *Ranunculus amplexicaulis* is bearing its snowy flowers, and the purple *Ronulea* has bloomed profusely. *Rubus spectabilis* is showing the first of its purple-pink flowers, and *Saxifraga polifolia* is throwing up its tall bloom-heads, while the Foam Flower (*Tarella cordifolia*) has perfected its feathery inflorescence. At the end of April the *Trilliums* at Coombefishacre were at their best. Several clumps of the fine *T. sessile californicum*

were flowering grandly, while *T. grandiflorum*, *T. roseum* and *T. erectum purpureum* were also represented. *Triteleia uniflora*, used freely, made a pretty picture, and the saffron heads of *Tulipa retroflexa* were expressions of graceful form, while a stony bank was clothed with the orange flowers of *Waldsteinia trifoliata*. S. W. F.

TREES AND SHRUBS.

ANDROMEDA JAPONICA.

I HAVE more than once called attention to the beauty of *Andromeda japonica* as a hardy early-flowering shrub. This year in spite of trying weather it is more beautiful than ever at Oakwood. Our best plant is 9 feet wide, 9 feet deep, and 9 feet high, and covered with



ANDROMEDA JAPONICA AT WISLEY.

pretty hanging flowers. On the nights of March 30 and 31 the thermometer at Wisley fell to 18° Fahr., so we put canvas shelters to keep the frost and wind off the plant, of which I send a photograph. We have for comparison a good specimen of the *Andromeda floribunda* 14 feet wide, 11 feet 6 inches deep, and 6 feet high, covered with blossom and unprotected. The smaller flowers of this feel the cold somewhat less than those of *japonica*, but in all other respects it is far inferior. The very hard frost did not suit many of the spring flowers which were in bloom; our sheltering coops have done good service and have all been in use. *Tecophylaea cyanocrocea*, both in a cold frame and in the open border, is in good flower; it is certainly a wonderful blue.

GEORGE F. WILSON

Heatherbank, Weybridge Heath.

WORKERS AMONG THE FLOWERS.

THE REV. H. HONYWOOD D'OMBRAIN.

ALTHOUGH I have been from my earliest years deeply interested in flowers and have grown them in all sorts of places and with varying success, it was not until about five and twenty years ago that I had anything to do with Roses, a flower with which since then I have been more closely identified than with any other. Very few of the younger generation of Rose growers can form any estimate of the great difference there exists between those days and the present as far as the culture of the Rose is concerned. We had, it is true, some persons, both amateur and professional, who cultivated the flower with great success, and the suggestion had often occurred to men's minds that a national Rose society would be a very desirable thing. My friend Dean (then Canon) Hole determined to get up a national exhibition which was held in the Hanover Square Rooms. I believe the matter was discussed at Mr. Cranston's at Hereford, but it did not lead there to the formation of any permanent society. I pondered much over the inadequate representation of the Rose in and around the metropol's. Two days' shows were considered at that time proper, although anyone who had seen the condition of the Roses after the first day's exhibition was quite prepared to regard this attempt as sure to end in failure. I talked the matter over with several friends, and as a result of the encouragement that I received I ventured on a bold, even daring attempt: I sent a circular to all those whom I knew to be interested in Rose culture asking them to meet me to talk over the matter. It was a cold, wet and miserable day in December, 1876, when we met in the rooms of the Horticultural Club (which I had been the means of forming the year before, and was therefore able as secretary to offer as a place of meeting), situated then in the Adelphi Terrace, overlooking the Thames, and I confess it was with some misgivings that I awaited the hour of meeting. There was not very much to cheer us in the surroundings, but as one after another of our most distinguished rosarians, both amateur and professional, trooped into the room, the thermometer went up, and when at last the portly form of Canon Hole appeared in the doorway, one and all felt that the battle was half won. Well, there was a good deal of disension, a committee was formed, subscriptions were promised, and thus the National Rose Society was formed, and it was determined to hold the first show at St. James's Hall. I was asked to undertake the secretaryship, which I readily agreed to do on the condition that someone was associated with me who understood finance, with which I positively refused to have anything to do. My late kind friend, Mr. Horace Mayor, undertook this: he remained as my partner only twelve months, however, when my good friend Mr. Mawley took his place, and it was in a great measure owing to his able, painstaking management that the society has attained its present position. The office of treasurer was separated from that of secretary, and in nothing was the society more fortunate than in its being able to secure for that post for many years the invaluable gratuitous services of Mr. J. B. Haywood.

The show at St. James's Hall was a financial fiasco, evidencing what so many know and so few believe, that London is about the worst place in which to inaugurate anything of the

kind. There was a large deficit, and the obtainers of prizes were asked to be content with only a portion of what was due to them. This did not look very promising for the prospects of the National Rose Society, but the zeal and energy of those connected with it triumphed over all obstacles. Exhibitions were held in the gardens of the Royal Horticultural Society at South Kensington, but these added nothing to the finances of the society; they were held in the conservatory and corridors, but those were not the days when the Royal Horticultural Society stood high in the estimation of the horticultural world. At last the Crystal Palace was approached: they had always held an annual Rose show, and it was agreed that this should be taken over by the National Society, while the director undertook to give a subsidy so as to make an important schedule. It was determined also to hold a provincial show under the auspices of the society in some Rose-growing centre; this was afterwards increased to two, one for the north and one for



THE REV. H. HONYWOOD D'OMBRAIN.

the south, and many places have thus had the advantage of seeing brought together all that the Rose-growing world can produce. It has added also to the number of our members, so that at present our subscriptions amount to nearly £100, and the number of our members to 600. I have never been an exhibitor nor have I attempted to raise seedling Roses; and thus I have but one claim to the gratitude of the rosarian world, viz., the formation of our National Society. We have held exhibitions as far north as Edinburgh and as far south as Bath, while we have at various times gathered the lovers of Roses together at Salisbury, Reading, Sheffield, Colchester, Manchester, Birmingham, and Wirral. I cannot but consider that the establishment of the society has greatly aided in the development of Rose culture. This, I think, is seen by the number of nurserymen who have sprung up all over the country where a Rose is the *pièce de résistance*, and many large establishments have been so encouraged by it, that the number of plants cultivated has reached hundreds of thousands.

It has also greatly encouraged the raising of new varieties. It used to be formerly considered almost impossible to ripen seed properly in this country, but all the gold medals which have been offered by the society for new seedling Roses have been won by home-raised flowers. We have a committee of which for diligence and painstaking exertion the society may well be proud. It has greatly encouraged the small exhibitors, who used to find themselves swamped by the larger growers; it has raised the standard of our exhibits, so that one does not see careless, untidy stands of flowers which were formerly put on our exhibition tables; it has knit together the whole brotherhood of rosarians in bonds of pleasant friendship. For myself, personally, I may say that it has made for me many friends. Many of these of course have passed away, but their memory is fresh and pleasant, and I may truly say that I know no body of men who are more genial, hearty and kindly affectioned than the members of the Rose world, whether professional or amateur. I have, I believe, conferred a boon on them by the publication of the "Rosarian's Year-Book," which has now reached its one and twentieth year. It will be thus seen that I have done nothing in the way of culture or raising of new varieties to entitle me to the gratitude of my fraternity, but I rest my whole claim to their recognition on the simple fact that I was the originator and founder of the National Rose Society.

THE FRUIT GARDEN.

"THE CURATE'S VINERY."

HAPPENING a short while ago to be in the neighbourhood of Penzance, I was shown a simple contrivance for growing Grapes without artificial heat to which the above title was applied. In slightly sloping ground a trench some 15 feet in length and 18 inches or 2 feet in depth is formed. The sloping sides, which are about 2 feet 6 inches apart at the ground level, are faced with slates, whose lower ends rest on a line of bricks paving the base of the trench, this being about 6 inches in width. Iron rods are run across the trench from side to side at intervals above the slates, which are capped by a course of bricks. A Vine is planted at the lower end of the trench and trained as a single rod over the iron cross-pieces to the upper end. In April a span-roofed glass frame, fashioned so that it fits exactly on the bricks surrounding the pit, is placed over it and the Vine grown beneath it during the summer and autumn. The lights being hinged, ventilation and pruning are both readily effected, and I was assured that a good weight of well-finished Grapes was annually produced from two of these structures lying side by side, each planted with a Black Hamburgh Vine that had been some years in position. When the leaves have fallen the glass roofing is removed and the Vines left open to the air throughout the winter.

S. W. F.

APPLE COX'S ORANGE PIPPIN.

For many years this Apple has been very popular, but not one bit too much so considering its value. No other dessert Apple can vie with it for quality. I have never yet heard an objection lodged against it on the score of flavour. This cannot be said of any other variety; even Ribston Pippin has its objectors, some saying it is too hard and dry. Now that rivals are cropping up against my favourite here and there, I must say another word of praise for Cox's Orange Pippin. Last winter its keeping qualities surprised me not a little. By the end of December during other seasons its flesh began to soften visibly and lose a trifle of that sprightly flavour which is so pleasing, but this year it is in excellent condition.

I suppose its most formidable rival is the new Allington Pippin. I have grown and tasted fruit from these trees and from others last season, but still prefer one of my favourite to a dozen of the newer kinds. In my opinion there is no comparison between the two in point of flavour, or even appearance. This Apple will grow in almost any kind of soil, provided, of course, it is treated correctly. For instance, where the soil is heavy, retentive of moisture, and consequently less favourable to early spring growth, it would be folly to plant the trees below the surface, especially if the soil has been deeply trenched, as it should be. Under such conditions the trees ought to be planted a few inches above the natural ground level, mounding them up with suitable soil. When the trees are growing freely, pruning ought not to be too severe. This Apple has a happy way of fruiting incessantly on long branches year after year where these are not too closely pruned. Liberal supplies of water during summer and liquid manure during the winter months are a help to growth, free crops, and rich colour. No variety that I know succeeds better as a half-standard on the free or seedling stock, as the semi-drooping habit of growth is just the thing for a half-standard. H.

GUMMING ON FRUIT TREES.

It appears from letters received that my recent notes on this subject have been read with interest by fruit growers in different parts of the country. I cannot say that I am surprised, as gumming is often a source of much anxiety in the garden and orchard. One of the correspondents, "B. P.," asked for further information (page 298), but as he furnished us with so little data to work upon, we could only surmise what had produced gumming on his Plum trees, and suggested that he should send further particulars. This he has done, and most interesting they are, as they in a great measure bear out some of the causes we suggested in our first article for the appearance of gumming. We pointed out the mistake of pruning all stone fruit trees, as these resent the knife much more than either the Apple or Pear. From "B. P.'s" second letter, no one would doubt, I think, that having removed young vigorous trees that had been planted three years and left unpruned, and then cut back to their original shape, was the direct cause of his trees falling a prey to the evil. This is certainly a convincing object-lesson that should be borne in mind by all intending fruit growers. "B. P.'s" account of transplanting, pruning, and how the trees fared is full of interest, and those who read it should be on their guard when transplanting or anticipating pruning Plum trees severely. I should certainly advise leaving the trees alone this year. Indeed, as regards pruning in the future, why do so at all in the usual sense of the word? If the knife proves so injurious, which I am sure it does, why not manipulate the growth while young, stopping the shoots at the desired length and nipping out lateral growths with the thumb and finger? If you want a Plum tree to grow rank, prune hard, and the closer or harder you prune, the stronger will be the next year's growth. This is not desirous even with young trees. Far better build them up piecemeal, so that each annual addition of growth ripens and forms fruiting wood at once. If it does not then, it cannot be made so afterwards, and this adds to the length of bare stems, and what fruit is secured is from the top and extremities of the branches. R. PARKER.

Goodwood.

REMINISCENCES OF AN OLD HORTICULTURIST.

BEYOND plants curious or grotesque in form, my heart goes forth to those with flowers of fearsome, yet harmless, odours. To such is often given the additional charm of strange and gresonous colouring, as in the succulent Stapelias, the trailing Aristolochias, and the tuberous, dark, weird Arums.

I have grown every species of Arum I could get, and the only one to be called sweet and

fair is the old white Calla aethiopia. The yellow Callas are lovely in colour, but scentless.

Particularly curious are those Aroids that flower without the foliage, of which habit the species of the *Amorphophallus* section are illustrious examples. Perhaps *A. Rivieri* is the most moderate and easily managed one. In all of them the curious flowers come very suddenly, and, as it were, impromptu. Their duration is but short, but the large palmate leaf that follows is decidedly picturesque on its spotted or marbled stem.

Flowers cannot be elaborated without the aid and the offices of the leaf, but leaves do not always live to accompany the flowers of their plant or tree. In such instances the leaves have "gone before," leaving in bulb or tuber, branch or stem, the ready ripened juices that the flower will need "till green leaves come again."

To me there always seems something very touching, very pathetic in all this. In human nature it is the old man's hope and joy to see his children's children. In the world of vegetable life it is not ordained, always, that leaves shall meet the flowers for which they have directly lived and worked. I think this illustrates the very grace of pure unselfishness, in that though the flower comes alone, it is no destitute orphan thrown helpless on its world.

Still, against the circumstantial evidence of the eye, it is not easy to convince unbotanical folk that upon some plants, and on such trees as the Apricot, Nectarine, Peach, Plum, and Blackthorn, the blossoms do not come before, but after the leaves that, in a parental sense, were most truly theirs. The young leaves that we see following them are, in fact, a newer leafy generation; and we mentally correct, as an optical illusion, a seeming break of continuity to which the hull and leaflessness of winter gave an apparent force.

To give but one, and that a modest, example of a flower both awe-inspiring and harmlessly malodorous, I would mention my old friend *Arum crinitum*, with its compound sagittate foliage, its speckled stem, its great ungainly bud bent to a right angle at the waist (for the better display of internal beauties), its broad expanded spathe of mottled snake-skin pattern—appropriately with the gory side inwards—and its fearful spadix almost black, and a very centipede for the number of black "legs" that grow all round this strange body. These are modified at the hairy throat, and adjusted to a trap formation that allows admission free to any insect, but no return.

Credulous blue-bottles are allured by a scent very suggestive to them; and, entering the seductive death-trap, their corpses may be "viewed" in the mortuary below.

If I remember rightly, it is this pleasant plant that owns the reputation of injuring the prospects of a Continental Hotel. This building was obtruded upon a locality where the plant had ancient prescriptive rights; and visitors who arrived at its flowering time paused, as before a most peremptory notice-board to trespassers, sniffed;—said "Drains!" and vanished. It reminds me of a dear old Rector of mine, and also Rural Dean, who could not get the churchwardens of a parish in his deanery to undertake some much-needed repairs that would come under their jurisdiction to carry out. So he forged a most monstrous archaeological-looking Seal, of seemingly awful potency and authority, with a dreal sentence "in an unknown tongue" all round it. Of this he made a huge impression, with much spread of scarlet sealing-wax, upon his next monition. The thing was utterly innocuous, of no legal validity whatsoever, but it scared those rustic

churchwardens into a prompt obedience! We often laughed together over this, knowing the bucolic men so well. Our kind old Bishop could hardly have won a more brilliant victory with all his "superior artillery."

Like as there is much in the type or strain among *Cattleyas* and *Odontoglossums* of the Orchids, so there are better and worse varieties in *Arum crinitum*, and I have never had one quite to equal in scent and colour my original plant of it.

Without doubt there is some beneficent purpose in Nature to be served by these odours, noisome to us. Always strongest while the flower is young, they are attractive to coarse carrion flies and heavy carnivorous beetles, where the light and dainty bee might be ineffective.

With similar, and perhaps eccentric, interest, I grew curious pods and seed vessels. There is, for instance, the sensational fruit of *Scorpiurus vermiculatus*, in startling similitude of a fat curled caterpillar, green or brown according to age. The plant is a trailing annual, with pretty little orange pea-shaped flowers, but nothing papilionaceous in its one-lobed oval leaf; it is of easy out-door culture when all danger from frost is over. It does best, however, with me when raised under cool protection and planted out. The pods take some time to ripen and then drop off.

Practical jokes are seldom either witty or safe, but no great harm could come of introducing a few green pods of *S. vermiculatus* among summer salad. Indeed, one French catalogue, with a quaint sense of humour not often to be found in such periodicals, recommended the pods of *S. vermiculatus* *pour étonner les innocents!*

The ripe seed-vessels of the *Martynias* are all very curious. In *M. fragrans*, a tender annual, the purple flower has a two-lobed pistil, so sensitive to the pollen, as at once to close over it with an action like that of the leaf-lobes on *Dionaea muscipula*, though hardly so rapid.

It was by growing this plant that I came to know, for its young pods, a thing in tropical pickles that looked like a hook-nosed Gherkin and that had long puzzled me. When ripe, the pods of the *Martynias* split, with two long prehensile horns, curved and sharp, and admirably adapted for catching in the fur or wool of any animal, offering facilities, carriage free, for transmission of rather heavy seed.

FRANCIS D. HORNER.

AMONG THE SURREY HILLS.

THERE are many lovely quiet spots among the Surrey hills where the invalid may find health and quietude. One does not wonder to find the London merchant prince, or the professional man of large means who is fond of gardening, busily employed in garden making, taking up some of the prettiest spots and mending Nature by introducing choice trees and shrubs and flowering plants.

Holmbury St. Mary is an old-fashioned straggling village that was twenty years ago almost lost in its loneliness and its distance from the station. Now there are signs of busy, active life. The capitalist has come to build himself a home among them, and a process of lifting up is going on, as may be seen by the new cottages springing up, and the lovely little church on the side of the hill, built and presented to the parish by the late Mr. Street, the famous architect, who had a residence in the neighbourhood. The public roads are often narrow and tortuous, but they are pleasant and shady, and little rills of water often burst out from the coppice and trickle musically down the side of that road. Patches of Violets, Wood Anemones, and the Cuckoo Flower, or Lady's Smock, embellish the open places in the roads and banks, leaving a

pleasant memory. One of the advantages of the district to those who are seeking pleasant healthy quiet spots to garden upon is its many changes of soil and climate in consequence of its varieties of elevation. There are patches of fairly good loam, peat bog with water trickling through it where the loveliest bog gardens have been made. Nowhere in England can the conifer family be found more at home, and at Feldmore, the residence of Mr. E. Waterhouse, a very choice collection has been planted at various elevations about the grounds which surround the house, and all, even the choice new things which are doubtful in many places, are in rude health. Some of them appear to be growing in very inferior soil, but soil is of less consequence than climate and shelter. If we look across the common above the village of Holmby St. Mary, we find the Scotch Fir planted by Nature, and as healthy and sturdy as can be found anywhere, and the many handsome Hollies which abound among the Gorse on the hills are some of the finest and healthiest in the country. These also are Nature's planting. It is not often that Holly hedges are obtained by planting seeds, but in several instances where I have seen the plan adopted the hedges have been very sturdy and strong. To revert again for a moment to the pleasant and picturesque gardens which Mr. Waterhouse has created on the hills at Feldmore: besides the conifers there are many choice flowering and evergreen shrubs, and a very interesting collection of alpine plants and climbers. The different varieties of *Pyrus japonica* now in flower have a bright effect upon the terrace and other walls. *Stauntonia latifolia* is growing on the house, and it flowers at least in the district, if not at Feldmore.

One is inclined to regard the creators of beautiful scenery, in the sense in which it has been done in several places in the neighbourhood of Holmby St. Mary, as public benefactors. Nature has raised the hills, but man has planted them, and he has filled the ponds with various coloured Water Lilies, and the bogs have been furnished with many and various plants which Nature had not scattered here. Skirting the common a mile or a mile and a half away is another most interesting place, Joldwynds, the residence of Lady Bowman. All along the valley, which we can look down upon from the road carved out of the hillside, we can see beautiful gardens which time did not permit us to visit, but glimpses of large bunches of Rhododendrons in flower were visible through the trees, and nowhere have we seen such masses of Andromedas which are now in full flower, and show with prominence to the pedestrian on the road.

But I am digressing somewhat. I was going to Joldwynds, and saw these glimpses of beauty on the way. This is an interesting place, and contains many shrubs which are uncommon elsewhere. Many of the Sikkim Rhododendrons are growing in the open air and some are in flower. The groups of San Roses (*Heliathemum*) and *Cistus* on the rockeries are very fine, and must be a special feature when in flower. Groups of the old bright flowered China Rose *Fellenberg* are special features, and in the bog garden large groups of Japanese Irises are starting into growth, and will be one of the sights of the future. Bamboos are in fine condition in the shelter of the trees. Mr. Cornish, the gardener, said he had seventeen varieties. Certainly they add a special feature to the place. The choice shrub *Carpenteria* is growing freely against a wall and flowers annually. Round a pond is a border of *Primula rosea*, very lovely in flower, and in the bog garden *Primula japonica* is

quite at home. Many and various are the special bits of rockery, including a sort of Aladdin's cave, from the roof of which hang large plants of wide-spreading Fern (*Woodwardia radicans*). This cave is lighted sufficiently for Fern culture by lights let into the roof. In the houses are many choice well-grown plants, including a nice collection of Orchids. Probably one of the houses contains one of the finest lot of *Disa grandiflora* in the country in the rudest possible health. Coming again to another phase of the alpine garden, one is struck by the large masses of such things as *Aubrietias*, *Thymes*, and other creeping plants hanging over the stones, showing plainly the value of good-sized patches of anything for the purpose of showing its decorative character. *Spirea trista* is a mass of white flower very conspicuous in several gardens in this district.

E. HODDAY.



MEYENIA

ERECTA.

(From a
drawing by
H. G. Moon)

AN ARTIST'S NOTE BOOK.

MEYENIA ERECTA.

THE shoot sent to you, and of which you give an illustration, is from *Meyenia erecta*, a plant I think which is rarely seen in flower. It is of upright growth, and the flowers are of bright violet-blue colour. They are produced on the growth of the preceding year, and are not unlike those of the Foxglove in form. Our

plant is in a pot, and in a temperature of from 55 to 60°, the soil being peat and loam.

R. DRAPER.

Seaham Hall Gardens, Seaham Harbour.

HARDY CALCEOLARIAS.

CONSIDERING the well-earned popularity of this extensive and valuable class of plants, it is to be regretted that so few are found to be capable of wintering in the open air. A few of the larger growing sorts, such as *C. violacea*, *C. hyssopifolia*, *C. Pavoni*, and *C. fuchsifolia*, stand well against a wall on a warm south border without protection, *i.e.*, if the winter is

not very severe; but those that stand in the open border are very few. They include *C. Fothergilli*, *C. plantaginea*, and the hybrid between these two called *C. Kellyana*. *C. Fothergilli* is rare, if now in cultivation at all, although it will grow well in any position that exactly suits. *Oxalis emmeaphylla*, another handsome plant seldom seen in our gardens; partial

shade and its roots well jammed between chalk stones appear to be the only way to success, and then copious waterings at the root without touching the foliage are also necessary. It has hairy spatulate leaves, and the slippers, which are deep purple and yellow, are not so handsome as those of *Kellyana*. The latter is said to have been raised in Edinburgh from a cross as above; but if so, there are very few of the *plantaginea* characters distinguishable in it. It seems to partake wholly of *Fothergilli*, with the exception of the slipper being a trifle longer and the markings smaller and more numerous; the leaves and habit are exactly alike. *C. Kellyana* is much easier managed than its parent. It is easily increased from cuttings, and no trouble whatever is experienced in propagating it. A stiff loam with a little peat added suits it best. *C. plantaginea* differs widely from the others in having pure yellow flowers without markings, and larger, smooth, shining, pale green leaves. It suffers most from damp, and should be planted on dry slopes on the rockery or raised mounds in the border; the leaves are deciduous and should be cleared off as soon as brown, so as not to engender damp. K.

TULIPA KOLPAKOWSKIANA & OTHER TURKESTAN TULIPS.

THE Messrs. Van Tubergen, of Haarlem, Holland, having sent out last year a collector to Eastern Turkestan in order to obtain for them a fresh supply of those charming Tulips which first became known to European cultivation by the late Dr. Edward Regel, of the St. Petersburg Botanic Garden, but which now have become extremely rare, have been very successful in their efforts, and many thousands of brilliant Tulips gathered on the Alexandra and Thian Shan Mountains may now be seen in full bloom in their nurseries. It has been my agreeable duty to identify these, as they were all sent home unnamed. In order to do this the flowering specimens had of course to be compared with the original descriptions of Regel in the *Acta Horti Petropolitani*, the *Gartenflora* and other publications of Regel. I also consulted Mr. Baker's "Revision of the Genera and Species of Tulips" in the Journal

of the Linnean Society, and Mr. Baker's "Monograph of Tulipa" in the *Gardener's Chronicle*, 1883, vols. xix. and xx. I was of course also familiar with the numerous coloured plates of these Tulips in the *Gartenflora* and the *Botanical Magazine*, and before setting myself to my task I imagined that nothing would be easier than to identify them with the aid of so many standard works. Very soon, however, I perceived that, instead of this being an easy task, the work was one which taxed one's attention to the utmost. Naturally, one might suppose that Dr. Regel, who first introduced these Tulips into Europe—first flowered them in the St. Petersburg Botanic Gardens, most carefully described them in the *Acta Horti Petropolitani* in a perfectly lucid manner, again described them in the *Gartenflora*, accompanying these Latin and German descriptions by good coloured plates—would see his views unconditionally accepted. This, however, is not at all so.

One of the first Tulips which came into bloom out of Messrs. Van Tubergen's importation was a fine yellow flower with the outer segments flushed with red. It answered perfectly in every detail to Regel's description of *T. kolpakowskiana* both in *Acta* and the *Gartenflora*. But on turning to the *Botanical Magazine*, tab. 6710, one finds a completely different Tulip under the name of *T. kolpakowskiana*. Here then was the first irritating puzzle out of which I could for the moment not find my way. Matters, however, were to grow more intricate still. On my further looking up the *Botanical Magazine* plates my attention became attracted by tab. 6635, which with its description so closely resembled my *T. kolpakowskiana* of Regel, as to leave no doubt of its representing the same plant. Unhappily, however, this tab. 6635 does duty in the *Botanical Magazine* for Tulipa Borszczowi (Regel). Now the latter flower possesses such very salient characters, according to Dr. Regel who first introduced and described this very peculiar Tulip, that one wonders how the *Botanical Magazine* authorities could possibly overlook these and figure a totally different Tulip under the name of *T. Borszczowi*.

The latter Tulip, says Dr. Regel, has the bulb coats completely and densely covered on the inside with long hairs, the foliage is very much undulated, and it creeps close to the ground; it is also very glaucous, so much so as to possess a distinct bluish tinge. The medium-sized flowers are scarlet, with a prominent scarlet eye. Not a single one of these characters can be detected in *Botanical Magazine* plate 6635 of *T. Borszczowi*, whereas a very good coloured plate answering perfectly to Regel's original description of this Tulip may be found in the *Gartenflora*, tab. 1175. One might compare as much as one could, now turning to Regel's work, then taking the *Botanical Magazine* in hand: the differences remained, and one felt as in a maze out of which it was impossible to find one's way.

By-and-by another of the Messrs. Van Tubergen's Turkestan Tulips came into flower, and, comparing it with the *Botanical Magazine* plates, great was my surprise to find that, although this Tulip perfectly corresponded to Regel's description of *T. ostrowskiana*, the above *Botanical Magazine* plate 6710 of *T. kolpakowskiana* exactly represented the features of Regel's *T. ostrowskiana*. If, consequently, the Messrs. Van Tubergen are going to offer their Turkestan Tulips according to Regel's nomenclature, all those who look upon the *Botanical Magazine* as an absolute authority will set up a quarrel, whereas those who (rightly, I think) regard Dr. Regel's descriptions as

decisive will be disappointed if they receive their Tulips according to the *Botanical Magazine* and English nomenclature.

Striving to get some light in this difficult plight, I happened to hit upon a paragraph from the hand of Dr. Regel himself (*Gartenflora*, 1884, p. 356), which I think must be looked upon as settling the question. It runs as follows, translated from the German in which it is written: "What is figured in the *Botanical Magazine*, tab. 6635, is not at all *T. Borszczowi*, but my *T. kolpakowskiana*, which I (Dr. Regel) have sent to Kew, but certainly not under the name of *T. Borszczowi*, bulbs of the latter Tulip never having been distributed from this establishment (the St. Petersburg Botanic Gardens)." He further remarks: "Tab. 6710 of the *Botanical*

CALCÉOLARIA
VIOLACEA.
(From a
drawing by
H. G. Moon.)

Magazine is not at all *T. kolpakowskiana*, but my Tulipa ostrowskiana of the *Gartenflora*, 1884, tab. 1144." Mistakes will, of course, occur in any and every thing that is human work.

but if the *Botanical Magazine* fails, there is the danger that subsequent compilers of encyclopedias, editors of gardening papers, &c., who, of course, cannot afford time to go deeply into every detail in which they become concerned, turning for information to such a splendid work as the *Botanical Magazine* undoubtedly is, may cause such grave mistakes as the above to be perpetuated *ad infinitum*. Among other Tulips which flowered out of Messrs. Van Tubergen's importation there was a charming very early-flowering and dwarf Tulip which botanically corresponded very well to Regel's description of *T. Korolkowi*, but the flowers were quite differently coloured, the lower half

central disc and the upper half a clear pure yellow, absolutely distinct from any other Tulip I ever saw. It is intended to offer it as Korolkowi var. bicolor. Tulipa triphylla, a rare sort, of which a very few bulbs were distributed years ago by Dr. Regel, was also represented among the importation. This is a medium-sized Tulip of a pure and soft yellow, some flowers quite big and of a decided orange yolk-of-egg tint, others being much smaller and of a lighter shade of yellow; hardly any two plants could be found of which the flowers were exactly alike.

Another sort, the growth of which was exceptionally strong, and has broad leaves like *T. kaufmanniana*, produced rich yellow, beautifully pointed flowers, the three outer segments being of a brilliant scarlet on the outside. Partially opened or closed, the flowers showed an exceptionally bright combination of colours. As it corresponded to none of the descriptions of the Turkestan Tulips, it will in all probability prove to be a new species and awaits description and naming.

There were also many-flowered white Tulips in the way of the diminutive *T. biflora*, but very much stronger, with medium-sized white, black-anthered flowers four to eight on a stalk, a dwarf Tulip with broad leaves and a yellow, black-centred flower nestling in them on a very short spike, and also a diminutive bright yellow very early-flowering Tulip, all of which will probably turn out to be new species, although not of much value as garden plants.

A most brilliant Tulip, however, which no doubt will soon find its way to many gardens, came in very considerable numbers, and is well worthy of special notice. The lanceolate foliage of this kind is upright-growing, dark green, and not at all glaucous; the flower-stem is about 1 foot high and carries a good-sized flower of an intense and dazzling shade of pale vermilion with small black, yellow-circled central disc and purple filaments and anthers. The flower is exactly Regel's *T. ostrowskiana*, but as the later Tulip is being described as possessing much undulated and glaucous foliage, it cannot be that species, and it is also awaiting the description and name by which it will go.

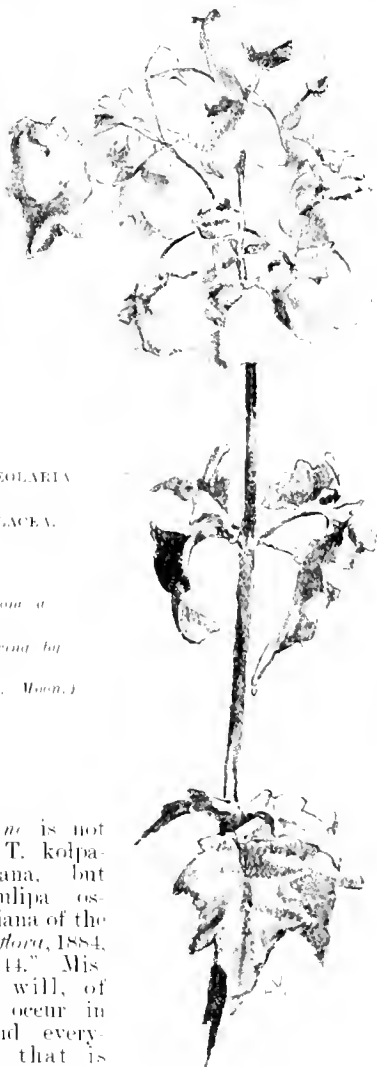
What a charm there is in a collection of the species of Tulip, in variety of form and colouring almost unlimited, and having a flowering period which, commencing with the March-flowering *T. violacea* and closing with the June-blooming *T. Sprengeri*, extends over nearly four months.

Haarlem, Holland. JOHN HOOG.

GEUM HELDREICHI.

THERE are a good many Geums which are of great value in the garden, but I think *Geum Heldreichi* is likely to prove to be one which will hold its own well among those already grown or yet to be introduced. It is of better habit than some others of the genus. The best of its forms are of a fine orange-scarlet, and it is of very easy cultivation, and seems to have proved perfectly hardy since its introduction a few years ago. It is also easily raised from seed, though it must be said that there is some variation in shade of colour and in size of flower when thus raised. It does not appear to object to a dry soil, and occasional hardships due to a scanty water supply. It comes into bloom with me in May, and when seen at a distance through the foliage of other flowers its blooms have been mistaken for those of an orange-scarlet variety of *Papaver nudicaule*. Of course, the resemblance vanishes at a nearer view, but the mention of this will give those who have not an opportunity of seeing it an idea of its colouring.

ALPHA No. 2.



GARDENING OF THE WEEK.

CHRYSANTHEMUMS.

FROM the last week in May till the 10th of June the whole of the plants of the large-flowering sections which are expected to produce exhibition blooms should be finally potted. Nothing is gained, however, by being in too much haste about this, and the final potting should certainly be delayed for a few days unless the plants which they are now in are thoroughly filled with roots. A great danger is that the plants will from heavy rains or other causes receive more moisture at the roots than they can take up and the soil will become sour, after which the vigour of the plants will become impaired. Avoid over-potting, or oftentimes the same bad results will follow. Ten-inch pots should be the maximum size used, these only for the strongest and most vigorous varieties. I advise 8½-inch for the bulk of the plants, and if the watering process is properly carried out this size will be amply large enough in nearly all cases to produce three blooms on a plant in the highest state of perfection. The pots and crocks should be scrupulously clean and the drainage built up in such a way that it will remain perfect during the whole season. The amount of material is not of so much importance as the manner in which it is placed. A thin layer of ½-inch bones should be arranged on the top and sufficient fibre taken from the loam heap, rubbing out every particle of soil so as to prevent its interfering with the free water course. The compost, which should consist chiefly of good fibrous loam, very much depends on the nature of this as to the quantities of other ingredients required.

If this is of the best quality and of a moderately light, porous texture, except enriching it, little else will be required. On the other hand, if of a heavy clayey nature it will be much improved by using sufficient road grit, mortar rubble, leaf soil, and charcoal to make it agreeable to the rootlets and to allow the water to pass away freely. A good and reliable mixture should be made up as follows: To every 4 bushels of good loam add 1 bushel of finely-sifted spent mushroom bed manure, 1 peck finely-crushed charcoal, 8-inch potful of ½-inch or bone-meal, the same amount of Clay's or Thompson's manure, and a 6-inch potful of soot, using sufficient coarse sand to keep the mixture open when firmly pressed together. The loam should be pulled apart with the hand, breaking it in pieces about the size of walnuts. The whole should be thoroughly mixed, turning it at least three or four times, and worms should be rigorously excluded or they will give much trouble later on. If the mixture can be prepared a week or so previous to using and turned every other day, all the better. It must not be used in a wet and pasty condition. This can easily be determined by squeezing a small quantity together in the hand.

When potting carefully remove the larger portion of the old drainage, and take great care not to harm the roots, or much more serious damage will be done than many imagine. Pot very firmly with the potting stick, and see that each plant is properly and correctly labelled. Place a neat stick to each plant and tie loosely before leaving the potting shed. If a sheltered spot can be selected and the plants arranged in beds for a week or two before placing them in their summer quarters, the check will be slight.

Very much will depend on the weather as to when the plants require to be watered, but it will certainly be safer to err on the side allowing the soil to be rather dry than wet, but the foliage should be thoroughly syringed five or six times a day in hot, dry weather. As soon as it is found absolutely necessary to supply water at the root this should be thoroughly and systematically done, tilting up the pots at least three or four times, thus making sure that every particle of the soil becomes moistened. Dust the points of the growth once a week with tobacco powder, as green fly

often does much damage to the young leaves at this season, when the plants have of necessity had to undergo a slight check. E. BECKETT.

Abraham House Gardens, Elstree, Herts.

HARDY FRUIT GARDEN.

TREES generally are now in full growth, and their many requirements must be supplied to assist them in carrying crops of first-class fruit. Work requiring immediate attention consists of disbudding, stopping some shoots, and nailing in or tying others, syringing with insecticides and clean water for the purpose of keeping insects in check, mulching with decayed manure to prevent the escape of moisture from the ground beneath trees, and nourishment from which is carried down to the roots by water, whether from rain or afforded artificially. Disbudding must be carried out on Peach and Nectarine trees, so that the remaining shoots have space to grow their full length without crowding for bearing fruit next season. The way to disbud was described in a former calendar. Stopping of young side shoots to form spurs is necessary on other wall trees, as Plums, Cherries, and Apricots, leaving from ½ inch to about 1 inch in length, according to the number of leaves there is space for to furnish branches without crowding. Leave unstopped shoots for forming branches in bare spaces and to take the places of dead ones, also leading shoots of branches for the extension of trees. When at this work opportunity may be taken of shortening some of the longest spurs that are without fruit to the farthestmost young shoot on each spur. Nail or tie in position unstopped shoots as mentioned.

Plums and Cherries are very liable at this season to be attacked with green and black aphides; therefore as often as required to keep them in check, and particularly to have the foliage as free of these pests as possible when fruit begins to colour, syringe with insecticide. When the black fly is numerous on the points of young leading shoots, on which it appears to thrive the best, put some insecticide into a flat vessel and go over the trees, dipping the points of the young shoots into it. Trees on walls, as well as those growing in the open, should be freed from insects. It may to some appear a formidable and difficult task to cleanse trees in the open, but it can be done, more easily, of course, with bush or pyramid than with standard trees. Gooseberries and Red and White Currants trained on a wall or to any kind of trellis require stopping on the spur system on the same principle as mentioned for some of the stone fruit. Caterpillars are in some seasons very destructive to Gooseberry trees. I have checked their progress by spreading a piece of canvas under the trees, and rustling the leaves with a stick to cause them to fall, and afterwards destroy them. White hellebore powder is sometimes recommended to destroy caterpillars on Gooseberry trees, but I have never used it, as it is poisonous. Green Gooseberries are in great demand at this time for tarts and other purposes. The fruit should be gathered from branches near the ground, as it would be dirty when ripe if left on the trees, and then from the heavier-cropped trees. In places where the supply is insufficient a note should be made of it, if it is through a deficiency of trees, that more be planted in the autumn. G. NORMAN.

The Gardens, Hatfield House, Herts.

INDOOR GARDEN.

PALMS.

IN the Palm house plants should now be growing freely, and if the shade given is sufficiently dense, the new leaves as well as the older ones should take on the rich dark green hue that enhances the value of these plants for decorative purposes. Increase of growth does not necessarily mean a proportionate increase in the quantities of water at the roots, for though Palms are lovers of humidity in the atmosphere and can scarcely be syringed too freely, providing only soft water be used, my experience is that they may easily be overwatered at any time of the year; therefore I advise a cautious use of the water-pot. When water is really needed it is advisable to use clear soft water, as this imparts a

darker shade to the leaves, and the same may be used in a weak state for syringing, only there must then be no mistake about the clearness of it. Many of the hundred-and-one little items that have to be perpetually seen to in the spring by the gardener under glass will now be getting out of hand and there will be more time for plant-cleaning. Scale is a great enemy to Palms, as to many other things, and must not be allowed to make headway. If insecticides are used on Palms they should be of the safest kind, for the plants are easily injured by anything of a harmful nature, and will not bear these things nearly so strong as most plants. In cleaning it is necessary to see that the insecticide does not run down into the axils of the leaves; small specimens may be laid down on their sides to prevent this, and for larger ones I have found it a good plan to press a clean sponge well down between the stems, as this will absorb the waste as it falls.

GARDENIAS.

Young stock which has been pinched some time ago and which has again broken into growth should be potted on. This should be done before the roots have become matted round the sides of the pots, for they do not appear to run into the new soil nearly so freely after this has happened, and those plants which have received such checks are the ones that will probably canker during the winter. Free growth should be encouraged by shutting up early and syringing freely; if plenty of moisture is used, the house may be allowed to run up to quite a high temperature without fear. Though Gardenias are very liable to scale and mealy bug, few plants can be kept clean so easily, for they seem positively to revel in paraffin, or petroleum, when judiciously applied by using two syringes, one to apply the mixture, and the other to keep it continually agitated. A safe proportion is a wineglassful to three gallons of water, and if this is used frequently no insects will trouble the plants. For those who do not care to use the paraffin in this form the emulsion sold by sundriesmen will answer the same purpose and be safer in careless hands.

ZONAL PELARGONIUMS.

Early struck plants which were pinched some time back will be ready for potting. I do not care for these in too big pots, but a few may go into 7-inch, the majority into 6-inch, and a few into 5-inch pots. Firm potting in a loamy soil, with plenty of sand, a little lime rubble, and a pinch of bone-meal, suits them well. Later struck cuttings should have their points pinched out ready to follow in the same way. All may be grown from now onwards in a cool frame with a sunny aspect and should not be crowded. After potting be very careful in the use of the water-pot, as the plants should not want much water for some few weeks.

Shipley Hall Gardens, J. C. TALLACK.

ORCHIDS.

ODONTOGLOSSUMS.

Those who have been privileged to attend the recent Temple show, and especially those interested in Orchids, will have noticed the remarkable number of spotted varieties of *O. crispum* and of the various natural hybrids that were exhibited. There was scarcely a group of any prominence that did not contain some of these gems, several of which were considered of special merit by the Orchid committee. Most of these forms are flowering from semi-established plants which have only recently finished the first growth in this country. This illustrates the desirability of procuring imported plants, as almost the whole of the many fine varieties that have been certificated this year have flowered from last season's importations. Not only is there a possibility of unique things cropping up amongst imported plants, but they contain a greater amount of vigour and grow more satisfactorily than established plants of some years standing.

The treatment of *Odontoglossums* after flowering needs considerable care. In the case of *O. crispum* the pseudo-bulbs become shrivelled after flowering, especially if they have been allowed to retain their flowers for a long time. This does not imply that

the plants require an additional amount of moisture at the roots to enable the bulb to regain its normal condition. It must be borne in mind that the distress has been caused from the top, and not through any lack of moisture at the roots. The period almost directly after flowering should be the proper season of rest. Although I do not advise that *Odontoglossums* should be allowed to suffer for want of moisture at the roots at any season of the year, I would advise that care be taken not to induce the plants to commence growing before they have had an opportunity of rest, which is the most essential item in their successful culture. When watering is required soak the plants thoroughly through the whole compost. Water should not be given again until the plants have become quite dry. In a few weeks' time, when the young growths have started, more liberal treatment may be afforded, and as the young roots are emitted into the compost the older bulbs soon regain their former condition. Ventilate freely while the plants are at rest whenever the outside conditions permit. If the different sections are kept separate they can be the more readily treated as their requirements demand.

The importations have been late in arriving this season, and will have the hot summer months to contend with here before they became rooted in the compost, which will no doubt prove detrimental later on. The imported plants should be potted up as soon as received. After placing a crock or two at the bottom of the pots fill the remaining portion with chopped roots of the Fern—that is to say, the larger woody roots, which are generally to be found in abundance in good peat—the surface being finished with equal portions of living sphagnum moss and fibrous peat, pressed moderately firm about the base of the bulbs. Give a thorough watering with rain water before arranging in position. The best place for imported plants of cool Orchids is on the side of the house where the sun has least power, and they should be shaded carefully from direct sunshine during the hottest parts of the day.

H. J. CHAPMAN.

KITCHEN GARDEN.

ASPARAGUS BEDS.

THOUGH the beds were late turning in they have produced wonderfully well in spite of the dryness and cold winds, and the present is a good time to feed. From May to the end of August salt may be given in showery weather, and is specially beneficial. There are some excellent fertilisers now, specially prepared for Asparagus, and the value of these foods consists in their quick action, so that the young roots are enabled to absorb the food and mature strong growths. In many gardens food may be given in a liquid state. With plants close together in beds, as is often the case, liquid manure is of great value, and if at all strong when procured from the stables or cow-sheds it is an easy matter to dilute it, and supplies given weekly will maintain a healthy growth. In the case of newly planted beds it may be well to give a mulch of decayed manure to prevent the roots from drying. There should be no delay in thinning seedlings and keeping the surface of the beds clear of weeds, also applying salt, as the latter will effect a saving of labour and assist growth. Young beds should not be cut over too hard, and from this date it may be advisable to leave all new growth to mature if the "grass" is at all weakly.

BRUSSELS SPROUTS.

Some time ago I noted the importance of raising plants so as to secure good material for planting in May, and now there should be no time lost in getting out the plants in their permanent quarters. These plants, to do them justice, need good culture. We always prepare a quarter for them early in the winter, and at planting time, owing to our land being very light, we draw drills at 3 feet apart and plant in the drill at the same distance. Many may think this a liberal space, but it is none too much for the earlier plants. I am not in favour of allowing the plants to remain too long in the seed bed; it is much better to plant earlier, though the seedlings are small, as they suffer less

in hot, dry summers. The space between the rows for the next two months may be occupied with small salads, a single row between two rows of sprouts; we find this a good place for Spinach, but this must be cleared quickly and not allowed to run to seed. In some soils many of the Brassicas chub badly, and to prevent this it is a good plan to use fine ashes or even burnt refuse freely, and in all cases to give change of crop as often as possible. Should only a small quantity of sprouts be planted, I have used a large dibber and partially filled the holes with wood ashes. A later lot of sprouts may be planted early in June from the open-ground sowing.

CAULIFLOWERS.

I am aware the Cauliflower is not a special favourite in many gardens during the time there is an abundant supply of Peas, Beans, and other good vegetables, but thus early we have to prepare for a season of scarcity, when the small Cauliflower the size of a cricket ball is welcome. For summer supplies there are some good varieties, such as the Pearl, Snowball, Sutton's First Crop, and Universal, but these, though small and compact growers, should have liberal treatment in the way of a rich-poor-run

CORRESPONDENCE.

VERONICA HULKEANA.

[TO THE EDITOR OF "THE GARDEN,"]

SIR, This *Veronica*, referred to by "F. W. B." as a good wall plant, is a delightful species, so different from any other kind, and where it is not sufficiently hardy for planting out-of-doors, is particularly valuable for the greenhouse, where it will flower throughout the summer months. It is totally distinct from the numerous shrubby forms of *Veronica* claiming parentage from *V. Andersoni* and *V. speciosa* which are so generally met with in gardens, and still farther removed from the curious little forms that mimic tiny conifers and succeed so well as rock plants. *Veronica hulkeana* is a somewhat loose-growing bush, clothed with light green ovate leaves about 1½ inches long. The pale lilac flowers are borne so numerously in large terminal branching panicles, that at its best the plant is quite a mass of that tint. It was introduced into England in 1865, but though so pretty



A GROUP OF MAPLES AND OTHER TREES AND SHRUBS.

(Shown by Mr. John Russell, at Richmond, Surrey, at the recent Temple Show.)

and an open position. The last-named variety is probably less known than the others, but it is one of the best summer varieties, as it is less affected by heat and drought, having a more robust growth, and is of good flavour. For autumn supplies few varieties equal the Autumn Giant. This should be planted in quantity for October and later supplies, and the same remarks apply to the Autumn Mammoth, a very fine autumn variety. I am aware the early autumn Cauliflowers at times grow coarse. To avoid this, it is well to make more than one planting and in diverse positions, and by using some of the smaller plants at the later planting coarseness is avoided and a succession is secured. Though, strictly speaking, not a Cauliflower, it is so closely allied, I would point out the value of the Self-Protecting Autumn variety. This should now be planted. It is invaluable for winter supplies.

Spou House, Brentford.

GEO. WYTHS.

Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, June 5, in the Drill Hall, James Street, Westminster, 1-5 p.m. A lecture on "Some of the Plants Exhibited" will be given by the Rev. Professor G. Henslow, M.A., at 3 o'clock.

LILIUM GIGANTEUM.

[TO THE EDITOR OF "THE GARDEN,"]

SIR, In Mr. Williamson's interesting note on the above Lily (page 247) he writes that it is only by growing it from the offsets produced by the exhausted bulb after flowering that it attains its amplest proportions, and that purchased bulbs seldom reach a height of more than 5 feet or 6 feet. I have at different times grown some thirty species of Lilies in the open, and am bound to say that my experience with the giant Lily does not in this particular coincide with Mr. Williamson's. I have found that purchased bulbs, even if the largest obtainable are procured, more often than not spend their first season in establishing themselves in their new quarters, and do not flower until their second season after planting, when their flower-stems have generally exceeded 8 feet in

height. Smaller purchased bulbs, requiring from three years to four years' sojourn in the ground before blooming, have eventually thrown up flower-stems from 9 feet to 11 feet in height, which latter is the greatest height attained with me either from purchased bulbs or home-grown offsets. In cases where the purchased bulb produces a flower-stem some six months after planting, this naturally suffers in height from the bulb being insufficiently established in the soil. It is, I think, quite practicable for amateurs to obtain results fully characteristic of this noble Lily in its best form from purchased bulbs if small or medium-sized bulbs are procured and an immediate result is not expected. The possessing one's soul in patience for two, three, or more years is, as Mr. Williamson says, rather a grievous trial to the enthusiastic flower-lover, but "hope deferred" has its reward in the end. As regards the production of seed by the giant Lily referred to by Mr. Wolley-Dod (page 283), the number borne by a single plant is enormous, amounting to several thousand. Only about 1 per cent. germinated with me, and it is probable that under natural conditions but few would prove fertile, or the ground surrounding the parent plants would be so thickly covered with self-sown seedlings, that but few could reach maturity. I have found that offsets were larger and more numerous where the flowers were removed as soon as withered than when the pods were allowed to develop and ripen seed. A bed rich in humus, about 3 feet deep, which retains a certain amount of moisture even during the driest summer suits these Lilies to perfection. The stately flower-stalks crowned with a dozen or more drooping, ivory-white blossoms are amongst the most striking features of the garden, while few fragrances equal the delicious vanilla-like perfume that hardens the surrounding air in the still twilight.

South Devon.

S. W. F.

SPIREA ARGUTA.

[TO THE EDITOR OF "THE GARDEN."]

SIR, This charming Spirea, referred to on p. 356, is, apart from its great beauty in the open ground, one of the best of all for flowering under glass, for which purpose we may soon expect it to be grown in quantity. It is strange that the merits of such a valuable shrub should be so long ignored, for it is by no means a new plant. For some time Spirea media, or confusa as it is frequently called, has been the most generally grown of the shrubby members of the genus, but we may soon expect *S. arguta* to usurp that position. As yet, however, it is not generally obtainable in nurseries. Though hybrids of our hardy shrubs, except in the case of a few genera, are not particularly numerous, a few, such as this Spirea, *Berberis stenophylla*, *Cytisus praecox*, and *Philadelphus Lemoinei*, are among the best we have.

T.

EUCOMIS PUNCTATA.

[TO THE EDITOR OF "THE GARDEN."]

SIR, This plant, if the bulbs are planted deeply, is thoroughly hardy in any ordinary winter. "H. H. T." (p. 360) recommends it for pot culture, but it is not nearly so fine in this way as when planted in the open border, where it develops into a very striking if not showy plant, especially valuable for its lateness, and room could be found for it in most gardens. A few of the smaller bulbs might be given pot room under glass in case a hard winter came and killed the outside stock, though this would not often occur. It is essentially an outdoor plant, as a dozen bulbs planted thickly together will throw up a large number of leaves that will spread over 6 feet or more of ground.

A. C. T.

DIANELLA ASPERA.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Mention of the pretty blue flowers of *Dianella caerulea* on p. 354 reminds me of the beautiful blue berries common to members of this genus. The most striking from a fruiting standpoint done is *Dianella aspera*, which forms a large

bold tuft of somewhat stiffer outline than most of the others. The flower panicles are freely borne, and the berries, which attain the size of large Peas, ripen about July and August, when they are of a pleasing rich blue colour. They remain in this stage a considerable time unless attacked by birds, which are very partial to them. This *Dianella* may be either grown in pots or planted out in the greenhouse. For many years past it has been very attractive in the beds of the temperate house at Kew. To the lover of variegated-leaved plants one variety of *Dianella* will appeal. This is *D. tasmanica variegata*, whose long arching leaves are plentifully striped with creamy white.

H. P.

ANEMONE FULGENS BICOLOR.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I am glad to see a favourable notice of this variety of *Anemone fulgens* from the pen of "E. J.," and am pleased to see that it attracted many admirers when shown at the Drill Hall. I have seen the flowers, and thought them very pretty, but was afraid they would not be acceptable to everyone. Frequenters of the exhibitions at the Drill Hall are, however, better judges of the merits of flowers than those who are only carried away by a liking for flowers and colours which are fashionable. Those who can flower *A. fulgens* regularly (for, unfortunately, not everyone can do so, as the discussion in THE GARDEN some time ago showed) will do well to look out for this variety. As your correspondent says, the petals are distinctly of two colours, white and scarlet. Without growing it, one dare hardly express an opinion as to its garden usefulness, but there is not room for much doubt as to its worth as a cut flower. Messrs. Wallace are to be congratulated in securing this pretty form of a favourite Windflower. It is to be hoped that its appearance will lead to a search for some of the double forms of *Anemone fulgens* which have been lost to cultivation for many years.

S. ARNOTT.

PLANTS FOR WALLS IN CITY.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Might I trouble you to let me know through the medium of your valuable journal the best plants for covering garden walls in the City—those which flower and have an odour.

A CONSTANT READER.

[There are not many wall plants that are sweet-scented and will do well in a town, though among them there is one of the best, namely, the common white Jasmine. This and the Virginia Creepers, both the common kind and *Ampelopsis Vetchi*, are excellent town plants, also the Grape Vines, some of whose flowers have a strange sweet scent. The deciduous *Magnolias*, viz., *soulangiana*, *conspicua* and *stellata*, would also do well, and there is no better town plant than the Fig. EDS.]

THE YELLOW FORM OF ANEMONE NEMOROSA.

[TO THE EDITOR OF "THE GARDEN."]

SIR, In your issue of May 5 (p. 324) Mr. J. Allen mentions a yellow form of *Anemone nemorosa* (not *ranunculoides*) discovered in Ireland some years ago. It is a pity that this plant seems to be lost, as it would have been very interesting to hear something about the difference between it and the plant known in English gardens as *A. ranunculoides pallida*. This latter I have not seen, as the plants kindly presented to me last autumn by one of your most esteemed correspondents have not flowered this spring, but it is, I think, certainly identical with the hybrid between *A. nemorosa* and *A. ranunculoides*, sparsely found on the Continent in places where the two parents grow side by side in quantity. One of the localities where it has been gathered is the wood at Charlottenlund, the summer residence of the Danish Crown Prince, and the single large colony still growing there may not unlikely be traced back to a date so remote as 1688, when the old botanist, Peter Kylling, in his "Vindarium Danicum" (p. 134), besides *Ranunculus nemorosus albus* and *R. n. luteus* of C. Bauhin,

mentions a *Ranunculus nemorosus flore-sulphureus* with yellow flowers from the very same locality. The plant is intermediate between *A. nemorosa* and *A. ranunculoides*, not only in the colour of the small flowers, but also in the leafage, the peduncles of the involucrel leaves being in length between those of the two parents. The plant, too, very rarely seeds, and in a wild state only occasionally where the two common Wood Anemones are growing together. There can certainly be no doubt that the plant is a hybrid, named *A. nemorosa sulphurea* by Pritzel in the "Linnaea," xv., 652. Of this hybrid two forms are known. The one, *A. intermedia* of Winkler, is nearer to *A. ranunculoides*, and is likely to be identical with *A. r. pallida* of English gardens as well as with the Danish plant from Charlottenlund. The other is known in the Hermauskogel, in the neighbourhood of Vienna, and named *A. vindobonensis* by Beck von Mannagetta in his "Flora of Lower Austria." This latter form with pale yellow flowers is more like *A. nemorosa*, and it may possibly be a similar plant which has been found in Ireland, as mentioned by Mr. Allen.

To the very interesting notes of recent numbers about blue Wood Anemones I may add that last year I got some dried specimens of a blue *A. nemorosa*, gathered in the west of Brittany, and, as far as I can see, it is at least very much like, if not quite identical with, Mr. Robinson's fine plant. The bluest forms of *A. nemorosa* seem to have their native home in the most western parts of Europe, from Ireland to the Pyrenees, whilst paler ones have been found in the same places in Germany (vide *Gard. Chron.*, 1881, t. 639).

Copenhagen.

M. LORENZEN.

THE KITCHEN GARDEN.

PEAS ATTACKED BY WEEVILS.

AN attack from weevils is in many gardens quite unknown, while in others they make an annual visit to spoil at least a portion of the spring rows. It is quite possible that the damage done in some gardens by them is attributed to some other enemy—the slug in particular; but, once their whereabouts has been learnt, this is not likely to happen. If there are many weevils present, Peas are soon hopelessly ruined, for they cannot endure being eaten to such a serious extent just as they emerge from the ground. For several years a portion of our Pea rows have thus suffered, and this one is no exception to the rule, though the present year was of shorter duration and the mischief wrought less serious. If the Peas are spared to advance into a leaf state, their whereabouts is very easily detected in the scalloped edges of the plants. Often, however, they are eaten off by the weevils under ground, and only a plant appears here and there sufficient to mark the place of sowing, and they will follow from row to row if these are in close proximity. It is strange, too, how they will select plots of ground that have not carried a Pea crop for several years. Those attacked this spring with me were on land that had been occupied three seasons with Strawberries, followed by Broccoli. Prior to sowing, a good dressing of newly-slaked lime was spread over the ground. They are an insect on which very little information is given in some standard books or periodicals. Nor are they easily banished once they are in possession; neither soot nor lime will drive them away. Quassia extract in solution and petroleum emulsion were employed, and it must, I think, be due to their use that Pea growth was less hampered on this particular site than in other years. It would be interesting if some of your entomological readers could give us some information bearing on their habits and means of extermination. It needs a sharp eye to detect them at work, and if one pass along the rows in search, they immediately fall to the ground and remain motionless as if dead for a time. In the course of rotation a portion of our Pea crops occupy ground

planted in the previous year with Celery, and between deep digging of the trenches in spring and subsequent earthing of the rows in autumn and winter one would scarcely expect to find these weevils, more especially because the same soil has not had Peas on it for several summers. For some unexplained reason these have been victimised when those in other parts of the garden have been spared, and this, too, for three or four consecutive years. Usually it is the main crop or mid-season Peas that suffer; this season the earlier sowings were chosen, the others passing unharmed. There is so little reference made to these weevils, that I imagine they must be somewhat rare. W. S.

ROTATION OF VEGETABLE CROPS.

IN gardens of limited size it is difficult to carry out a perfect system of vegetable crop rotation. Where this can be done, it is no doubt one of the chief elements of success. The essence of rotation in cropping is that an exhausting crop should not follow one of a similar character. For example, Cabbage should not occupy the same site two years in succession. Although, as previously stated, this

opportunity, however, exists of one crop following another in accordance with a system, Potatoes or the Brassica tribe should succeed Onions, Beans, Peas, or any of the various root crops, such as Carrots, Beet or Parsnips. Celery is a good crop to precede Potatoes, Carrots or Parsnips. The earthing required for the Celery is an extra means of digging and moving the soil deeper, and in consequence is favourable to deep-rooting crops like Parsnips. It is a common practice to follow Onions with Cabbage, and with reason, too. The Onions are cleared off the ground early, and the surface is generally clean and firm, so that all that is required then is to draw drills in September and dibble in the Cabbage plants. All members of the Brassica tribe are partial to a firm rooting medium, and thus the Onion ground suits the Cabbage.

Many persons sow Peas in parallel rows in a block. This is an error, as this vegetable succeeds best with abundance of space between the rows to admit of air and sunshine to all parts. It is a good plan to sow a row of Peas, and then plant four rows of Potatoes, then another row of Peas. E. M.

among hardy plants. Upon its first flowering it was so unlike any other hardy flower, that very few entertained hope of its perfect hardiness. This, however, is now indisputable indeed, it is among the very best of hardy things, and its mode of increase and its free flowering are points that commend it to all. One has but to remember the splendid examples brought from Colchester by Messrs. Wallace, for instance, crowned with crimson, carmine and purple Gloxinia-like flowers with buds innumerable, to get an idea of its wonderful freedom of flowering. It is not likely to be at all fastidious, and may be made quite happy in the border or in colonies in deep soil in the lower part of the rock garden.

Another startling as well as good plant was noted in

Eriophyon subangustius, a composite of some worth among the perennial class. This too is an exceptional plant on account of its earliness, and also of the large flower heads.

In actual novelties the new hybrid Day Lily, *Hemerocallis lateola*, is worthy of notice as much by reason of its parentage as from any other cause. It is a cross between *Hemerocallis aurantiaca* major and *H. Thunbergii*, the hybrid happily carrying with it all the freedom of growth and floriferousness of the latter, and much of the size and colour of the other parent. I believe it is destined to form one of the best garden plants of the future, and its progress will be watched with some interest by the writer of these notes at least. It is much in its favour that the plants at the Temple were barely two years old. In the open garden it will be a much finer plant, unless I am mistaken.

Among delicately coloured flowers none impressed me more greatly than

Eurotia speciosa rosea; it is an exquisite plant.

Thalictrum orientale is a white plumed form that is very beautiful and quite distinct. It is one of the herbaceous kinds, and will make a most useful border plant. All these taller kinds of Meadow Rue delight in a good, rich, sunny loam.

Another notable plant brought here in very fine condition is

Aquilegia Stuarti. It is highly probable that it has never been seen in better form at any exhibition in London. The rich deep blue and the pure white centre are in strong and striking contrast; moreover, the size of the flowers alone should be quite enough to attract anyone. This is one of the most conspicuous of its race, and all should endeavour to grow it.

There were also several

Hybrid Genus of importance, especially those from *G. montanum* and *G. Heldreichii*. Of the former I was much taken by the beauty of *G. m. aurantiacum*, a kind that received the award of merit at the Drill Hall recently, and another somewhat allied, *G. m. magnificum*, said to be even a finer production. Of this I am not able to express as definitely, as one was in a cut state, in which its merits could not well be judged, and the other in a large pan, well displaying both its habit and its free-flowering qualities. Such a group of plants is wanted, but it is equally necessary that there should be a marked distinction.

Never before, perhaps, has there been so great a show of

Hardy Lady's Slipper Orchids (*Cypripediums*), but this time they were present in many groups, in solitary examples or otherwise, while the Messrs. Wallace had almost a complete collection, all in good flower, and these grown in pots carried many charming and interesting flowers. I mention these because of the exceptional merit of the plants, and to show how well such things can be grown in pots when other means are not at hand. But it is best, of course, to give such a group special treatment, and make a peaty bed in a quiet shady nook where the plants may be happy for years to come. Such kinds as *spectabile*, *montanum*, *parviflorum* and *pubescens* are surely enough to form a colony for a beginner, and in a cool spot in peat and sand they are not difficult to manage.

Lilies, too, were much in evidence, including the pure and chaste Madonna Lily, the less pure, though more rare, white Martagon Lily, which is



A GROUP OF THE EXCELLENT CARDINAL NECTARINE IN POTS.
(Shown by Messrs. Rivers and Son, of Sandbridgeworth, at the Temple Show.)

is the essence of the practice, yet too much stress is laid at times upon the failure of any particular crop as owing to a want of an opportunity to vary the crops systematically. I have known this rule to be set absolutely on one side with success. For instance, I know gardens where Potatoes have been grown—and well grown, too—on the same site twenty years; also various members of the Brassica tribe, such as Brussels Sprouts, Cauliflowers and Broccoli, have all been grown repeatedly on the same site for ten years. It was done in this way: When the Cauliflower and early Broccoli are cleared off the ground in November, a heavy dressing of manure is dug deeply into the soil at once. The soil is turned up as rough as possible, and until the Brussels Sprouts are planted in April the surface is exposed entirely to all kinds of weather. The Broccoli and Cauliflower take the place of the Brussels Sprouts in May and June.

If the soil where these duplicate crops, as I will term them, were not thoroughly prepared, success could not follow. If sufficient plant food is added to the soil, the rule of rotation may be set aside with impunity; but where the treatment is the reverse, failure in repetition cropping will soon take place. Where the

SOME GOOD HARDY PLANTS AT THE TEMPLE SHOW.

Trollius, or Globe Flowers, were conspicuous. They produce, immediately after the Daffodils, handsome bushes of yellow and rich orange flowers, and the plants bearing them are of the simplest culture. Such kinds as Orange Globe, *napellifolius*, *Fortunei* fl.-pl., and *caucasicus* are some of the gems of this race that produce large globular Buttercup-like blossoms on neat tufts not much more than 2 feet from the soil. These are things that should find a home in every garden, for they are most easy to grow, and in deep, rather heavy soils succeed well.

The *Fair Maids of France* is another plant that always attracts attention. It is known as *Ranunculus aconitifolius* fl.-pl., and produces a great number of pure white double flowers. The spreading heads are covered with snow-white flowers, and no one will regret making the acquaintance of so beautiful a plant.

Incarrillea Delavayi. Though it is but a year or two since this handsome plant was introduced into this country, it has already made its mark, and is still destined to rise to a position of importance

more difficult generally to cultivate, the handsome hybrids, such as Dalhousian and Marhan, the extremely beautiful szovitzianum, that is ever a popular and telling kind, were all finely done. Equally as well grown as the latter were quantities of *L. umbellatum*, *longiflorum*, and other sorts. All these are amenable to border culture if given suitable soil and position, and not a few may be well grown in pots, and thus enjoyed in quite a different way. They must, however, be studied and treated with care.

Very interesting and beautiful was the group of *Iris*s and their near allies. It is not possible to give the quaint and interesting colours, but the pleasure these afford is very great, and their chief requirements are a dry, sunny corner, but where in the growing time moisture can be given them.

Trees and other Potonies were gorgeous in the extreme.

Tulips, especially those sections known as Darwins and Parrot, appeared everywhere in huge dazzling banks.

Spanish Irises were much more delightful, and gave quite a restful plot of colour by way of change, while the same may be said of the beautiful and restful spots created by interspersing the varied kinds of Tufted and other Pansies among the more dazzling masses of colour. The foregoing observations are not intended to be complete, and only touch some of the older things; the many beautiful alpinas I may remark upon on another occasion.

E. JENKINS.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY THE TEMPLE SHOW.

A LOVELY group, showing rare taste in arrangement, to which we shall refer again, came from Messrs. W. Cutbush & Son, Highgate; it consisted largely of Malmaison Carnations, and also contained Carnations Duke of York, Cecilia, La Vilette, Herbert J. Cutbush, Calla eliottiana, &c.

Lovely collections of double and single Begonias and plants of Ivy-leaved Pelargonium Mrs. J. G. Day were shown by Mr. H. J. Jones, Lewisham.

Messrs. Fisher, Son, and Sibray, Handsworth, Sheffield, sent a charming collection of various plants, including various Crotons, a few Orchids, *Aralia Schafferi*, Bamboos, *Sarracenia flava*, and others.

Ghent Azaleas of superb variety and colours, *A. mollis*, *A. pontica*, Mrs. L. J. Endtz, a fine variety, and many others came from Messrs. R. and G. Cutbush, Southgate. One of these, the apricot-coloured George Cutbush, we gave an illustration of last week.

Messrs. H. Cannell and Sons, Swanley, exhibited beautiful



A GROUP OF HERBACEOUS CALCEOLARIAS.

(Shown by Messrs. Sutton and Sons, of Reading, at the Temple Show.)

groups of Cannas, Calceolarias, tuberous Begonias, and a fine collection of cactaceous plants.

A very fine group of Calceolarias, of rich and interesting colours, came from Messrs. J. James and Son, Farnham Royal, Slough.

A beautiful group of tuberous Begonias was shown by Messrs. T. S. Ware, Ltd., Feltham. It contained Miss Irene Lower, Gradus, Mrs. James Portbury, Lord Rosebery, Brilliant, Avoca, and Sovereign.

A very fine collection of Clematis was exhibited by G. Jackson and Son, Woking. In it were specimens of *C. coccinea* Comtesse of Onslow (of which an illustration was given last week), Duchess of York, and Duchess of Albany.

From Mr. Charles Turner, Slough, came a group of show Pelargoniums, among which were Joe, Edward Perkins, Mr. Combs, Mystery, and the Shah. He also exhibited a fine group of Azaleas and fine Malmaison Carnations.

A splendid collection of Rhododendrons was sent by Mr. John Waterer, Bagshot. It contained, among many others, the plants of Michael Waterer, Sappho, Pink Pearl, Lady Clementine Walsh, and John Walter.

Very fine groups of tuberous Begonias and Calceolarias were shown by Messrs. John Laing and Sons, Forest Hill. The flowers were of wonderful colour and form. We hope to figure some of the more important types.

Several fine plants of Astilbe W. E. Gladstone and A. Washington came from Messrs. G. van Waveren and Kraijff, while Mr. Paul Erselius, Romford, showed a group of *Petunia Charlotte*.

A group of the pretty Pelargonium Emmanuel Lias was staged by Mr. W. J. Godfrey, Exmouth.

Messrs. Hugh Low and Co., Enfield, sent plants of the very pretty *Schizanthus wisetonensis*.

A collection of various cactaceous plants was sent by Messrs. A. W. Young and Co., Stevenage, Herts.

Fine groups of double Begonias, Calceolarias, and scarlet Gloxinia Stanley came from Messrs. Webb and Sons, Wordsley, Stourbridge. These made an excellent display.

Mr. E. S. Towell, Windmill Road, Hampton, showed his new and pretty zonal Pelargonium Fire Dragon.

A group of plants, such as Calceolarias, Ericas, Astilbe japonica, and *Lilium longifolium*, was staged by Mr. W. Icton, Putney; while a new yellow Calla, *Primrose League*, came from Mr. S. Bide, Farnham.

Fine groups of Azalea mollis came from Messrs. F. Sander and Co., St. Albans, and Mr. J. Russell, Richmond.

A group of Calceolarias and *Streptocarpus* hybrids was exhibited by Messrs. J. Laing & Sons, Forest Hill.

Messrs. R. Smith & Co., Worcester, showed a fine lot of Clematises, including Princess of Wales, *Purpurea elegans*, Fairy Queen and others.

Messrs. Sutton & Sons showed a fine group of Calceolarias, of very rich and dainty colours, and of this we give an illustration. The plants were dwarf in growth and a mass of flowers.

Mr. Charles Pigott, Bart., Wexham Park, Slough, showed a very fine group, containing Crotons, Palms, Malmaison Carnations, Liliums, &c.

Mr. J. Jennings, gardener to Mr. L. de Rothschild, Ascott, Leighton Buzzard, staged a group of Carnations, including King Arthur, Sergeant George, Jim Smith, &c.

From Colonel Rous, Worsted House, Norwich, came a seedling *Bougainvillea*, Mauld Chettleburgh.

FERNS AND FOLIAGE PLANTS.

A lovely collection of Ferns came from Messrs. J. Hill & Son, Lower Edmonton.

Another fine collection of Ferns was exhibited by Messrs. H. and J. Birkenhead, Sale, near Manchester. A great variety was represented. A very interesting exhibit.

Mr. J. Upton, Irlam, near Manchester, showed an excellent collection of Gloxinias.

Fine, well-coloured Coleruses, *Crimson Gem*, *Golden Gem*, *Victor*, &c., were shown by Mr. H. E. May, Upper Edmonton.

Messrs. J. Veitch and Sons sent a splendid collection of Calceolarias, including Princess of Teck, Edith Luther, The Mikado, Lady Mosely, Rose Laing, and Excellent.

Another handsome collection of Calceolarias, including Henry Dixon, Oriflamme, Sir Wm. Broadbent, Silver Cloud, &c., was sent by Messrs. Peed and Son, W. Norwood. This firm also had a fine group of Gloxinias.

A very fine exhibit of Lilies of the Valley was sent by Mr. W. Poupard, Twickenham.

A group of Crotons was staged by Mr. R. Green, Cranford Street, W.

A very pleasing group of flowering and foliage plants was shown by Mr. H. B. May, Upper Edmonton. It contained such subjects as *Platycerium grande*, *Statice profusa*, *Asparagus Sprengeri compacta*, Crotons, &c.

ROSES.

These formed, as in previous years, a very beautiful display, and one of the most important groups came from Messrs. Wm. Paul, Waltham Cross, whose group contained many fine subjects, among which were Jersey Beauty, Claire Jacquier, Enchantress, Duke of York, Corallina, Climbing Devonensis, and others. A very charming exhibit.

Messrs. Paul and Son, Chessnut, also had a fine group, including Mme. de Watteville, Mavourneen, J. E. M. Camm, Haileybury, Psyche, Innocent Pirola, &c.

Another fine group was staged by Mr. Charles Turner, Slough. It contained, among other kinds, Mme. Abel Chatenay, Souvenir de Eugene Verdier, Céline Frestier, and L'Innocence.

Mr. B. R. Cant, Colchester, had a pretty group containing several fine sorts, and also a group of cut blooms, among which were fine blooms of Marechal Niel, Caroline Testout, The Bride, Ulrich Brunner.

A handsome group from Mr. R. Rumsey, Waltham Cross, contained several plants of *Crimson Rambler* and plants or blooms of *Niphctos*, Mrs. J. Laing, John Stuart Mill, and several others.

Messrs. R. Smith and Co., Worcester, showed a group of *Crimson Rambler*; while Mr. W. Piper, Uckfield, sent some very good blooms of Sunrise.

A group of plants in pots was staged by Messrs. F. Cant and Co., Colchester. Among them were Yellow Banksian Muriel, Anna Olivier, and Mme. Hoste. A beautiful display.

HARDY PLANTS.

In this section Messrs. R. Smith and Co., Worcester, figure as an addition to the list of exhibitors, though, as is full well known, the firm have grown herbaceous plants largely for many years. Prominent among those noted were *Thermopsis montana*, a good yellow-flowered member of the Leguminosae, growing some 3 feet high and of good habit.

In the same order was *Piptanthus nepalensis*, also yellow and quite distinct. Quite among showy things, though only seen on rare occasions at exhibitions, are *Paeonia tenuifolia* and pretty trusses of *Saxifraga peltata*, so good a plant for shade and moisture, and not at all to be despised when only given ordinary culture in the garden; *Ornithogalum aurantiacum* is pretty and showy; a variety of *Iris germanica* named *australis*, which is also darker than the type. We also noted *Paneratium maritimum* in this lot, the whole of which was margined with the variegated ground Ivy.

The Messrs. W. H. Rogers, Southampton, had a display of cut flowers for the most part. A very showy plant among the shrub portion is *Andromeda formosa*, with pure white bells in considerable profusion, even on small branches or twigs.

Mr. Robert Sydenham, Tamworth, had a beautiful lot of Tufted Pansies in select colours and well disposed, A. J. Rowberry, Niphctos, The Lark, Devonshire Cream, being all good, and so also a new-comer called Hawk. It is one of the "edged" class, the margin being of a bright lilac-blue and well defined.

The Messrs. Bobbie and Co. had a most interesting group of Sweet Peas. These were delightfully simple and very charming, as well as beautifully fresh, and indeed conveyed more to the mind than is often the case in much larger groups.

Quite charming too was a group of hybrid Columbinas, contributed by the Messrs. James Veitch and Sons, Ltd., Kings Road, Chelsea. These, it should be noted, were all grown in 5-inch pots, and not only displayed to good advantage the plants, in so far as the superiority of the strain was concerned, but equally demonstrated the great value of these graceful subjects in general grouping for effect. In this way these plants are always charming. There were probably some 200 pots of these pretty and diversified plants. As to colour, or colours, there are shades of blue varying from deep to delicate, some very pretty and fascinating, and there are tints of yellow and buff, and others of delicate primrose, often in delightful combination.

Messrs. A. W. Young and Co., Stevenage, set up a small collection of hardy plants, mostly of the dwarfier kinds.

LIST OF AWARDS.

Gold medal to Sir F. Wigan, Bart., Northlake (gardener, Mr. W. H. Young), for Orchids, Messrs. F. Sander & Co., St. Albans, for Orchids, Azaleas, &c.; Messrs. J. Veitch and Sons, Chelsea, for Calceolarias, *Cheila*, flowering shrubs; Mr. Leopold de Rothschild, Gimmershay House, Acton (gardener, Mr. J. Hudson, V.M.H.), for fruit trees and Water Lilies; Lord Wantage, Lockinge Park, Wantage, for fruit.

Silver cups to Messrs. J. Cypher, Cheltenham, for Orchids; Messrs. Lucien Linden, Brussels, for Orchids; Messrs. Charlesworth and Co., Bradford, for Orchids; Mr. C. Turner, Slough, Roses, Pelargoniums, Carnations; Messrs. J. Carter and Co., Holborn, vegetables, Calceolarias, &c.; Messrs. Barr and Sons, Covent Garden, Tulips, herbaceous plants, &c.; Messrs.

W. Cutbush and Sons, Highgate, topiary work, &c.; Messrs. Fisher, Son and Sibray, Sheffield, stove and miscellaneous plants; Messrs. Hugh Low and Co., Enfield, N., Orchids and new plants; Messrs. G. Paul and Son, Chessunt, Roses, cut flowers, and Bamboos; Sir Charles Piggott, Bart., Slough, Palms and Crotons; Messrs. R. Smith and Co., Worcester, Clematis and Roses; Messrs. J. Peed and Son, Norwood, S.E., Caladiums, Gloxinias, &c.; Messrs. W. & J. Birkenhead, Sale, Ferns; Messrs. J. Hill and Sons, Edmonton, Ferns; Sir J. Pease, Bart., M.P., Gnisboro, fruit; Messrs. T. Rivers and Son, Sawbridgeworth, fruit trees; Messrs. G. Bunyard and Co., Maidstone, fruit; Messrs. W. Paul and Son, Waltham Cross, Roses and Rhododendrons; Messrs. T. S. Ware, Ltd., Feltham, Begonias, herbaceous plants; Messrs. H. Cannell and Sons, Swanley, Cacti, Cannas, &c.

Silver-gilt Flora medal to Mr. R. J. Measures (gardener, H. J. Chapman), for insectivorous plants; the Duke of Northumberland, for Nepenthes; Messrs. J. Cheal and Sons, for Cacti, &c.; Messrs. Wallace, for hardy plants and Lilies; Messrs. Kelway, for Peonies, &c.; Messrs. Sutton, for Calceolarias; Mr. J. Russell, for trees and shrubs; Mr. J. Watkins, for Apples; Mr. Leopold de Rothschild, Ascott, Leighton Buzzard (gardener, Mr. J. Jennings) for Carnations. Silver-gilt Knightian medal to Mr. A. Henderson, M.P., for fruit and vegetables.

Silver Flora medal to Mr. W. Teeton, for decorative plants; Messrs. Laing, for Maples and stove plants; Mr. T. Jannech, for Lilies of the Valley; Mr. W. Poupart, for Lilies of the Valley; Messrs. Cripps, for Maples; Mr. R. Green, for Crotons; Messrs. B. S. Williams, for Orchids; Mr. Ludwig Mond, for Orchids; Mr. G. W. Piper, for Roses; Messrs. F. Cant and Co., for Roses; Messrs. Hogg and Robertson, for Tulips; Messrs. W. H. Rogers, for Rhododendrons; Messrs. J. James and Son, for Cinerarias; Messrs. Webb and Son, for Begonias, Gloxinias; Messrs. Stanley, Ashton and Co., Southgate, for Orchids; Mr. W. A. Gillett, for Orchids; Mr. H. J. Jones, Lewisham, for Begonias and cut flowers; Mr. W. Runsey, Waltham Cross, for Roses; Mr. Amos Perry, Winchmore Hill, for hardy perennials; Messrs. G. Jackson and Son, Woking, for Clematis and hardy perennials; Mr. B. R. Cant, Colchester, for Roses; Messrs. R. and G. Cuthbert, Southgate, for Azaleas; Mr. M. Pritchard, for herbaceous plants; the Guildford Hardy Plant Nursery, Guildford, for alpines; Mr. H. B. May, Edmonton, for foliage plants and Roses; Messrs. J. Waterer and Sons, Buzshot, for Rhododendrons; Lord Gerard for Carnations; Messrs. Backhouse, for Orchids, alpines, &c.; Messrs. Fromow, for Maples.

Silver Knightian medal to Mr. S. Mortimer, for Cucumbers; Mr. W. Godfrey, for Asparagus; Mr. Barwood, for Asparagus. Silver Bankian medal to Marquis de Wavrin, for Orchids; Messrs. Hobbie, for Sweet Peas; Mrs. Bodkin, for Cacti; Messrs. Young, for Cacti; the Misses Hopkins, for herbaceous plants; Mr. E. Erseluis, for Petunias; Messrs. Waveren, for Astilbes.

FLORAL COMMITTEE AT CHISWICK, MAY 24

The last of the specially summoned meetings of the floral committee to examine the late-flowering Tulips was held at Chiswick on Thursday, the 24th ult., when a goodly number of members attended, notwithstanding the counter attractions at the Inner Temple Gardens. On this occasion the committee recommended ... highly commended, to fifteen varieties, of which four belonged to Darwin section:

Columbus, from Messrs. Hogg and Robertson, Dublin; Messrs. Barr and Sons, Long Ditton; and Mr. Krelage, Haarlem. This is a rich and beautifully shaped late-flowering Tulip, and when seen in a large mass is very effective, its brilliant crimson petals freely striped and deeply edged with golden yellow. It grows 16 inches high and is also known as *Gala Beauty*.

Guinevan southlata, from Messrs. Barr. This is a lovely variety for massing, and grows nearly 2 feet high. Its handsome flowers with pointed petals are rich scarlet-crimson, suffused with rosy carmine on the outer petals. The centre of the flower is deep indigo-blue.

Isabella, from Messrs. Barr and Sons; Messrs. Hogg and Robertson; and Messrs. Jas. Veitch and Sons, Chelsea. This old-fashioned cottage garden Tulip is even to-day one of the most attractive of the late kinds. It grows 10 inches to a foot high, is very sturdy in habit, and bears very long, exquisitely shaped flowers, which in a young state are primrose-yellow with a faint suspicion of pink, gradually changing to carmine-pink or rose shaded with cream-white. The outer petals are silvery white and rose, and the centre of the flower is stained with pale blue on a white ground. This charming variety is encumbered with several synonyms, the principal of which are *Blushing Bride* and *York and Lancaster*.

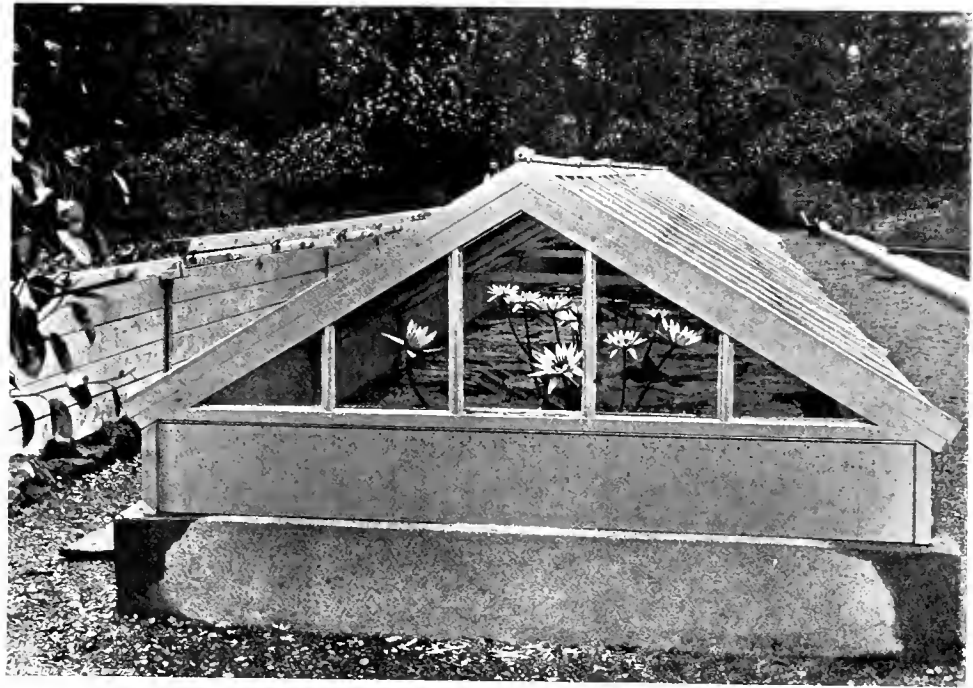
Muculata major, from Messrs. Hogg and Robertson. This is a grand bedding Tulip, brilliant and distinct in colour, but unfortunately not quite so enduring as some. Its height ranges from 16 inches to 20 inches, and the deep crimson flowers are conspicuous for the very dark centre and golden yellow zone.

Billietiana, from Messrs. Barr and Sons and Messrs. Jas. Veitch and Sons. This is a strikingly beautiful cottage garden Tulip, with rich yellow flowers with broad substantial petals irregularly margined with orange-scarlet. Its flowers are of good form, borne on stout stems, and create a glorious effect when seen in bold masses. It usually grows about 18 inches high.

Billietiana Sunset, from Messrs. Hogg and Robertson and Messrs. Barr and Sons. Where showy late-flowering Tulips are in request the merits of this uncommon variety should be considered. It rarely exceeds a foot high, and its flowers are lovely orange-yellow, deeply edged and splashed with orange-scarlet. It is a gem.

Stella, from Messrs. Barr and Sons. This is a grand variety with exquisitely shaped bright carmine flowers, blotched with blue in the centre on a white ground. A bed of it creates a pleasing effect in the midday sun.

Miss-on-the-hill, from Messrs. Hogg and Robertson, Messrs. Barr and Sons, and Messrs. Jas. Veitch and Sons. For massing this can be thoroughly recommended. It grows about 14 inches high, and bears large rich scarlet sweet-



HYBRID WATER LILIES (NYMPHÆAS) IN TUBS.

(Shown by Mr. Leopold de Rothschild (gardener, Mr. J. Hudson) at the Temple Show.)

[The flowers seen are those of the tender blue-coloured *Nymphaea stellata*, but the other kinds were quite hardy.]

scented flowers with pointed petals, with a dark centre and deep yellow zone. It is effective, free flowering, and quite distinct.

Goldflake, from Messrs. Hogg and Robertson. This is another charming cottage garden Tulip with large well formed flowers, orangesscarlet, flaked with deep yellow. It is sweet-scented and well adapted for massing. Grand for cutting.

Fulgens, from Messrs. Barr and Sons, Messrs. Hogg and Robertson, and Mr. H. J. Jones. For planting in masses in pleasure grounds or naturalising in grass few sorts show to better effect than this well-known favourite. It is very vigorous in growth, averaging 2 feet high, and its large rich crimson flowers with a yellow centre are borne on stout stems. Its flowers remain in good condition for several weeks.

Persica, from Messrs. Barr and Sons. This is a dainty Tulip and well suited to the rock garden. In height it varies from 4 inches to 6 inches, and its undulated leaves barely rise more than an inch or so above the ground. Its rich buttercup-yellow flowers are borne with great freedom, some stems carrying as many as four fully developed flowers at the same time. It may be used with excellent effect as an edging to beds, but wherever it is planted it should always be where it can get a fair amount of sun-heat.

DARWIN TULIPS.

Landelle, from Messrs. Hogg and Robertson. This grows 2 feet high, and the beautifully shaped flowers are bright rose and pink, the central petals having a band of white down the centre.

Minister Roll, from Messrs. Hogg and Robertson. Here we have a brilliant variety with large handsome flowers with broad petals, colour crimson, with a dark centre and white zone. The plant grows about 2 feet high.

Calypso, from Messrs. Hogg and Robertson. A magnificent variety with exceptionally large salmon-red flowers touched with rose on the outer petals. The centre of the flower is white with a narrow zone of pale blue. It is very doriferous and remains showy for a long time.

Madame Eubonia Toussaint, from Messrs. Hogg and Robertson. This is under 2 feet high, and the medium-sized flowers with broad petals are rosy purple, much paler towards the tips. The central petals are striped with white and the outer ones freely marked with rose-pink.

ANNUAL DINNER OF THE KEW GUILD

ON Tuesday night (May 22) at the Holborn Restaurant was held the first annual dinner of the Kew Guild. We have on previous occasions referred to the excellent work and importance of this guild, which binds together in a powerful body those men who are yearly passing through Kew, and are now scattered in all quarters of the world. The guild is some eight or nine years old, but this is the first occasion it has aspired to a dinner. It was felt, however, that an opportunity should be given to the members for social intercourse and to the renewing of old acquaintances, and the entire success of Tuesday night's proceedings has decided that the dinner will become an annual event. The director of the Gardens, Sir William Thiselton-Dyer, K.C.M.G., &c., was in the chair, and was supported by Mr. Nicholson, the curator, and the permanent staff of the Gardens, both from the botanical and horticultural sections. The loyal toasts having been duly proposed and honoured, the chairman proposed, in happy terms "The Health and

Continued Success of the Kew Guild. He expressed the great pleasure it gave him to preside over such a large gathering, embracing, as it did, members of the guild not only from all parts of the British Isles, but also from the Continent. Many of the members, he was assured, must have made sacrifices to be present, and this convinced him that the comradeship which they as a body of past and present Kewites claimed to exist among all men who had passed through Kew was an established and undeniable fact. At the inception of the guild he had stated that he had great hopes of its success, and had pointed out that a Kew training was to horticulturists very similar to a university training. Young men came there at a critical period of their lives, full of love and enthusiasm for their work, though needing perhaps some corners rubbed off. By association with their fellows they learned to respect the opinions of others, to be tolerant of views contrary to their own, and, unconsciously it might be, they developed that breadth of judgment which made a Kew man respected wherever he might be placed. As he looked around him he saw members who were occupying considerable positions of trust and importance in the horticultural world, and he ventured to say that the Kew Guild was the strongest and most influential body of professional gardeners in the land. It was a source of peculiar pleasure to him as director of the Gardens to preside at this dinner and to see so many old friends around him, and he had every confidence in the continued success and prosperity of the guild.

Mr. Nicholson, the curator of the Gardens and president of the guild, responded to the toast, as also did Mr. Watson, the assistant curator.

Other toasts suitable to the body and the occasion were honoured with enthusiasm, and a most enjoyable evening terminated with the singing of "Auld Lang Syne." At intervals songs were contributed by members of the guild.

BECKENHAM HORTICULTURAL SOCIETY.

MR. A. D. HALL gave a most interesting and instructive lecture before the members of the society on Friday, May 25, entitled "The English Tulip: its History, Cultivation, &c." Introduced at the close of the 16th century, the Tulip made but little progress until from 1830 to 1850, when it became the English flower of the day, but the fabulous prices charged checked its general cultivation, and, with the exception of a few growers in the north and midlands, had almost gone out of cultivation. Within the last few years it has begun to grow in favour again, and there are several enthusiastic growers south, not the least of which is Mr. Hall, who illustrated his remarks with specimens of bizarres, byblomems, roses, and breeders, which had secured for him three firsts, one third and two premier bloom awards at the recent show of the National Tulip Society. Messrs. Barr and Sons sent specimens of Darwin Tulips. A hearty vote of thanks was accorded. This lecture closed the winter session.

ROYAL NATIONAL TULIP SOCIETY.

THE exhibition of this society was held in connection with the Temple show on May 23, 24, and 25. The exhibits, though few in number, were very interesting. The premier blooms were: byblomen *Trip to Stockport*, shown by Mr. A. Charter; flamed byblomen *George Edward*, sent by Mr. A. D. Hall; and breeder *Adonis*, from Mr. A. D. Hall.

In the class for six breeder or self-coloured Tulips, Mr. A. D. Hall, Wye, was first with splendid blooms of *Gold*

under, Maid of Orleans, Adonis, Mrs. Barlow Rose Hill, &c. The second place was taken by Mr. J. W. Bentley, Stakehill, Castleton, while Mr. Chater, Cambridge, was third. In the class for three breeders, Mr. Hall was again first with fine blooms of Hepworth's 108, Talisman, and Annie McGregor. Mr. Bentley was second.

In the class for twelve distinct varieties, the first place was awarded to Mr. J. W. Bentley, who showed a fine collection, among which were Masterpiece, Samuel Barlow, Duchess of Sutherland, Modesty, &c. Mr. A. Chater and Mr. A. D. Hall held the second and third places respectively. Mr. Hall was placed first in the class for six distinct varieties. His collection consisted of Attraction, Samuel Barlow, W. H. Parkinson, George Edward, Miss Edward, and Mabel. Mr. Chater was second in this class, and Mr. Bentley third. Miss Scott, St. Albans, was the only exhibitor in another class for six distinct blooms.

For three feathered Tulips the first prize was awarded to Mr. Bentley, who sent blooms of Masterpiece, Bessie, and Mrs. Collier. Mr. Hall took the first prize for three flamed Tulips, while Mr. Chater was second, and Mr. Needham, Altrincham, third.

Mr. Bentley won the first prize for two rectified Tulips, one feathered and one flamed, with Mrs. Wood, feathered, and Samuel Barlow, flamed. Mr. Chater was second with Samuel Barlow and Sarah Headley, feathered.

CAMBRIDGESHIRE HORTICULTURAL SOCIETY.

This excellent society will hold its summer show on Tuesday, June 12, and its autumn exhibition on Wednesday and Thursday, November 7 and 8.

LINNEAN SOCIETY OF LONDON.

The next evening meeting will be Thursday, June 7, at 8 p.m., when the following papers will be read: On "A Viviparous Syllid Worm," by Mr. E. S. Goodrich, F.L.S.; on "The Genera Phacelium (Gill) and Dicellandra (Hook. f.), by Dr. A. Stapf, A.L.S.; on "The Structure and Affinities of *Echinus mucinatus*," by Miss Enbleton.

PARIS CHRYSANTHEMUM SHOW.

The schedule for this show has now appeared, and contains nineteen classes for pot plants and the same number for cut blooms. There are also several classes for what may be described as ornamental arrangements of Chrysanthemums. The show will open on October 31 in the Exhibition grounds, and be followed by an international conference of growers, to be held at the headquarters of the National Horticultural Society of France on November 3 and 4. The classes at the show will consist of collections of 150, 100, and 50 large-flowered Japanese and Chinese varieties, 30 hairy, 30 incurved, a collection of 1898, 1899, and 1900 novelties, 50, 25, 12, and 6 varieties exhibited for excellence of culture, 25 grafted on Antheunis, 100 on single stems, 75 decorative, 50 for superiority of colour, a collection of hardy varieties, 100 pompons in 25 varieties, 60 pompons in 10 varieties, and 30 Anemone, hairy or curious kinds.

ITALIAN NATIONAL CHRYSANTHEMUM SOCIETY.

WHEN we look over the pages of the various continental Chrysanthemum societies journals, we often wonder when we shall have something similar in England. The Italian N.C.S. has just issued the current number of *Il Crisantemo*, which is its official organ, and which is certainly got up in far better style than any other similar publication. It has several illustrations, and the printing leaves little or nothing to be desired. Among the contents we notice report of the society's second annual exhibition in Milan, accounts of several local shows, report of the Lyons Congress, introduction of the Chrysanthemum into Italy, and two articles by Mr. Haman Payne on Calvat's novelties and Chrysanthemums for borders. The membership of the society is increasing, and under the guidance of Mr. Scalarandis (the president) and Mr. Radalli (the secretary) it seems likely to do useful work.

NATIONAL CHRYSANTHEMUM SOCIETY.

The annual report and financial statement for the past year have recently been issued. It is worthy of note that the income of the society for 1899 was considerably over £1000, and that the balance at the bank was £76 18. 0d. after the year's outgoings had been disbursed. The reserve fund stands at £74 118. 2d. Among other contents are the report of the N.C.S. deputation that visited the Lyons show last November, the rules, report of the classification committee, the names of the winners of the various medals, trophies, &c., lists of members and affiliated societies, the latter of which has grown beyond all expectation, for we notice that, besides having affiliated societies in Australia, New Zealand, the Cape of Good Hope, there are others in Germany and Denmark. The remainder of the volume is devoted to the prize schedules of the various exhibitions to be held by the society in the coming autumn.

SOCIÉTÉ FRANÇAISE D'HORTICULTURE DE LONDRES

THIS interesting society, which, under the judicious chairmanship of Mr. George Schneider has done so much to establish and maintain good feelings between English and continental gardeners and nurserymen, has quite recently published its annual bulletin. It is a volume of some importance, containing as it does 150 pages of printed matter, a large portion of which includes articles of interest on horticultural subjects outside the actual records of the society. Among the many English friends who have lent their support to the society, Mr. George Nicholson, of Kew Gardens is one of the chief, and a very excellent portrait of him forms the frontispiece to the present year's issue, accompanied by an appreciative biographical notice.

Other literary contents are the annual report for the past year, the rules, list of officers, list of members of various

grades, reports of the monthly meetings, and a somewhat lengthy report of the annual dinner, at which it will be remembered that Mr. Geoffroy, the French Minister, presided last January. The balance sheet, which it is agreeable to record shows a substantial improvement, and a catalogue of the society's library terminate what may be considered as the purely official part of the bulletin.

Articles of interest on general horticultural matters are contributed by members on such subjects as Crotons, Chrysanthemums for cut blooms, the temperate greenhouse at Kew, the pot culture of Cannas, Hampton Court Gardens, the forcing of Lilac, &c. Altogether the present issue may be regarded as quite equal in importance to its predecessors, and under the able guidance of its genial and devoted chairman the society is filling an important place in the horticultural world, and doing a work that could be undertaken by no other society in the country.

NEW AND RARE PLANTS.

At the Temple Show, 1900, first-class certificates were awarded to the following:—

LELIA PURPURATA LITTLEANA.

This is a charming variety, the sepals and petals of fine form and substance and pure white, with a lip of good form, and a conspicuous white blotch at the apex. On either side of this there is a deep blotch of rich purple, margined with rose. The side lobes are white, shading to yellow at the base, where there are numerous lines of bright purple. The plant exhibited carried two racemes of four and three flowers respectively. From the collection of Mr. H. Little (gardener, Mr. A. Howard).

ODONTOGLOSSUM ADRIANÆ ARTHUR ASHWORTH.
This is a distinct and pretty variety, with fine round flowers each 2½ inches in diameter. The ground colour is bright yellow, and the sepals and petals beautifully and regularly spotted with bright brown, the lip standing out prominently, as in *O. crispum* Leeman, paler yellow with a deep orange disc. The disc is surrounded with bright brown spotting. From Mr. E. Ashworth, Harefield Hall, Cheshire (gardener, Mr. H. Holbrook).

ODONTOGLOSSUM ADRIANÆ ERNEST ASHWORTH.
This variety resembles Arthur Ashworth in shape and spottings, but has an almost white ground, and the spottings are larger on the sepals and of a deeper brown. The lip is larger, much crisped on the margin, and has a large blotch of deep brown covering the central area. The plant carried a five-flowered raceme. From Mr. E. Ashworth.

ODONTOGLOSSUM SOUVENIR DE VICTOR HYE DE CROM.

This is a garden-raised hybrid between *O. harrayanum* and *O. luteo-purpureum*. It is one of the most distinct of this section of hybrids. In shape and general characteristics it shows the intermediate characters of the parents. The sepals are each about 3 inches long, almost wholly deep brown, margined and slightly mottled with bright yellow. The petals are tipped and marbled with yellow, the remaining portions being almost wholly deep brown. The lip is flat, as in *O. harrayanum*, the whole of the front lobe creamy white, the basal half rich purple, mottled with yellow. There is a prominent crest of yellow hairs on the disc. The plant carried an eight-flowered raceme. From M. Jules Hye, Ghent, Belgium.

ODONTOGLOSSUM ROLFEÆ VAR. OPTIMUM.

This is one of the prettiest of the *O. harrayanum* hybrids. It is the result of intercrossing *O. harrayanum* and *O. Pescatorei*. The flowers are each about 3 inches in diameter, the sepals being 1 inch broad, white, suffused with purple, having a large blotch of deep purple in the centre and numerous smaller ones around the sides and towards the base. The petals are white, suffused with purple on the apex. There are numerous purple spottings on the centre and basal area. The lip is white with numerous violet spottings at the base, the disc bright yellow. There are numerous blotches of purple on the exterior of the segments. The plant carried a four-flowered raceme. From M. Vynylsteke, Ghent, Belgium, by whom it was raised.

LELIO-CATTLEYA CALLISTOGLOSSA EXCELSA.

(*C. GIGAS SANDERIANA* × *L. PURPURATA*.)

Four handsome forms of this hybrid from the same seed pod came from Messrs. F. Sander and Co. The one selected for certificate has unusually large sepals and petals of good form and substance and of a pale rosy lilac. The lip is enormous, vivid crimson-purple, veined with a darker shade of purple, which extends into the side lobes. The throat is white, becoming yellow in the centre, with some deep crimson at the base. It is one of the finest Cattleya hybrids.

Annals of merit were adjudged to the following

CATTLEYA MOSSIE ROSELEANA

This is a highly coloured variety with large drooping deep rose sepals and petals. The lip is crimson-purple, marbled with rosy purple, with the usual yellow at the base and through the throat. The plant carried five racemes of two flowers each. From the Marquis de Wavrin, Belgium.

C. M. OUR QUEEN.

This is a beautiful variety of the *C. M. Arnoldiana* section. The sepals and petals are of fine form and substance, white, with a faint suffusion of rose through the centre. The lip is white, mottled and lined with bright crimson in the centre and with some yellow at the base. The side lobes are white. The plant carried a three-flowered raceme. From Messrs. F. Sander and Co.

C. M. WAGNERI, HASSALL'S VARIETY.

This is by far the largest form of this white variety we have seen. The sepals and petals are unusually large and fine in substance. The lip is also large in proportion, pure white, except the yellow disc. From Messrs. Stauley, Ashton and Co., Southgate, London, N.

LYCASTE BALLÆ.

(*SKINNERI* × *PLANA MEASURESIANA*.)

This is a distinct variety with flowers nearly as large as those of *L. Skinneri*. The sepals are deep brown-purple, and the petals are of brighter purple covered with miniature white spottings. The front lobe of the lip is white, with prominent purple spottings. The side lobes and base are rich deep purple. Exhibited by Messrs. Charlesworth and Co., Heaton, Bradford. A most desirable addition.

CYMBIDIUM LANSONI.

This is a supposed natural hybrid, the flowers 4½ inches in diameter, and the sepals and petals pale greenish yellow, lined with delicate brown, and having a brown suffusion at the base. The lip is large, creamy white, with some yellow and indistinct purple markings on the front lobe. The plant carried a five-flowered raceme. It is a most distinct and desirable addition. From Messrs. H. Low and Co., Bush Hill, Enfield.

LELIO-CATTLEYA MASSANGEANA.

(*L. TENEBROSA* × *C. SCHILLERIANA*.)

This small hybrid has the intermediate characters of the parent species. The sepals and petals are rich chocolate brown, and the lip is in shape like *C. schilleriana*, wholly rich crimson-purple, more intense at the base and lighter on the margins. From M. Peeters, Brussels.

L. C. HERODE.

(*C. GIBBIENANA* × *L. C. ELEGANS TURNERI*.)

This is a pretty hybrid, with deep rosy lilac sepals and petals. The flat lip is rich crimson-purple, margined with rose on the front lobe, white, shading to yellow in the centre and towards the base. The side lobes pale rose, shading to crimson-purple at the base. From M. Peeters.

L. C. G. S. BALLÆ.

(*C. SCHROEDERÆ* × *L. CINNABARINA*.)

This is a pretty hybrid with deep orange sepals and petals. The lip is similar in colour with orange-scarlet around the outer margin, which shows the crisp characters of the *Lelia* parent. It is a desirable addition and most attractive. The plant carried a three-flowered raceme. From Messrs. J. Veitch and Sons, Chelsea.

CYPRIPEDIUM MARY BEATRICE.

(*C. BELLATULUM* × *GOWERI*.)

This is a pretty variety of the *C. Lawreli* section. The dorsal sepal is 2½ inches across, rich purple with deep brown veining. The petals 3 inches long, deep purple, with green suffusion at the base, the whole being covered with dark brown spottings. The lip is deep brown, shading to green at the base. Plants were exhibited from the same seed pod by Mr. G. W. Law-Schofield, Newhall Hey, Rawtenstall, and Messrs. Charlesworth and Co., Bradford.

ODONTOGLOSSUM ROLFEÆ ARDENTISSIMUM.

This resembles the variety *O. R. Optimum*, only differing slightly in the colouring, which, perhaps, is owing to the age of the flowers, as this section of hybrids changes to a great extent with age. From M. C. Vynylsteke.

ODONTOGLOSSUM CRISPUM MRS. F. PEETERS.

This is a pretty spotted variety. The flowers 3½ inches in diameter, and the exterior of the segments deep rosy purple, which is reflected through the sepals giving a rose suffusion. There is a solid blotch of brown-purple in the centre, and other indistinct markings at the base. The petals are much crisped on the margin, white on the outer one and becoming suffused with rose in the other portions. There is a large oval blotch of brown in the centre, surrounded by other purple markings. The lip is white, shading to yellow on the disc, the whole being covered with dark brown spottings. A cut spike of three flowers came from M. Peeters, Brussels.

ODONTOGLOSSUM ADRIANÆ VICTORIA REGINA.

This is a pretty form. The ground colour is creamy white, and the sepals spotted with intense bright brown. The petals are not nearly so densely spotted. The lip is white with small brown spottings in the centre and on the yellow disc. From M. Peeters.

ODONTOGLOSSUM ADRIANÆ VAR. RADIOSUM.

This is a pretty, finely shaped variety, more like *O. crispum* than most of this section. On the exterior of the segments there are deep purple blotches, which are reflected through the white ground colour in front, giving a rose suffusion. The sepals are blotched and spotted with deep purple-brown, the petals each having about three blotches of purple in the centre; there are a few small purple markings at the base. The lip is large, white, beautifully marked and spotted with deep brown. The plant carried a two-flowered raceme. From L'Horticole Coloniale, Brussels (manager, L. Linden).

ODONTOGLOSSUM CRISPUM CONFETTI.

This is a pretty form, the flowers 3½ inches in diameter, the ground colour white, delicately suffused with rose. The whole of the sepals and petals are thickly covered with small bright purple spottings; the lip maroon, white in front, blotched with purple in the centre, yellow at the base. The plant carried an eight-flowered raceme. From L'Horticole Coloniale, Ltd.

TULIPA BATALINI.

This is a rather small, but pretty species of a pale yellow colour. Its foliage is narrow, and it is a very suitable subject for planting in the grass. Exhibited by Messrs. Barr and Sons, King Street, Covent Garden.

TULIPA GALATICA.

A DELIGHTFUL bright yellow-flowered species, rather small. Shown by M. C. G. van Tubergen, Jun., Haarlem, Holland.

TULIP MRS. MOON.

THIS is a very pretty cottage garden Tulip, large, and bright yellow. It was sent by Messrs. Barr and Sons, King Street, Covent Garden.

TULIP MABEL.

THIS large English Tulip is of a lovely rose colour, white at the base of the segments. Also sent by Messrs. Barr and Sons, Covent Garden.

LILIUM THUNBERGIANUM ORANGE QUEEN.

THIS is an excellent Lily which was shown by Messrs. R. Wallace and Co., Colchester. The flowers are of a rich orange, with very small dark red spots towards the centre. The plant is of dwarf habit.

GLOXINIAS.

A FINE strain of Gloxinias, raised and shown by Mr. J. J. Upton, Irlau, Manchester. The colours were brilliant and the blooms very fine.

BOUGAINVILLEA MAUD CHETTLEBURGH.

THIS seedling Bougainvillea is a handsome, tall-growing sort, with large purple bracts, enclosing small yellow flowers. Shown by Mr W. Chettleburgh, Worstead House, Norwich.

SCHIZANTHUS WISETONENSIS.

A VERY free-flowering plant of bushy habit, the flowers being very graceful. The colours vary from white, marked with yellow, through shades of pink to a brown. Sent by Messrs. Hugh Low and Co., Enfield.

EDRAIANTHUS DALMATIcus.

THIS is a pretty rock plant, bearing clusters of rather large purple flowers. Exhibited by Messrs. G. Jackman and Son, Woking.

PELARGONIUM MRS. JOHN G. DAY.

THIS is of rather shorter-jointed habit than the rest of the Ivy-leaved Pelargoniums, and bears good trusses of fine semi-double, light-coloured blooms. Shown by Mr. H. J. Jones, Lewisham.

ENOTHERA SPECIOSA ROSEA.

A VERY charming new plant, having rather large pink flowers. The plants are from 6 inches to 1 foot in height. Sent by Mr. Amos Perry, Winchmore Hill, N.

DOUBLE BEGONIAS.

THREE fine double tuberous Begonias were Lord Roberts, a lovely flower with white ground and scarlet edge; Mr. W. G. Valentine, vermilion (both from Messrs. T. S. Ware, Ltd., Feltham); and Mrs. Arthur Hall, a very large salmon, very pretty. From Messrs. J. Laing and Sons, Forest Hill.

PEONY LADY SARAH WILSON.

THIS Tree Peony has a very large, semi-double flower with pink petals, which are of a darker colour towards the centre. It is a beautiful variety. Exhibited by Messrs. Kelway and Son, Lurgort.

CARNATION H. J. CUTBUSH.

AN excellent kind, with handsome crimson blooms. It is fairly free flowering, and does not apparently split its calyx. It is said to be beautiful as a border Carnation, and, if this is so, should be very useful. Shown by Messrs. W. Cutbush and Son, Highgate, N.

ECHINUM CALLITHYRSUM.

THE flowers of this plant are of a purple-blue colour, and are borne on a large, massive spike. Sent by the Hon. John Boscawen, Tregye, Perranwell, Cornwall.

CHAMELIRION CAROLINIANA.

THIS obtained a botanical certificate, Royal Horticultural Society on May 23, being shown by Messrs. T. S. Ware, Ltd., Feltham. Its white flowers are borne on spikes 4 inches or 5 inches in length, ascending from a mass of narrow, almost grass-like leaves.

HOW SPECIES ARISE IN NATURE.

THE question of "The Origin of Species" has been a very debatable one for the last forty years, since Darwin published his work with this title in 1859; and the first thing to decide is, what do we understand by the word "species"? If we follow the procedure of expert systematic botanists, when, *e.g.*, a packet of dried plants from some newly-explored country is put before them, they proceed to note all the features they can observe; and if a plant agrees in all essential features, but differs in several points of structure from some known plant, they say it is another "species" of the same "genus." Or if it agree very closely to the known species, they may call it a "variety." Here comes in a somewhat arbitrary procedure, for what one botanist may call a distinct species another may regard only as a variety; because the

number of distinct characters which qualify a plant to be called a species is not fixed.

According to this method of naming we may define or recognise a species as follows: "A species is known by a collection of presumably constant characters, taken chiefly from the forms of any or all the organs of the plant." These are to a large extent the vegetative organs, for the main features of the floral structures are the same for all species of the genus which includes them, though they may differ in such minor details as size, colour, &c.

To take as examples we have several species of *Buttercup*. To a casual observer the flowers of *Ranunculus bulbosus*, *R. acris* and of *R. repens* are all alike; but each of these species differs by a group of some half-dozen or more constant features, by which they are scientifically distinguished.

It was once thought that species were fixed entities and originally created as we see them, and that they refused to be crossed and yield fertile offspring. We now know that they have come into existence by evolution, and that crossing is no infallible test of a species whatever, for some hybrids are more fertile than either parent. Moreover, some plants cannot be fertilised by their own pollen, as Darwin has shown to be the case with some *Orchids* and *Linum perenne*, &c.

The next question which arises is, how do different forms of roots, stems, leaves, bracts and flowers arise? These often supply "specific" characters. We have already given reasons in a previous article for regarding insects to have been the chief agents in bringing about the adaptation of floral organs to their visits. This is especially manifest in the case of irregular flowers, declinate stamens, position of honey glands and guides, &c.

With regard to the vegetative organs, we must look to other influences, and these are the external conditions surrounding the plants wherever they grow in Nature.

When we take a general survey of all the plants growing under the same conditions of the environment, when it is of a very marked character, such as an excessively dry area, we often observe certain common features possessed by many plants not in any way related to each other. Thus in a sandy soil leaves are often reduced in size, as of *Heaths*, *Broom* and *Ling*, or the plants are spinescent, as *Furze* and the *Needle Furze*, all these being of different genera. Another type is seen in fleshy-leaved plants, which are enabled to store up water against dry seasons. The order *Crassulaceae* illustrates this feature, though it occurs in other families as well. Thus while the genus *Fagonia* has spiny stipules and no fleshy parts, *Zygophyllum*, of the same family, and growing with it in the wadys near Cairo, has fleshy leaves like our *Stonecrops*. Again, our English *Spurges* are ordinary herbs, but in the sub-tropical arid districts of North Africa they assume *Cactus* and *Stapelia*-like forms, as may be seen in the succulent house at Kew.

The cases are so numerous, that the conclusion is irresistible that such peculiar structures are the outcome of the response of the living protoplasm to the direct action of the environmental forces brought to bear upon it.

Similarly, if we turn to the opposite condition of things which occur in aquatic and marshy environments, one notices that in dicotyledons which have submerged leaves, these are almost always finely dissected. As examples may be mentioned the *Water Crowfoot*, *Myriophyllum*, *Ceratophyllum*, some aquatic *Umbellifere* and the *Water Violet* (*Hottonia palustris*). Such general coinci-

dences imply a common cause. Hence these and other characters which botanists use and describe as "specific" are obviously the result of the conditions in which the plants live. They become permanent by the prolonged existence under the same conditions and are hereditary by seed.

It must be borne in mind, however, that nothing need be absolutely fixed, for when a plant is again removed to a new environment the power of change goes with it, and so they begin to change again in re-adaptation to the new conditions. They may not lose their old structures altogether, but re-adapt them.

Thus, if the seed of the *Water Crowfoot*, which has whole floating leaves and dissected submerged leaves, be sown in a garden border, all the seeds grow up precisely alike. They bear dissected leaves at first, and whole ones afterwards by hereditary influences, just as they would have done if growing in water; but the entire anatomy of the plant is altered, the leaves being now adapted to live in air. If the plants be transferred to water, all the leaves perish, but new dissected leaves arise in adaptation to water in which they are submerged. This fact will show the rapid and immediate adaptations which arise when the plant finds itself in air or water, as the case may be. Indeed, a single shoot growing up into the air out of the water changes abruptly at the line of the surface of the water.

We thus see how "specific" characters arise: first by adaptation to the environments, and secondly, heredity follows, until they begin to alter under fresh conditions to form new varietal or specific changes as the case may be.

I have said nothing hitherto about "natural selection," to which Darwin attributed the main influence by which new species arise. It is now perceived that he made a mistake on this point. It was his impression that when a quantity of seeds of any plant germinated under new conditions, they would individually vary in all sorts of ways as they grew up, and that the environments would, so to say, select those, probably one or two or very few only, which were best adapted to the conditions in question, and that all others would perish. No evidence of such "indefinite" variations, as Darwin called them, has ever been produced. On the contrary, experiments show that the seedlings all vary alike, and in more or less direct adaptation to the new conditions, *i.e.*, if they vary at all. Darwin was aware of this, but thought it was of rare occurrence. He called them "definite" variations. But, in truth, this is the rule and not the exception. He admitted that in such cases new varieties and species would arise without the aid of natural selection. For further details I would refer the reader to my works, "The Origin of Floral Structures" and "The Origin of Plant Structures," International Science series. Natural selection, therefore, has nothing whatever to do with the origin of species.

The "struggle for life" occurs everywhere, and natural selection determines what plants shall live and what shall die in any given area. For example, *Daisies* on a tennis lawn will soon cover it and destroy the grass; but let it be left unmown for a few years, and the grass will now exterminate the *Daisies*. If weeds be allowed to grow at will in a kitchen garden, they would soon prevent all the vegetables from growing. Such is natural selection, but it has nothing to do with originating new variations of structure in plants, upon which varieties and species are founded. GEORGE HENSLow.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS

Questions and Answers.—The Editors intend to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITORS OF THE GARDEN, 20, Tavistock Street, Covent Garden, London. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

Names of plants.—*Emile Thibault*.—*Rosa sempervirens* Flora.—*J. R. D.* Iris humilis.—*J. B.*—1, *Spirea prunifolia* flore-plena; 2, *Staphylea pinnata*; 3, *Caragana arborescens*; 4, probably *Veronica virginica*, but it is difficult to say without leaves.—*Puzzled*.—1, *Tulip sunset*; 2, *Tulip Isabella*; 3, it looks like a light form of No. 1.—*T. W.*—*Heuchera sanguinea*.—*Iris*. *Bucks.*—*American Juneberry* (*Amelanchier canadensis*).—*Spring Hill*. The white flower is *Choisya ternata*; the leaf like small Chestnut, *Quercus serrata*; yellow flower, perhaps *Cytisus nigricans*, but too poor to say positively. Small Orchid flower in paper by itself, specimen insufficient for identification. May be a *Maxillaria*.

INDOOR GARDEN.

Tricolor Pelargoniums (B. J.). These plants are still grown in great numbers for market sale, and especially for bedding purposes. We deprecate their free use in summer bedding in the way that they and other bedding varieties are often seen. They are pretty when grown in pots in the greenhouse, or planted out in quite small clumps in flower beds, but not to make big flat monotonous masses, as in that case they are offensive. The leaves of the best varieties when they show under ample sunlight their true tricolor coloration are charming, but are undesirable if found in great excess. Some of the best golden tricolors are Mrs. Harry Cox, probably the best of all; Mrs. Pollock and Macbeth; of silver tricolors, Eva Fish, Mrs. Laing, and Charming Lady; and of the golden-bronze or bicolor section, M. MacMahon and Jubilee. The best silver bicolors are Flower of Spring and Boule de Neige. But all these variegated varieties should in any description of summer bedding be used sparingly.

FLOWER GARDEN.

Tulips a failure. The specimen bulb sent shows signs of starvation, and in consequence has produced half-blind flower buds. We understand from the letter that the Tulips have been in the same ground for two or three years, and this would only lead to deterioration. Tulip bulbs like being lifted annually and being replanted in fresh ground. In no case should they be left in the same soil for more than two years, and when this is done the soil should have a top-dressing of well-decayed manure in early spring. The spotting on the leaves is a fungus, brought about generally by heavy rains followed by bright sunshine, or early morning frosts with sunshine following will also produce similar results. Naturally weak bulbs will suffer more than strong ones from these conditions.

Lilium canadense (M.). This is a very charming kind, and we give a little illustration of it. It is a lover of peat, and succeeds best in a place where it gets some amount of shade, such as that afforded by Rhododendrons. The flowers are usually of a reddish orange with brown spots.

Pentstemons from seed (ALPHA). It is too late to sow seed of Pentstemon to obtain flowers this year. We have had plants raised by sowing seed in a frame in April blooming finely all through the ensuing autumn, but it is too late to have such bloom now. We advise you all the same to make a sowing of seed in a shallow box thinly, and stand the box in a frame or greenhouse, keeping it shaded until growth begins. If you have no frame to spare, then stand the box outdoors, cover it over with glass, and see that it be shaded and watered; seed does not germinate readily, indeed, you may have to wait a month for it to move. But in any case you should have plenty of nice young plants to dibble out into borders in September, and those standing in the winter will grow stronger and bloom finely next summer. You can get from seed now as fine a strain as named flowers give, or you can purchase now a

collection of a dozen named varieties, and plant them out and bloom them, then save seed for yourself.

Wall creepers (BERTHA). The distinction between wall creepers and climbers is that the former sustain themselves by attaching their stems firmly to walls or other supports by the aid of clingers or tentacles, whilst climbers need some artificial support, such as is furnished by nailing, or by tying to wirework or trelliswork. We understand your objecting to nailing to the new brickwork of your house; yet if you want Roses, Clematises, Wistarias, and some other free-growing climbers, you must either consent to nail them, or else to have wire or wood trellis affixed to the wall to which to tie them. But there is no natural creeper to give greenery all the year round like Ivy, and whilst it attaches itself naturally to the brickwork, it does no harm, but rather helps to keep it dry. Ivy is so recuperative, that if to relieve it of its strong growth occasionally it be hard clipped in during March, it very soon becomes green again. Of the deciduous creepers, Ampelopsis Veitchii is the very best. It is beautiful in summer and autumn, but bare all the winter.

FRUIT GARDEN.

Pear leaves and shoots unsatisfactory (D. W. B.). We have carefully examined both the foliage and young fruit, and the very small galls on the surface of the leaves as well as round the eye of the fruit has undoubtedly been caused by the very cold nights and east winds we recently experienced. We have seen many trees this season affected in the same way. There is no sign of fungus or other parasite, and with the balmy weather we are now having growth will be freer, and there is no reason why the fruit should not swell properly also. A slight check to growth such as your trees and many others have suffered often leads to some parasite attacking them, and to prevent this a thorough syringing with any ordinary wash, such as Gishurst compound, on a warm evening would do much towards keeping the foliage clean and healthy.

Diseased Grapes (T. S. KENT). We could have wished that your Grape berries, now as large as peas, and the Vine leaf sent had been enclosed and better packed in a box, as by sending in a letter, not only had the berries become much rubbed, but also cracked, and the leaf much dried and broken. Still, there seems to be every reason to regard them as suffering from mildew. This disease is induced by various causes, but chiefly by exposing the Vines to cold currents of air through open doors or sashes, and by the roots being in sour soil and deep where they fail to obtain needful air and food. Atmospheric changes from cold, sunless weather to sudden bursts of sunshine and heat also help to promote mildew. The trouble is a far too common one to all Grape-growers. The chief, indeed almost only, remedy is found in the employment of sulphur. A simple method of using this is to take advantage of dampness in the evening, after the vineyard is closed up, to dust the Vines all over with it, allowing it to remain for a few days, then syringing very liberally to wash it off, and making the pipes or lines, rather warm by fire-heat to help dry off the Vines quickly. Another way is to put down small heaps of fresh stone lime, sprinkle it with water to slake it, then, whilst it is hot, to cast sulphur over the lime, which will cause the house to be filled with its potent fumes. Also the pipes may be made hot, then coated over with a wash of sulphur and milk to cause it to adhere, then shutting the house close up. But all the same, cold draughts must be excluded, and roots, if believed to be at fault, must be lifted and replanted more shallow in fresh soil.

Well-kept Apples (DELTA). Without doubt the keeping of Apples in good condition so late as the end of May, such as you saw at the Temple show, was remarkable and unusual. The two huge collections staged showed what can be done in keeping Apples sound under ordinary conditions, for they had been preserved on open shelves in cool, airy stores. Mr. Bunyan's store is really wood, thatched and coated with reeds, but it seems to have the great merit of keeping up an equable temperature, for after all that is one of the chief features in Apple keeping. Still, as a matter of economy, except where there is a great abundance of Apples, we do not say that such long keeping is the wisest policy, because after what may be regarded as the natural period of maturation has arrived, fruits generally are more likely to depreciate by keeping. As store that is kept at an equable temperature of about 40°, and in which the air can be frequently changed, yet does not become unduly damp or dry, constitutes the best surroundings. It is worthy of note, however, that Apples are seldom so thoroughly ripened or matured as they were last autumn.

The best Melon (S. F. C.). You put to us in asking which is the best Melon a question difficult to answer. Really we do not know of any one Melon that stands out quite in advance of any other as best. There are scores of varieties under name in commerce, but the differences between them are generally trifling. Nearly all are

in shape roundish, oval, and have netted skins, which differ in colour so far that some are green and some yellow when ripe. The flesh of the diverse forms are green, white and scarlet, whilst not a few have been raised through so much inter-breeding, that the flesh is of two colours. Such Melons never are good. You will, if you want a scarlet flesh variety, find Blenheim Orange as good as any; Hero of Lockinge, a good white; and Royal Jubilee, a good green flesh variety. But Melons for character of fruit and quality depend so very much on culture and treatment, that a variety is often delicious with one grower and bad with another.

TREES AND SHRUBS.

Forcing Honeysuckles (W. A. B.). It is questionable if any great amount of success can be hoped for in forcing the common Dutch Honeysuckle, as all the different hardy shrubs which are so generally forced flower naturally early in the year, which is not the case with this Honeysuckle. At the same time, it might be brought on gradually under glass so as to anticipate its usual season of flowering out of doors, but we have never met with it treated in this way. The treatment, soil, &c., could not be improved upon.

KITCHEN GARDEN.

Asparagus culture (AMATEUR). Your bed of Asparagus is no doubt suffering from being too elevated, and therefore kept far too dry, and the plants are too crowded. It is not possible to have fine stems to cut unless you give the plants ample room; indeed, in good, deep holding soil the plants may well be 3 feet apart each way to enable them to get justice. So soon as you cease cutting your Asparagus give the bed a dressing of either common salt or of nitrate of soda, at the rate of 5 lb. per rod of ground. If, when dressed on, no rain is imminent, give it a good soaking of water to dissolve and wash it in. That should greatly help the roots to throw up strong summer growths, and the stronger these are the better will be the cutting shoots sent up next year. In the winter remove a few inches of the top soil, spread over the bed a heavy dressing of manure, then add a little of the soil, and in the spring a little more to make the bed look neat.

Leeks (PRESTON). It is meritorious to produce large and well blanched Leek stems in the autumn, but very large ones, such as are commonly exhibited in collections of vegetables then, are far from being the best for cooking. We like them about the dimensions of a walking-stick, and not of a broom handle. The best method of securing fine stems is to raise plants under glass, get them strong, then to plant out into trenches just as prepared for Celery. This planting out should be done during May and June, whilst some plants from an ordinary outdoor sowing may be put out so late as July or August to give blanched stems all through the winter. When not too large and well blanched, so that the stems are quite white, and properly cooked, leeks constitute a delicious dish. As a table vegetable they merit very wide consumption, especially in the winter months. Under thorough blanching, that strong colour or taste so characteristic of the Allium family, is missing, and the stems are mild and pleasant eating.

ROSE SHOW FIXTURES IN 1900.

- June 13.—York.
 - .. 27.—Salisbury (N.R.S.), Richmond (Surrey), and Southampton.
 - .. 28.—Canterbury, Colchester, and Isle of Wight (Ryde)
 - .. 30.—Maidstone and Windsor.
 - July 3.—Westminster (R.H.S.) and Gloucester.
 - .. 4.—Croydon, Ealing, Farnham, Hereford, Reigate, and Timbridge Wells.
 - .. 5.—Bath, Norwich, and Sutton
 - .. 7.—Crystal Palace (N.R.S.)
 - .. 10.—Barnes and Wolverhampton.
 - .. 11.—Brockham.
 - .. 12.—Brentwood, Eltham, Salterhebble, and Woodbridge.
 - .. 13.—Evershot.
 - .. 14.—Manchester and New Brighton
 - .. 18.—Cardiff and Carlisle.
 - .. 19.—Birmingham (N.R.S.) and Helensburgh.
 - .. 21.—Newton Mearns.
 - .. 24.—Tilshelt.
 - .. 26.—Newcastle-on-Tyne.
- Shows lasting two days. † Shows lasting three days.

CATALOGUES RECEIVED.

- Herbaceous, Alpine, and Bulbous Plants.—*Wm. Cutbush & Son, Bathgate, N.*
- Dutch Bulbs and Plants.—*Van Meerbeck & Co, Hillegom, near Haarlem, Holland.*
- Caladiums.—*J. Peet & Son, Roupell Park Nurseries, West Norwood, S.E.*
- Bedding and other Plants.—*Wood & Ingram, Huntingdon.*
- Bulbs, Roots, and Terrestrial Orchids.—*Davemann & Co., San Giovanni a Teduccio, near Naples, Italy.*
- Nympharads and Nelmabiums.—*R. Labour-Martin, Temple-sur-Lot, Lot-et-Garonne, France.*

PHOTOGRAPHS AND NOTES. We shall welcome very much any photographs and notes sent to us, and hope readers who thus give practical assistance in making THE GARDEN interesting and useful will give their full names and addresses, not necessarily for the sake of publication, but to enable us to thank them for their kind co-operation in our work.



LILIUM CANADENSE R. BR. M.

THE GARDEN.

No. 1499.—Vol. LVII.]

[JUNE 9, 1900.

WANT OF VARIETY IN TREES AND SHRUBS.

WISE words are written in *THE GARDEN* for June 2 by that good gardener, Mr. Kingsmill, about a subject which we confess has been too little considered by planters of both small and large gardens. An increased knowledge of horticulture has led to a greater variety in the planting of some pretentious domains, where the more beautiful flowering trees are occasionally grouped in quite simple ways, with an effect impossible to convey to those who know not that in simple massing of good things lies the chief interest and beauty of park and woodland; but in the smaller gardens this is not so.

We have written before of the necessity of simplicity in all garden planting, and now endorse the words of our correspondent who insists upon a variety of flowering shrubs to thrust out the eternal use of dingy ill-odoured Privet and spotty Laurel.

We fear the local nurserymen are to blame for this want of variety in some degree by not providing other shrubs and small trees of interest either for their foliage or for their flowers, but we are afraid they are innocent sometimes of the existence of those things which for many years have proved to us an annual delight, as pleasurable as the rain of golden flowers from the Laburnum or the big white Snowballs burdening the Guelder Rose.

Privet and Laurel, or even pink May, Lilac, and golden Laburnum are not the Alpha and Omega of tree and shrub life, yet a stranger to our suburbs and small towns would surely be convinced of this condition of things by the wearisome repetition of these shrubs, the former two with little beauty, but the others of much charm, which would create a deeper impression if they were used with greater discretion.

The villa, it is true, is frequently held upon a short lease, but not always so, and let it be remembered that trees are permanent. A good beginning means years of pleasure as the trees in their welcome variety put forth their flowers.

Many small trees and shrubs of uncommon beauty have been long in our gardens, but one would suppose from their rarity that they were recent acquisitions to our land. We give the names of a few of these, and advise those with small gardens which they wish to make more interesting and pleasurable to note them, and

not forget also to watch nursery and private gardens for any good shrub of free growth, and beautiful for its form, leaf, or flower.

Esculus Brioti (the Red Horse Chestnut).
Amelanchier canadensis (the Snowy Mespilus).
Andromeda japonica. Azaleas (hardy).
Berberis stenophylla. *Catalpa bignonioides*.
Cherries (such as Watereri and other beautiful double kinds).

Chimonanthus fragrans grandiflorus (Winter Sweet).

Chionanthus virginicus (the Fringe Tree).
Cotoneaster frigidula. *Cytisuses* (the Brooms).
Daphne Mezereum, and its varieties, and *D. pontica*.

Ericas (Heaths), hardy.
Exochorda grandiflora (the Pearl Bush).
Gorse (the double yellow).
Halesia tetraptera (the Snowdrop Tree).
Hammamelis arborea (the tree Wych Hazel).
Hibiscus syriacus (the finer forms, such as the double white *totus albus*).

Hypericum moserianum.
Kerria japonica and its double form, which is often planted in cottage gardens but not in small newly acquired places.

Liriodendron tulipifera (the Tulip Tree).
Magnolia conspicua, *soulangiana* and other forms, *M. stellata*.

Pyruses, such as the Siberian Crab, *P. Malus floribunda* and *atrosanguinea*, *P. M. spectabilis*, besides many others.

Mespilus (the Medlar), a charming tree for a small lawn.

Philadelphus (Mock Orange) *microphylla*, and some of *Lemoines* hybrids.

Prunus spinosa fl. pl. (Double Sloe).
Rhodotypos kerrioides.

Ribes (flowering Currants), especially the better forms of *sanguinea*, such as *atrorubens*.

Robinia hispida (Rose acacia).
Rubus deltoideus.

Spiraea arguta, *S. armenis*, *S. arifolia*, besides others.

Syringa (Lilac), the finer varieties.
Viburnum plicatum (the Chinese Guelder Rose).
Vitis (Vines), the richly coloured Vines.

The beauty of park and woodland, too, depends naturally upon the trees and shrubs planted. Strenuously avoid the usual Wellingtonia type, or the massing together of Laurel and Aucuba. An immense and fascinating field is before the planter, who has practically an unlimited selection of species and varieties, some native of our Isles, and the remainder introduced from the four quarters of the globe.

Aim at variety, for variety is charming, and by this means trees and shrubs for small and large gardens are provided for the year's seasons, from the time of the tree Wych Hazel until the autumn brings its harvest of ruddy-coloured fruits.

There is yet much to learn about trees and

shrubs, and many kinds of rare charm are seldom seen even in large gardens. The Pearl Bush (*Exochorda grandiflora*) occurs to mind, a bush or dwarf tree smothered with graceful flower-racemes, as pure as driven snow, against the tender green of the opening leaf. And this is a tree for quite a small garden too, and not even mentioned in the catalogues of some of those who have a reputation for possessing interesting collections.

AN APPLE ELECTION.

It having occurred to me that an election of Apples would prove useful, I addressed a circular letter to all the best authorities I could think of amongst nurserymen, market growers, and gardeners in all parts of the country, choosing as far as possible those who had practical knowledge gained by selling either fruit or trees. The letter will speak for itself. It was as follows:

"Seeing how very desirable a thing it would be in the interests of everyone connected with fruit growing, nurserymen, fruit growers, and also the public, that the number of varieties of the various fruits should be reduced and a lead given to those of proved merit, I am getting together the views of the leading experts upon the subject of Apples. . . . The following selections to be made with a view of combining as far as possible *quality* with free bearing. All should be essentially market Apples, but not the so-called 'market Apples' whose only recommendation is appearance, for it is not with these that we can hope to hold our own against Apples from other countries."

Best six cooking Apples for standards.

..	three dessert
..	twelve cooking bushes.
..	six dessert

To these letters I received some thirty-two replies giving the information sought, three saying that the task was beyond the powers of the writers, and one (which ought to be sent to a museum of antiquities) in which the writer says that he has been many years collecting the information I asked for, and that it was too valuable to give away, *but he should be pleased to see the result of my enquiries in the press.* (The italics are mine.)

I beg here to thank those who gave themselves the trouble to reply to my letter, and I trust that the information they have so kindly given may be of use to my other correspondents. I am sure it will be to many of the reading public.

I think it will be wise that I should point out that, although the replies given come from all parts of the country, the bulk of them are written from the fruit-growing districts of the south and west, so that some Apples most suitable for the north and midlands do not stand quite so forward in the list as they might have done had the votes been more evenly divided. Setting this aside, it will readily be seen that certain varieties take the lead in *all* localities, as, for instance, Lane's Prince Albert and Cox's Orange, which for bush culture have each secured thirty-one votes out of thirty-two. A remarkable feature of this election is the way such comparatively new varieties as Newton Wonder and Bramley's have come to the front. It took fifty years for Cox's Orange to gain the favour

of cultivators, but things move more quickly to-day; still, I am inclined to think that such Apples as Alfriston and Beauty of Kent, which are of finest quality and also productive, deserve more notice than they have received. I am not responsible for my correspondents' selections, and whilst some class Blenheim as a table fruit, others call it a culinary Apple, and some of the most practical name it under both headings as a desirable variety. I think it only fair to say that Worcester would have had more votes but for my remark about quality; indeed, the votes given are recorded *despite* the quality condition. Lord Suffield and Lord Grosvenor detract the one from the other to some extent, as most growers prefer Lord Suffield where it will grow, and where it will not they take Lord Grosvenor.

SIX STANDARDS FOR COOKING.

Dumelow's Seedling	21
Warner's King	18
Bramley's Seedling	18
Newton Wonder	17
Ecklinville	13
Lord Grosvenor	10
Prince Albert	10
Blenheim Orange	7
Duchess of Oldenburg	6
Keswick Codlin	6
Lord Derby	6
Annie Elizabeth	6
New Northern Greening	5

Alfriston, Golden Noble, Beauty of Kent, New Hawthornden, Grenadier, and Bismarck, 4 each; others 1 and 2 each.

THREE STANDARDS FOR DESERT.

King of Pippins	25
Cox's Orange	21
Worcester	14
Blenheim	11
Quarrenden	8
Irish Peach	3

Sturmer, Allington, Oldenburg, Ribston, and Adam's, 2 each; others 1 each.

TWELVE BUSH APPLES FOR COOKING.

Prince Albert	31
Stirling Castle	23
Ecklinville	22
Bismarck	22
Newton Wonder	20
Bramley's Seedling	18
Potts' Seedling	18
Lord Grosvenor	18
Warner's King	16
Grenadier	15
New Hawthornden	13
Duchess of Oldenburg	13
Lord Derby	11
Alfriston	11
Golden Noble	11
Lord Suffield	9
Frogmore Prolific	9
Dumelow's	9
Golden Spire	8
Peasgood's	7
Beauty of Kent	6

Stone's, New Northern Greening, Annie Elizabeth, Cox's Pomona, and Gascoigne's, 5 each; 30 others, smaller number of votes, chiefly 1 and 2 each.

SIX BUSH KINDS FOR TABLE.

Cox's Orange	31
King of Pippins	23
Worcester	20
Lady Sudeley	13
Ribston	10
Quarrenden	9
Allington (New)	8
Claygate Pearmain	6
Irish Peach	6
Sturmer	6
Beauty of Bath	6
Mr. Gladstone	5
American Mother	4
Duchess of Oldenburg	4

Gascoigne's Scarlet, Scarlet Nonpariel, Adam's, Blenheim, and Count Penda Plat, 3 each; 28 others received 1 or 2 votes.

I regret that a goodly number of those to whom I addressed questions (24 out of 60) did not see the importance of the matter or had not time to reply, but I think we may take it for granted that the tables given above represent quite the best of the knowledge obtainable in this country, and if planters take the first twelve, six, or three in each list as a guide, they will not be far wrong.

OPINION OF FRUIT SALESMEN.

As fruit salesmen have a considerable interest in the question under consideration, I addressed some twenty of the leading men in this line in all parts of the country who handle Apples, asking them to give the twelve best cooking Apples and six best dessert (British grown) that sold most readily and gave most satisfaction to buyers and best returns to growers. Only six replied; the others, probably dreading to disclose any trade secret, were discreetly silent.

COOKING APPLES.

Warner's King	6
Lord Suffield	5
Lord Derby	4
Dumelow's	4
Stone's	4
Lord Grosvenor	3
Bramley	3
Ecklinville	3
Blenheim	3
Prince Albert	3
Beauty of Kent and Keswick, each	2

TABLE APPLES.

Worcester	6
Cox's Orange	5
Blenheim	4
King of Pippins	3
Ribston	3
Quarrenden	3
Ingestre & Duchess	3
Favourite, each	2

I trust that the importance of the subject will excuse the length of this communication.

Loxtham, Notts.

A. H. PEARSON.

June, 1900.

[We thank Mr. Pearson heartily for this most important communication, which is especially interesting coming after our lengthy discussion upon "The Best Apples for Britain." Eds.]

THE EDITOR'S TABLE.

LILY OF THE VALLEY WILD IN LINCOLNSHIRE.

FORTUNATELY we happened to hit upon the one week in the year for a short visit here when these are at their best, and it has been an unexpected treat and a revelation. I had no idea that the Lily of the Valley grew wild anywhere in England in such beauty and such profusion.

The lucky owners of the various woods in this district sell the right to cut the flowers for quite considerable sums. The owner of one of the largest woods (I could not ascertain the actual size) sold the right to gather the flowers this year for £100, and it is understood that the purchaser considers he has secured a good bargain. When one considers the cost of labour, and that the picking season only lasts for about a week, it gives a good idea of the immense quantities which must be gathered and sold before a profit can be made on such an outlay.

The effect of the bright green foliage as undergrowth was exceptionally charming, but what struck me even more was the quality of the blooms: they are superior to many that one sees in gardens, and though not, of course, to be compared to the large-flowered kinds, are vastly superior to the insignificant green-tipped flowers that one generally associates with the wild Lily of the Valley.

That you may judge for yourselves as to both quality and scent, I forward you one of the sixpenny bunches.

Woodhall Spa.

[The bunch contains nearly 300 flowers of fair size and very sweet scent. Eds.]

ARISTOLOCHIA ORNITHOCEPHALA.

An example of this wonderful flower comes from the Rev. F. D. Horner, who includes

within his wide range of garden sympathies some of the plants whose flowers are strange and weird of appearance and even doubtfully advantageous of smell. He describes it as of "gruesome colouring and awful odour," but as he kindly sends a flower in an early stage, before the latter quality is developed, we can admire without inconvenience its extraordinary form and strange, though by no means displeasing, colour. The upper part of the tube is swollen into a form not unlike that of a large Fig. From near the lower fore-part of the Fig-shaped inflation a tube-shaped portion makes a sudden ascent of 2 inches, like a spout, rising almost perpendicularly from the lower part of a vessel. When this has risen, still as a tube, to near the height of the top of the inflated portion, it divides into two parts, the lower of which flattens into a lanceolate leaf form that curves and swings away laterally, ending in a sharp point 5 inches distant from the inflation. This is creased in the middle line of its length, and the two sides are folded together in the earlier stage of the flower's development. The upper part of what answers to the lip of the flower widens into a connected pair of wide roundish wings with wrinkled surface $5\frac{1}{2}$ inches across and 4 inches long. The whole colouring of the flower somewhat resembles that of *Tris susiana*, but is fainter, the veined and spotted markings being of a dull reddish purple on a dim white ground. It is for stove cultivation, being a native of Brazil.

NARCISSUS POETICUS (WILD VARIETY).

Mrs. S. M., Ambleside, sends the wild Poet's Narcissus of the district, viz., at some elevation above Montreux, in Switzerland; it is well known to us. The plant is there extremely variable; examples may be found that match the dwarf *N. p. verbanus*, while others are equal to a good form of garden *ornatus*. There are often two on a stalk, and the flat many-petalled form described by our correspondent is not infrequent. It is not possible to give an opinion on the merit of the flower sent, as the perianth was withered beyond hope of restoration, and the seed-pod far advanced, but the thin stellate form described, with the segments of the perianth twisted, is a charming flower, especially for wild planting in a grassy place or woodland.

BRIGHTENING MIXED BORDERS.

AFTER the Crocuses, Iris reticulata, spring Squills, and Dog's-tooth Violets have left only the memory of their beauty behind, our herbaceous borders in Scotland, planted mainly to brighten autumnal days, become for a season green and uninteresting. Daffodils and other late flowering bulbs have somehow come to be looked upon with disfavour in mixed arrangements, largely because as usually employed they leave ugly gaps which cannot be filled after they have retired to rest. Arranged in thick clumps or masses, among which, or, rather, above which it is not possible to introduce late-flowering plants, this is no doubt a fact that cannot be gainsaid. But if we alter this method of arrangement and set them not in thick clumps, but singly or in twos or threes at a few inches apart, that difficulty no longer remains.

The last time our long and wide borders were emptied, cultivated, and refilled, the opportunity was seized to introduce a large number of Daffodils and other bulbs in this manner, not only towards the front, but all over the border, and in order to have them out of the way of plants of more importance on account of flowering later, they were planted among permanent herbaceous subjects, as, for example, in the interspaces between grouped Asters or masses of *Lilium tigrinum*. In other instances they form the main

group, and the spaces are filled later with *Berberis*, *Marigolds*, *Pentstemons*, and other plants suitable for the purpose.

The thought will doubtless arise that this system of double cropping must be prejudicial to the vigour of these supernumeraries. To some extent it is so, but by attention specially to three points very good results are secured, viz.: (1) The bulbs should be planted somewhat more deeply than usual; (2) a surface-dressing of an effective manure applied early in spring, and if water is required later, let it be not pure, but weak manure water; and (3) only free-blooming, easily-grown sorts should be chosen.

Daffodils of themselves render the borders attractive during several weeks, but happily there are other plants equally suitable for arranging in this way. The brightest bit has been produced by a mass of *Thomas More Tulip* planted among *Anemone japonica*, while the same *Tulip* intermixed with *Campnello Jonquils* among *Aster longifolius* has been very pretty. Early-flowering *Tulips*, however, are generally unsuitable, because, being dwarf, they do not show above the herbaceous greenery. But late *Tulips* of such free growth as *Tulipa macrospila*, *T. gesneriana* major, and *T. fulgens* are first-rate. On the other hand, there are some which do not succeed, of which *Picotee* and *T. retroflexa* may be named as examples. To utilise extra bulbs of these and other sorts for which no ground could be spared, I hit upon a plan which has yielded much satisfaction. A trench 9 inches in width was taken out on a border close to the edge of a grass walk, and in the bottom of the trench the *Tulip* bulbs were set at 3 inches apart, and the soil levelled over them. The line extends to over 400 feet in length, and the effect of the flowers leaning over the grass is very good indeed. Annual flowering plants are generally introduced above the *Tulips*, but this year *Sweet Peas* are planted just behind them and no other plant will be required. *Tulips*, like *Daffodils*, require an annual dressing of manure.

Returning after this digression to the mixed border, there is yet another plant which is eminently suited for the purpose under discussion. This is the common deep orange form of the *Crown Imperial*, though any or all of the varieties are admissible. Perhaps its pervading scent remind-

ing one of *Reynard the Fox* may have caused this handsome and striking plant to be practically banished from gardens, and, not as it deserves to be, grown in its hundreds, and it is a fact that to see the "*Corona imperialis*" praised according to its merits we must hark back to *Clusius* or *Olivier des Serres*, or our own *Markham*, each of whom appears to have fully appreciated its undoubted beauty of form. An older generation called it "*Crown and Pearls*," from its leafy crown and the drops like living pearls within its bells. It possesses an unfortunate failing. When grown strongly the stems are apt to snap across or to be twisted out of the ground by winds. It is therefore necessary to secure each plant to a short stick when the stalk has half grown up. Like the other plants mentioned, this one succeeds excellently arranged in a like manner. R. P.

MILDEW-PROOF ROSES.

It must be admitted that attacks of this troublesome fungus are, more or less, influenced by temperature and culture, but yet there are some few kinds that resist the disease, no matter how changeable the weather or how erratic the culture. Such an one is *Mrs. George Dickson*, a Hybrid *Perpetual*, raised by the late Mr. H. Bennett. This grower also introduced *Her Majesty*, another splendid variety.

Now what are the conditions essential to a mildew-proof Rose? Taking the variety *Mrs. G. Dickson* as our type, we find it possesses very firm foliage, not very thick, but rather inclined to be glossy, and entirely free from the beginning from that thin tender state common to most of the *Roses* now grown. *Mrs. G. Dickson* has produced a sport named *Mrs. Runsey*. This variety is equally exempt from mildew as its parent. *Madame Clemence Joigneaux* is another kind that rarely takes the mildew, and in like manner its sports, *William Warden* and *Margaret Haywood* (which, by the way, seem to be identical) are almost entirely free from it.

Would mildew be prevented if *Mrs. G. Dickson* were employed as a stock? It might be worth a trial, in fact it has been done with some measure of success. I cannot speak from personal experience as to the result of the trial, but I intend to make some experiments in this direction. My chief object in writing these few notes is to appeal to our raisers, both English and continental, to assist in the production of a mildew-proof race of *Roses*, for without a doubt everyone who possesses or has charge of a collection experiences a grievous disappointment when his pot *Roses* are affected, or in the autumn when hundreds of plants are white with this unsightly, if not very harmful, disease. P.

ODONTOGLOSSUM CRISPUM BRITANNIA.

This beautiful variety of *O. crispum* was exhibited by Messrs. Hugh Low and Co., Bush Hill, Enfield, in their group at the recent Temple Show. It is by far the best form of this species Messrs. Low have ever introduced. The accompanying illustration is reproduced from a photograph taken in Messrs. Low's nursery. The flowers are fine in substance and in form, the ground colour white suffused with rose, the blotches on the sepals and petals being rich brown purple; the spottings on the lip are of a brighter shade of brown, and there is a bright blotch of yellow on the disc. The plant was only a small one, and carried the two-flowered raceme as seen in the illustration. This is another remarkable example of the better varieties ap-

pearing among the cheaper plants. With the exception of Mr. Pitt's plant, figured in *THE GARDEN* of May 19 last, there has scarcely been a plant of exceptional merit among the spotted forms of *O. crispum* but that have appeared among the smallest prices of various importations. We have frequently been brought into contact with high-priced *Odonoglossums* of late. Three plants from the continent passed into one of the North of England collections for £1,000. The price of Mr. Pitt's plant was on this scale. Several others have fetched high prices at the auction sales, and with respect to the subject of this note the writer is in a position to testify that Messrs. Low refused £210 for it at the Temple Show. I understand the plant has since been sold, and has now passed into a private collection. H. J. CHAPMAN.

A GARDEN NEAR DUBLIN.

BLACKHEATH, CLONTARE.

CLONTARE is a locality of much historical interest, lying on the sunny side of Dublin Bay. On its shores the last great and decisive battle was fought between the Irish and the Danes in the year 1014, when Brian Boru was killed at the moment of his victory. The modernised remains of the well, at which he last drank on the morning of the battle, still exist in Castle Avenue, and further on are *Vernon Castle* and *Yew Park*, remarkable for their venerable *Yew* trees. *Blackheath* is a modern place, although situated on an old and interesting site, and its gardens are well worthy of a visit at all seasons of the year.

Just now in the time of *Lilac* and *Hawthorn*, of green turf and shimmering young leaves, they are peculiarly attractive and bright with colour. The rock garden is gay with *Tulips* and spreading masses of dwarf *Phloxes* of many kinds. *Aubrietia*, *Arabis*, *Alyssum*, and *Saxifrage* give rich groups of colour, as also do clumps of dwarf *Iris* amongst the stones. *Iris longipetala* is opening its soft lilac, delicately lined flowers, and there are several clumps of *I. Tolmieana*, one bearing fifty spikes amongst its soft glaucous leaves.

The rich crimson-flowered *Paeonia tennifolia* flore-pleno is a feature, and for contrast there are such rarities as *Saxifraga longifolia* and *Morisia hypogea* nestling amongst the rocky edging stones. The first glimpse of the rock beds as one enters the garden gate is startling in its brilliancy of colouring, but as seen from the opposite direction the effect is even greater, as a sombre *Yew* hedge 20 feet in height forms a background. The flowering trees and shrubs for which *Blackheath* is noted were at their best a week or two ago, but even now *Lilacs*, the *Japanese Crab*, and late double-blossomed *Cherries* are very beautiful. The purple-leaved *Beech* and *Acer* are also very telling as seen in combination with the lighter greens of other trees. Great bushes of the Mexican *Orange flower* (*Choisya ternata*) are also covered with masses of snow-white flowers. In one sheltered corner the Californian *Bush Poppy* (*Roumeya*) is growing freely, and close beside it is a healthy young specimen of *Clematis indivisa*, which is, as I am told, well established, and floriferous as a hardy climber in a neighbouring garden. Although generally grown as a greenhouse plant, it is very interesting to know that this choice plant is amenable to outdoor culture in mild and genial spots near the sea.

Fruit trees, vegetables, and flowers are very happily blended in this suburban garden, and to select one speciality, I may allude to the open-air *Peach* trees, of which there are three or four very fine ones on a 16-foot wall. I should like those who tell us that open-air *Peaches* are things of the past to see these *Blackheath* trees, as they spread themselves on



ODONTOGLOSSUM CRISPUM BRITANNIA.

(First class certificate, Royal Horticultural Society, May 25.)

blackened walls, and flower and fruit if anything too freely. The kinds are Dr. Hogg, Noblesse, and two others at present unnamed.

The vineries are flourishing, and a collection of stove and greenhouse plants is grown. In one of the houses I noticed some very strong and healthy pots of *Disa grandiflora* throwing up very stout spikes from the clusters of fresh and dark green leaves.

Freesias are also a speciality here, being potted from July onwards in batches, and so brought on in successional bloom. A good many Palms, Ferns, and other decorative plants are grown for the house, and in a sunny yard I noticed a row of finely-filled pots of *Crimm Moorei* ripening off for flower.

Blackheath was built by the late Mr. Gibson-Black, and the grounds were tastefully arranged and planted by Mr. W. Shepherd, but many additions have of late years been made by Mrs. Gibson-Black, who is extremely fond of her beautiful garden, to which her friends are always welcome, and her efforts are ably seconded by her headgardener, Mr. Henry Humie. That the fair owner is a good horticulturist will be readily understood by many of our readers who knew and appreciated her brother, the late Rev. Frederick Tymons, of Baskin Hill, Co. Dublin, whose loss was deeply deplored by all true gardeners and florists, not alone in Ireland, but in England as well, where he was also well known.

F. W. BURDGE.

NOTES OF THE WEEK.

Iberis Pruiti. This is a short-lived perennial whose flowering lifetime is two years, but it is easily raised from seed, so that a succession can be kept up. It has a neat, almost trailing habit, and the lilac-white heads of bloom, somewhat like the Lady's Smock in colour, are numerous and large for the size of the plant.

Rubus deliciosus. I wish some of the readers of THE GARDEN could see a large bush of *Rubus deliciosus* we have here now in full bloom on the dry rocky face of a terrace. It has grown quite vigorously there for years, and never fails to give a mass of bloom in May. We propagate it by layering the lower branches. J. Wood, *Woodville, Kirkstall, Leeds.*

Dryas octopetala. In deep peat on the cool northern slopes of the rock garden (this hardy northerner is quite at home). The trailing stems are almost woody, and the dark but bright little leaves with serrated edges set off the large flowers with the eight petals that give the specific name. The large white bloom is made all the brighter by the bunch of numerous deep yellow stamens.

Tulipa maculata (type) of Dutch lists. Would some of your readers say if they know of more than one variety? I can trace at least six, having all the same marking, as *Tulipa macrospila* and *T. maculata*, but in other respects quite different and distinct. I do not reckon *T. Dideri* or *T. Dideri lutescens*. I mean scarlets or crimson with the base maculated. A. B. W.

A delightful mixture. In the rock garden, *Phlox Vivid*, the neatest growing and best coloured of the *etacea* varieties, is intergrouped on a steep rock bank with *Corydalis capnoides*, whose tender blooms of ivory white, tipped with lemon yellow, with delicate yellow-green foliage, form a delightful setting to the neat little *Phlox*. The combination is so good, that it is noted for still more careful use.

New Nectarines. The Messrs. Rivers, of Sawbridge-worth, had a notable exhibit at the meeting of the Royal Horticultural Society on Tuesday. They staged two new Nectarines, the Cardinal and Early Rivers; the latter is good both forced and in the open; the Cardinal is a beautiful fruit for glass culture. The fruits sent were large as cricket balls, indeed larger, and few, if any, have ever been staged so large or so well finished.

It shows to what perfection with good culture Nectarines can be grown, and the Messrs. Rivers were highly complimented by the fruit committee for such superb fruits.

Posoqueria longiflora. — Introduced from French Guiana in 1820, this *Posoqueria* is quite an old-fashioned plant, but at the same time a very uncommon one. Though so rarely seen, it is very attractive when in bloom, the individual flowers, which are pure white, being remarkable for their extremely long tube. They are in general appearance a good deal in the way of a glorified *Bouvardia Humboldtii corymbiflora*, and, like that popular subject, are agreeably scented. Vigorous examples will in some cases bear as many as a couple of dozen flowers in a truss, and as these clusters are plentifully sprinkled over the plant, a good specimen forms when at its best a very telling feature. It is essentially a stove plant, requiring much the same treatment as an *Lxora*, and, like that popular class of plants, must not be over-potted. It can be propagated by cuttings of the half ripened shoots, put into small pots of sandy soil, and placed in a close propagating case in the stove. A small flowering plant at the Temple show proved very attractive to many visitors. H. P.

Lilium tenuifolium. — Possibly no Lily can surpass this one in the intensity of the rich scarlet that so characterises the species. Scarlet we have certainly in others, *e. g.* *Pomponium Verum* and *chalcidicum*; and even though these make a finer display as a whole, they certainly do not surpass in richness the fine scarlet of the subject of this note. Apart from this, it is a frail plant, and possibly delicate generally in constitution so far as many gardeners are concerned. But those who can give it a position where comparative dryness of the root is assured, it will be more likely to succeed than when its bulbs are planted without such protective measures. For instance, a block of stone in the rock garden may just perform this office to advantage, and provide it also with that cool, uniform condition that to many plants means a great deal in short, their very existence. The plant is not much more than 18 inches high, and the little room it requires renders it possible to place bulbs in isolated positions that otherwise would be impossible. E. J.

The Royal Gardens, Kew. — The Gardens are very beautiful at the present moment, and on Bank Holiday it is said that there were no less than 80,000 visitors, who must have enjoyed the rare groups of colour in the woodland and in the rock garden. The Bluebells in the grounds surrounding the Queen's Cottage were fading, but a vision of colour remained, seen through the trees, a surface of azure blue, which we are pleased to see is jealously guarded. This is quite the proper course to pursue. This sanctuary of flowers and birds ceases to be a "sanctuary" unless the public are kept from rambling at will through the grass and shrubberies. The *Rhododendron* dell is a glorious feast of colour, and the Hardy Azaleas are blooming more profusely than we have ever seen them, even in this sheltered place. Soon the flowering trees and shrubs of June will have passed, and one of the brightest seasons of the year also. Much good work has been accomplished by the lake in the arboretum. Immense groups of Irises are now in flower, the Florentine and others, with the Siberian Iris in the water. Clouds of pink colour come from the waving, feathery shoots of the *Tamarisk*.

Epiphyllum makoyanum. By far the best known of the *Epiphyllums* is *E. truncatum*, represented in our gardens by a considerable number of varieties, all of which flower during the late autumn and winter months, and are on that account valued by many. From the preceding *E. makoyanum* differs in the shape of the flower, colour thereof, and time of blooming, for the petals are regularly disposed instead of forming a one-sided bloom as in *E. truncatum*; next, the colour is a good bright cinnabar red; and, lastly, it has been for a month and still is in flower. *E. makoyanum* is of easy culture, succeeding under the same conditions as its immediate allies. It unites with the *Pereskia* just as readily as *E.*

truncatum does, and on page 49 of the present volume of THE GARDEN is an illustration of it grown in this manner. The plant is trained to the roof of a conservatory, and in this way its pendulous growth and drooping blossoms are seen at their very best. I have also met with it treated as a basket plant, with good results. In this case the plants were struck from cuttings, as for basket work a naked stem is not desirable. *E. makoyanum* was introduced from Brazil a dozen years ago, and is now fairly well known in gardens. — T.

Eremuri at the Drill Hall. — We imagine there were no two opinions among those having knowledge of good hardy plants as to the merit of the group of *Eremuri* shown by the Messrs. Veitch on Tuesday last, at the meeting of the Royal Horticultural Society. In a word, it was the most imposing exhibition of the species of this group yet seen either in London or elsewhere. Of *E. himalaicus* there were some twenty-seven towering spires of almost snow-white blossoms, while of *E. robustus*, a warm red-pink flower—not well seen in the Drill Hall light—there were seven or so of its noble spikes. Some of these latter were 9 feet high, and they looked every inch of it, while the more compact and densely flowered spike of *E. himalaicus* was, at least, impressive by its boldness as also by the number set up. Those who can grow and flower these striking plants in this way have reason to be well satisfied with their success, though the plants really present few, if any, cultural difficulties. The chief difficulty, and perhaps the most trying, is the length of time necessary to build up giant crowns, meanwhile one's patience suffers not a little. In view of the importance meted out to the group by the award of the gold medal, on Tuesday last, to this fine group, some particulars of culture may not be altogether out of place, and no group of plants is more destined to come to the front than this.

Cheddar Pink (Dianthus Cæsius).

This is one of our rare British plants and is only found growing wild on the Cheddar rocks in Somersetshire, and is usually called the Cheddar Pink. It is well worth growing on account of its fragrant flowers, and makes a suitable plant either for rockwork, old walls, or the front of a mixed border. Mr. W. Robinson, in "The English Flower Garden," says: "It requires peculiar treatment, as in the winter it perishes in the ordinary border, but flourishes freely and flowers abundantly on an old wall. Here, however, it grows well, and blooms very freely in the front of a herbaceous border in sandy loam. In its natural state the flowers are produced singly, but under cultivation several are found on one stem. The individual flower is about the size of a shilling, of a rosy pink colour, and sweetly scented. It does not appear to flower much until it becomes established. Two large clumps on the border here, which were planted about seven years ago, did not flower much the first year or two, but they now bloom profusely every season, and are useful for filling small vases. In large clumps the plants have a pleasing appearance before they come into flower. The leaves, indeed the whole plant, is of a very glaucous hue, and the flower stems lie almost flat upon the plant in all directions. When the flowers expand the stems are nearly erect, and grow to the height of about 1 foot. It will not grow in all soils." We are told by a correspondent in THE GARDEN, "M. L. W.," page 360, that he has a great affection for this Pink, but that it absolutely refuses to grow in a chalk soil. In "Nicholson's Dictionary of Gardening" it is said to require calcareous or sandy soil. Perhaps if "M. L. W." were to import soil of the latter description he might induce it to grow. Or is his non-success due to climatic influences? Another useful *Dianthus* is to be found in *D. deltoides*, the Maiden Pink. This, too, is a British species, but not so showy as the above. The flowers are very small and scentless. It is a capital plant for growing upon old walls, and may also be used for the border or rockwork, but it is a free grower, and apt to overrun its choicer neighbours. There are several varieties, besides the one having deep pink flowers, there are spotted and white-flowered ones. The pink-flowered form grows on a sunny bank in this neighbourhood. — J. S. UREX.

Pink Oriental Poppy.—It is well to plant this in such a place that it is shaded from hottest sunshine or even shaded all day, then the delicate low-toned pink colour, which in full sun turns quickly to a dirty drab, retains all the purity of the freshly opened flower.

Diplacus glutinosus.—This evergreen greenhouse plant is a useful subject for giving a display of its bronzy-coloured blossoms in May. Planted in a narrow border or even grown in pots at the front of the greenhouse it is interesting, and when fully exposed to light and sunshine it never fails to give a full crop of flowers.—E. M.

Amelanchier florida.—This variety of the Snowy Mespilus is a useful May-flowering subject, and its pure white blossoms are exceedingly showy amongst other subjects in the shrubbery. When cultivated in standard form and planted in groups of not less than half-a-dozen together, this Amelanchier is a desirable object.—E. M.

Rhododendron Manglesi.—This grand hardy hybrid of Aucklandi is now in bloom, flowering with the earliest of the old forms of garden hybrids. This splendid thing should be in every good garden where Rhododendrons can be grown. Its only disadvantage is a straggling, leggy habit. To suit this it would be well to intergroup it with some other strong-growing, but late blooming kind perhaps, giving its companion a start of two or three years in size.

Streptosolen Jamesoni.—One of the finest specimens of this greenhouse evergreen it has been my lot to see is growing in a narrow border at the back of a conservatory attached to the residence of Miss Gladstone at Swamore. The plant in question is now 10 feet high and but eighteen months old, having been struck from a cutting. The growth is luxuriant, as one would imagine when examining the flower trusses, which measure fully 9 inches in diameter, and as they are numerous the plant presents a magnificent appearance. The blossoms individually are extremely rich in colour, intensified perhaps by the dense green of the foliage. Abundance of moisture at the root appears to be the chief factor in culture in this particular instance, as the border itself cannot provide much nourishment, as the depth of root-run is but scanty, the border being but 1 foot wide and 18 inches deep. The foliage is the picture of health, and reflects the highest credit on the gardener, Mr. Cooper.—E. M.

Perpetual Strawberries. The autumn-fruiting Strawberries St. Joseph and Oregon, the latter an American variety, are now blooming in great quantity at Gummingsbury House on a south border. There are also a few plants of the new St. Antoine de Padoue. All bear close resemblance in foliage, habit, and bloom to the ordinary garden Strawberries, and have no appearance of contact with the alpine, which previously had been regarded as the best perpetual fruiter. Mr. Hudson purposes to fruit these varieties early, just to see how they answer, and then to gather all the flower trusses and leave the plants to form new ones for autumn fruiting. Great quantities also are fruited in small pots from summer layers under glass in the late autumn. It seems very doubtful whether these autumn fruiterers can compete at all favourably with our earliest garden varieties in the early summer, for so far the fruits have shown want of size and flavour. Undoubtedly their peculiar merit lies in their natural autumn fruiting, especially in the form of potted runners, which will carry capital crops in comparatively small pots if stood on shelves in a cool house during September and in a little warmth in October. Alpine Strawberries are largely grown at Gummingsbury House, a considerable quantity being raised from seed sown in shallow boxes under glass in the spring, and from these planted out on to good ground in the early autumn. The first flowers of this batch are pinched out in the spring, and then they bloom and fruit late. The plants remain three seasons, being allowed to fruit earliest the third year, then are cleared off, those of the second year coming in mid-season, and the younger plants fruit later. The old Hautbois is grown also, but does not fruit well. Probably it prefers a much stiffer soil than the gardens here furnish.—A. D.

FLOWER GARDEN. THE SHOW AURICULA.

THE accompanying illustration of Auriculas gives an exceedingly good idea of what the four classes are like. They have been taken from a first prize collection exhibited at the recent exhibition of the National Auricula Society (southern section) in London. They are examples of the finest varieties in their respective classes. The dark variety on the left hand side of the picture is Horner's Heroine, the dark maroon self edge contrasting well with the pure white centre. The variety next to it is Acme (Read), perhaps the best and certainly the most constant white edge; it increases more rapidly than any Auricula known to me. The next is the Rev. Francis D. Horner (Simonite), a superb green edge, which has often been pronounced the best Auricula in exhibitions. Owing to the lateness of the season, the corollas are

better than some of the new ones in this respect. Some twenty-five years ago I was visiting one of the good old growers, Mr. Alex. Meiklejohn, near Stirling, and amongst others he showed me a strong healthy plant of the old Alexander (Stretch) which had not produced an offset for six years.

These old plants have a tendency to produce long necks. The lower leaves gradually decay and are removed; roots attempt to form on this bare stem, and if the crown or head of the plant is cut off with an incipient root or two attached, it will strike root in a small flower-pot if some sandy soil is used and the crown potted firmly in it. Much care is necessary when dealing with the old stool, as the main stem of the Auricula has a tendency to rot; therefore, I advise beheading the plant when it is well on the dry side at the roots. Rub some powdered quicklime into the cut part and give no water until the wound is dried up. Very soon side growths will be given off from the main stem, but it is better not to remove them until they are well



SHOW AURICULAS.

(First prize group of four shown by Mr. Hennell, of Winchmore Hill, at the National Auricula Show.)

not fully expanded. The same remark applies to George Lightbody, sent out by Mr. Headley, of Stapleford, more than forty years ago; it has been the premier bloom in shows more frequently than any other Auricula, and is undoubtedly the best grey-edged variety at present in cultivation.

During the last dozen years some remarkably fine varieties have been exhibited by the Rev. F. D. Horner and others in the grey-edged class, notably one named Greyhound, but none of these are yet in cultivation, beyond their raiser's garden. Amateurs not intimately conversant with the characteristics of the Auricula have no idea of the long time it takes to work up a stock of a show Auricula—from six to sixteen years, according to the character of the seedling. An Auricula of the show type if left to itself will sometimes not produce an offset in five years. The question may arise in the minds of some what is meant by "leaving it to itself." I mean simply repotting the plant annually, and waiting patiently until a young growth develops from the side of the plant. Old varieties are not

developed and have formed some roots at their base. Each tiny offset may be planted in a 2½-inch pot, and they will soon become established plants if well looked after. Amongst the more modern varieties, John Simonite, raised by Mr. Walker, of Sheffield, a distinct and good white-edged variety, requires this treatment. Of course the larger number of edged Auriculas produce their offsets without this treatment. Offsets should be removed as soon as they have formed a few rootlets at their base; it is undesirable to allow them to remain, as they exhaust the plant to a great extent.

As it is not possible to purchase the more recently introduced varieties from seed until several years elapse, why may not every amateur cultivator of Auriculas raise his own seedlings, either from purchased seed or seed saved from his own plants by cross-fertilising? I admit that the raising of seedling Auriculas requires a fair amount of patience. Two or three in every hundred seedlings may be selected to grow again, but they require a good

deal of weeding out after that. Even after the coveted first-class certificate of the National Auricula Society has been obtained, your precious seedlings may have to be thrown on the rubbish heap, as they do not all maintain their first promise of high-class quality. I have thrown a dozen such away, but, nothing daunted, I am still raising seedlings, and am now busy cross-fertilising for another batch. The amateur that has no seedlings to flower loses half the pleasure of the blooming season. It may be well to add that potting should be begun at once, and the best potting compost is one of three parts of good fibrous yellow loam, one part of decayed manure, and one part of leaf-mould, with some white sand added if the loam is heavy. Do not over-pot. The very largest plants will do well in 5-inch flower pots and smaller plants in 3½-inch. Keep the roots clear of the white woolly aphid and the leaves free from green fly. J. DORRIS.

PERFUME IN MAY-FLOWERING TULIPS.

THE borders and beds at Ardara during the past lovely "Tulip weather" in the south of Ireland have presented a glorious display of bloom, but apart altogether from the rich blaze of colour was the sweet perfume that reached the air at early morning and evening, that of a blending of Primroses and Sweet Peas, some sorts emitting much more fragrance than others. Where such a quantity of Tulips is forced annually. Dutch sorts for market work, and as the stiff Darwin varieties are to now reach florists for early forcing it is quite possible the fashionable May-flowering leaf varieties scarlets, whites, yellows, particularly being sweet-scented and carrying good stems, should give good results. The following are all richly perfumed and highly coloured: *Gesneriana major cœrulea*, *G. major albo cœrulea*, *G. major albo-oculata*, *G. major striata Bridesmaid*, *G. Firefly*, *G. lutea, macrospila*, *Dichrallia, lutea pallida, fulgens-lutea*, and *Golden Eagle*. The latter are Primrose-scented, while the seven former emit that of Sweet Peas. I took upon *Tulipa fulgens lutea Mrs. Moon*, and for which I got an award of merit at the Royal Botanic Society recently, as being the finest yellow Tulip in cultivation. This Tulip was figured in THE GARDEN some years since as *Golden Eagle*, from specimens sent from Trinity College, but prior to that known at Kew as a yellow form of *fulgens*, and always grown here by the Latin term. W. B. HARTLAND.
Ardara, Cook.

JOHN BRIGHT STOCK.

THIS is undoubtedly one of the finest of the large-flowered pyramidal Ten-week Stocks in cultivation. I do not know with whom it originated, but I think it first appeared in Lancashire, and, as its name implies, it is by no means new. It is of strong growth, and produces large spikes of brilliant crimson flowers of the finest form. I first saw it a few years ago in the garden of the late Mr. Samuel Barlow at Stakehill House, near Manchester. There it was treated as a biennial, the seeds sown at the end of July or thereabouts, the plants potted, grown on through the winter in frames, or sometimes planted out in a bed in a frame, and then put out in beds in April; by Whitsuntide they produced magnificent heads of bloom, and it being a tree-branching Stock there was an abundance of side spikes also. With this Mr. Barlow associated the fine pyramidal Stock *Manve Beauty*, one of the most distinct in cultivation. This is not quite so tall growing as *John Bright*, but it is equal to it in its noble spikes of flower and tree-blooming and free-branching habit. It has often struck me that these strong-growing Stocks require to be treated as biennials in order to bring out their full measure of beauty. When treated as annuals, that have too short a period of growth to do them justice, grow them as biennials, as by reason of late summer sowing they have a longer time in which to perfect their growth. Both the before-named distinct varieties have been so carefully selected, that a very large proportion of double flowers can be looked for.

A comparatively new white variety named *Grace Darling* promises to make the third of a very interesting trio. I have not yet bloomed it under this name, but I should not be surprised to find that it is a selection from, if not identical with, the well-known *Princess Alice*. This last variety—the plants raised from seeds sown last autumn and wintered in a cold frame—is now blooming very finely despite the cold winds.

Some persons fail to get good and satisfactory plants of Stocks from seed. The seeds germinate freely enough, but as soon as the plants begin to form their second pair of leaves they damp off. Two causes may operate to produce this result. One is that the seedlings are in too close and adhesive a soil; the other, injudicious watering before pricking off. I make a practice of sowing my Stock seeds in a light sandy soil, with which is mixed a good deal of fine leaf-mould. I sow in pans, and having provided good drainage, the pans are then filled with compost, and the surface being made ready for the reception of the seeds, I give it a good wetting through a fine rose watering-pot over-night and then sow the following morning, placing a little fine sand upon the seeds, and cover each pan, if more than one, with a piece of glass. No water is needed until the seedlings come through the soil, and when it is necessary to supply it, the pan is dipped in water until the moisture rises to the surface, and then taken out and allowed to drain thoroughly. These precautions operate to reduce the loss of plants from damping to a minimum and prevent disappointment. After the young plants are pricked off and become established they are pretty safe. R. D.

SOWING LAWN GRASS SEEDS.

WHERE new lawns are to be made by sowing seeds this season no time should be lost in preparing the site by deeply digging and levelling, so that when seeding time comes—early in April—valuable time and perhaps a good season will not be lost. Where suitable turf is not available—and it is seldom that it can be obtained free from coarse weeds, Plantain, Thistle and common Daisyroots—it is much better then to sow seeds, even if more time is required to produce a sward. It is at times surprising what a change takes place in the character of turf taken from one site and relaid on another. Previously the turf was apparently quite clean and free from objectionable weeds, but as time went on many Plantains rise above the grass. This is owing to the soil on which the turf previously grew being so poor, but directly a change took place increased vigour was infused into the roots of weeds as well as the grass.

Success in obtaining a good sward from seed in a short time depends entirely upon the manner in which the ground is prepared. Given suitable weather—warm and showery—the seed will germinate quickly and the lawn look quite green in five weeks, while in as many months quite a thick carpet of grass can be secured. Even the grass on a lawn will betray the presence of good culture or otherwise. It is surprising what a difference is perceptible where the soil has been deeply stirred. In the latter case it remains green so much longer during a period of drought in the summer than where the culture was but on the surface. Dig the ground at least 15 inches deep, and if poor, add half-decayed farmyard manure freely 6 inches under the surface. Some weeks previous to sowing the seed the soil should be forked over so as to secure as fine a tilth as possible. The surface must be raked fine and then rolled to secure a firm bed for the seed. On the day selected for sowing the seed the surface should be raked again and the seed sown at the rate of 60 lb. to the acre. Sowing should be most carefully done, choosing a still day, as it is impossible to sow it evenly in windy weather. Sowing should be done in two ways, first up and down the piece and afterwards cross-ways. In this manner plenty of seed will be scattered to produce an even sward. After sowing again rake the surface as evenly as possible and pass the roller over it to obtain an even and level surface. If the soil be of a heavy and retentive nature it should not be rolled after sowing the seed,

because if rain followed quickly it would be too hard baked, and thus prevent the seeds from pushing through.

Small birds are very partial to the seed when it is germinating. They must be scared, or much damage will be done. As soon as weeds, such as Dandelions and Docks, can be discerned, pull them up, choosing showery weather for the operation. When the grass is sufficiently high, mow it lightly with a scythe, and repeat this operation directly it has grown long enough again. Repeated cutting of the tops induces it to fill out more readily at the base and to form a thick sward. A light iron roller may be run over the grass often enough to make the surface firm. It cannot be either rolled or mown too much provided suitable weather is chosen for both operations. S. H.

HARDY FLOWERS AT GLASNEVIN BOTANIC GARDEN.

THE natural beauties of these grounds have been the subject of many notes by visitors, and I should like to refer to a few of the choicer plants now flowering there. Late-flowering Tulips in themselves provide a feast of beauty, the profusion in which they are provided and their happy position in the mixed borders, combined with their own charm, presenting a delightful picture, while some, such as *Parisian Yellow* and *albo-oculata*, having not yet reached perfection, promise to continue Tulip time well into June. In the rock garden several strong groups of *Primula japonica* are magnificent in colour and size of flower and foliage. Strange to say, *Primula rosea* grown here under the same conditions, as also in the bog garden, flowered very poorly, and after a short and inglorious stay passed. *Gentiana acaulis* and *G. verna* have been in flower for the last month or more, the golden *Alyssum*, perennial *Candytuft*, and the various *Aubrietas* also having bloomed well, and these, being in great profusion and large patches, have contributed much to the effect of the whole garden. *Dianthus neglectus* is in full flower, and is undoubtedly one of the prettiest things now in the rock garden. The tiny *Noceca alpina* is also doing well. The coral-red spikes of *Orisia coccinea*, uprising from a carpet of its broad bright green leaves, are very charming. *Celmisia coriacea* and *C. spectabilis* arrest attention by their form and colour. *Ononis rotundifolia* is in flower, also *Incarvillea Delavayi* and *Cypripedium* in variety, while *Erinus alpinus* and *Meconopsis cambica* grow and flower with the luxuriance of weeds, and seem to contest the right to the walks. *Dryas octopetala* and *D. integrifolia* are delightful with *Papaver alpinum*. Other things especially worthy of mention are *Anemone alba*, *A. virginica* and *A. sibirica*, *Phlox canadensis*, *P. divaricata* and *Ranondia pyrenaica*, *Paeonies*, *Asphodels*, *Lupins* and *Trollius* combine with the Tulips before-mentioned to make gay the landscape, while under the trees amid *Buttercups*, *Bluebells*, and the tall dark flower-heads of the *Foxtail Grass* masses of *Poet's Narcissus* may be seen. After inspecting the plants of the garden an hour may be well enjoyed observing the more general effect of the scenery in the beautiful valley of the Tolka, a rivulet running along one side of the gardens.

GARDEN DESTROYERS.

THE BROWN WEEVIL.

M R. BUNYARD calls attention in the *Maidstone and Kentish Journal* to the brown weevil. He says: "Will you allow me to call the attention of fruit growers and gardeners to this enemy, which has hitherto been overlooked by cultivators. It is a small earth-brown beetle, which, being nocturnal in its habits, is not often detected. Its habit is to climb up the trees and bushes in the twilight and to devour the young buds as they appear. In May, until the buds sprout, the weevils will eat away the bark from the ends of the shoots, more especially from the sharp angles left in pruning, leaving the

ends bare. Its attentions are not confined to one kind of tree, as it may be found upon all fruit, nut, and many ornamental trees, which in isolated specimens it will denude of its buds so that the trees appear dead. It also affects Roses, and can be found on Rhododendrons, Laurels, and such large-leaved evergreens, where it confines its attention to young tender leaves, which afterwards assume a jagged appearance. It is not a new insect, but has always been a native and is spread over the whole country, and my object in calling attention to it is to state that tar and similar substances placed on the bark will not arrest its progress, and the only effective remedies are: First, to catch them by night, one man carries a lantern and another holds under the trees a net or white cloth, and the other throws the lantern on the tree when they are once tall, the remainder (in the shady part) will fall on a smart tap being given with the hand. The insects can then be collected and killed with hot water; they are so tenacious of life, that none of the usual remedies will kill them. In fact, by accident some were shut up in a tin box for twelve months and then came forth lively. Second, they may be killed in the earlier stages by ramming the soil tightly round the stem of the tree or bush and thus smothering them, but as they become perfect insects they are tough and will stand a great deal without injury. Third, the soil round the trees may be made smooth with the foot and a few flat stones or clods of earth may be laid on it. The insects will crawl under this in the daytime, and can be caught by lifting the clods and watching the soil: at first none may be seen, as they are so near the colour of the soil, but they will soon move to get away from the light, and can then be detected and caught. In my opinion the orchards suffer most when a plantation of Raspberries, Currants, or berries has been removed, as the insects then concentrate their efforts on the remaining trees. As a rule they are not so abundant in grass orchards. Cleanliness is very important, as

they winter in tufts of grass, &c. It only remains for me to say that its Latin name is *Otiorynchus tenebricosus*, and its allies *O. picipes* and *O. sulcatus* are also found on the same deadly work in its company; the latter is occasionally troublesome in vineries. As the insect is now at work prompt measures should be taken, as they will soon pupa and lay eggs. Like other insects, it passes through an egg state; a larva or grub state; a chrysalis; and emerges as a perfect insect or imago in April or May, according to the weather. In the grub state it also does much damage to the roots of trees and plants. Figured plates and further information can be found in Miss Ormerod's work on noxious farm and garden insects, and live specimens can be seen at our office."

A POOL IN THE GROUNDS OF HOLME LACY.

THIS illustration of one of the pools at Holme Lacy makes the fingers of the wild gardener itch with a desire to make more of its abundant capabilities, for the naked shores might be made full of beauty by planting bold patches of some of the larger of our native water-edge plants: the great Water Dock (*Rumex*), the Butterbur (*Perasites*), the Water Plantain (*Alisma*)—not all along, but in well-considered patches, with here and there a bushy clump of Water Elder, so beautiful of flower and fruit and autumnal blaze of leaf-colour. There is also an ungraceful squareness about the right-hand edge of the pool that might easily be rectified by a little spade-work and planting. If a sharp little bay were cut into the rising ground and the earth tipped into the near corner, a remarkable improvement could be effected with a moderate amount of labour.

THE FRUIT GARDEN.

UNPRUNED ORCHARDS OF WORCESTERSHIRE.

EVER since a series of articles appeared in *THE GARDEN* years ago on the subject of pruning fruit trees on restrictive principles the subject has been discussed in all the horticultural papers with an ever-increasing bias against restrictive methods, until now it may be said that the natural bush form of fruit tree is the favourite, and that pruning is at a discount everywhere. The two systems have been tested at Chiswick, in private gardens, and in the experimental plots set apart by county councils, and the rule in nearly all cases is to let the trees alone. There is now a decided tendency among writers and cultivators to adopt the extension system of training wherever practicable, and which has come as a relief to amateurs and others who have hitherto been persuaded that some kind of cutting was necessary, and did not know how to set about it.

These thoughts have been suggested by a recent visit to the Apple and Pear orchards of Worcester and Hereford, where trees are to be seen of all ages and sizes. I believe some of the county councils there have tried to teach the Apple growers to prune their trees, but I very much doubt if they will make much headway, for if there be any one thing about the Apple orchards there that impresses the gardener brought up to training methods, it is that every variety of Apple and Pear is grown most successfully by simply letting the trees alone. The county council horticultural teachers are expected to teach the Apple growers how to grow their trees; but it struck me that it is the old-fashioned orchard owners who



ONE OF THE POOLS, HOLME LACY.

are going to teach the gardener, or modify his ideas very much. When the extension system of training first was formulated on something like an intelligible basis there was a certain class of timid gardeners who "sat on the fence" professing an adherence to what they called the medium between the two extremes. Now, the orchard owners of Worcester-shire may be said to belong almost exclusively to the latter class, for they do not prune, and never did, and their trees on the natural stock come into bearing early, and go on bearing with a constancy and abundance exceeding anything known among the stunted fruit trees of our "high class" private gardens. The fruits may not be individually as large as some samples from private gardens, but that is not caused by the want of pruning, but by too many fruits being left on the trees. Still, the fruit is fine, and when the trees do bear they are covered with fruit. Last summer, in most parts of Worcester Apple crops were above the average, and were lying underneath the trees in heaps late in November, and cider is still being brewed at this date, February. Everybody knows something about Apple and Pear culture there, but the sum total of knowledge required is not much. The trees are planted in the field at orchard distances apart, firmly staked, and there is an end of it. Acres upon acres of orchards, from one year old upward to nearly 100 years, I should say, are to be seen that nothing apparently has ever been done to in the shape of training or pruning. I inquired of one old planter if the trees were ever pruned, and his reply was, "No; there are some who say we should prune, but nobody minds them much."

One thing that strikes the professional gardener about these orchard trees is that they are seldom or never root-pruned, and do not appear to need it. Gardeners who call themselves scientific prune their fruit trees in with the knife, which induces a strong reactionary growth of woody spray without fruit buds. To counteract this they cut off the roots, root-prune, and their whole cultural practice is one artificial round of root and top-pruning to maintain the balance between the two. They will not let the top of the tree expend itself naturally in fruitful branches, but they cause it to break out in over-luxuriant, barren shoots, which they try to subdue by cutting off the supplies. The idea of cutting off the supplies while at the same time reducing the demand is absurd. The Worcester-shire Apple grower does not need to root-prune, because his trees are allowed to expend their energies to the fullest extent in the production of fruitful branches, and the crops of fruit help to restrain vigorous growth.

Let me describe these orchard trees that have never known the knife. In the first place I may remark that it is well known to those who understand the habits of the Apple and Pear that the different varieties differ greatly in habit of growth, some growing more erect than others, and under the same conditions producing longer annual shoots. In the more compact growers the shoots are comparatively short and studded with fruit buds from end to end when left unpruned; but in the sorts that produce long shoots the buds are mainly at the extremities, leaving a bare space towards the base of the shoot. This bare space is the pruner's excuse, and he shortens the shoot in summer when not half grown to keep the branches within bounds. Provided, however, that there be no objections to the tree growing in its own way, there is no need to shorten the shoots to cause fruit buds, because they will be produced in due course without assistance. Those of lankier habit will have the longest limbs in the end; but in the long run the trees of all the varieties will assume a more or less round-headed shape with all the fruit buds studding the branches where they get most light and sunshine. J. SIMPSON.

(To be continued.)

A FEW VERY LATE APPLES IN SCOTLAND.

In view of the great interest being taken in this subject I venture to forward specimens of a few varieties of those Apples which succeed generally throughout the south of Scotland. The sorts are designedly confined to those which have been in cultivation during the greater part of the present century, or even longer, so lack of late Apples cannot be said to be the result of a want of suitable varieties. Mainly from such old sorts as Northern Greening, Deux Ans, and Gogar Pippin I hope to be able to continue supplying culinary Apples well through the month of June. At present

ALFRISTON

is being used. It is a variety now well known and first described in Lindley's "Guide." Dr. Hogg ("Fruit Manual") states it was raised in Sussex by a Mr. Shephard, and it would appear to have been in cultivation a very long time previous to becoming generally known. It is undoubtedly one of the finest late Apples, and if allowed to hang on the tree till fully matured in November,



EUCALYPTUS TRUNK IN AN IRISH GARDEN.

the fruit keeps in perfect condition. I had a quantity of blown fruit, which, though bruised and punctured, was not eaten till April, and examples are still good. The tree does not become fruitful until it has attained a good size, when it crops annually with unfailing certainty. Its blossoms, somewhat late in opening, are of medium size and whitish.

GANGES

is a common sort in Scotland. In "British Apples" it is bracketed with Rhode Island Greening, but the two Apples are quite distinct. Ganges appears first in "Lindley." Our trees are over fifty years of age and still bear freely. The fruit is ready to gather in October and to use now or earlier. Its flowers, which are very large and cupped, are produced in large clusters, and are exquisitely beautiful. In

BEAUTY OF KENT

we have a variety that is fitted for dessert, and which comes into use as early as October. Forsyth (1803) names it, and it appears to have always been a popular sort. The habit of the tree is somewhat straggling, and therefore not adapted to train in

bush or other dwarf forms. The flowers are blush coloured.

BESS POOL.

as you will see, is even in our northern climate a very handsome fruit. It appears in "Forsyth" as Best Pool, and one of London's synonyms is Bessy Pool. The tree requires several years' growth before it becomes fruitful, and at best it never crops profusely. I have found root-pruning at lengthy intervals distinctly beneficial, though one-half only of the roots should be cut at a time. It is a variety worth including in large collections, but I should hesitate to plant it in small gardens. I have left

NORTHERN GREENING

to the last, as being later than any of the fore-mentioned and superior when cooked, the pulp being a clear greenish hue and the flavour delicious. It is seldom indeed the tree fails to bear a crop, which sets so thickly, that neglect to thin results in produce comparatively of small value. Spurs are produced freely, and as they ramify rapidly, the centre of the tree becomes uselessly occupied by leafy spurs. Part of the routine management of this variety must therefore consist in an annual cutting away of superfluous spur-growth, and it is also worth while at this time of year to examine and rub off a portion where they are plainly superabundant. Our finest fruit is secured off dwarf trees growing on grass. This variety and French Crab have each been identified with Shakespeare's Apple John. There is, however, great difficulty in locating the latter. Evelyn, for instance, in his "Kalendarium Hortense," makes it synonymous with Deux Ans, while Forsyth names all four sorts as distinct. The variety I cultivate as Deux Ans, though small, is otherwise a fairly good Apple, but hardly worth extended cultivation. The tree is a long time arriving at a fruitful stage, and even then requires occasionally a partial root-pruning. P.

[Extremely fine fruits were sent, quite firm and juicy. Eds.]

EUCALYPTUS GLOBULUS.

THE note on page 238 and its capital illustration induce me to send for your inspection a photograph of the trunk of the largest Eucalyptus I have seen in these islands. It was growing in the gardens of Garron Tower, Co. Antrim, a former seat of the Londonderry family, and now being converted into a charming residential hotel. The grounds are close to the sea, 200 feet above it, and face about north-east. I did not measure the trunks, but should estimate them at over 2 feet in diameter. The tree was seemingly in robust health, 70 feet or 80 feet high, and covered with flower-buds when I saw it in August, though I suppose not many opened.

The blue Hydrangea, a small plant of which is visible in the foreground of the picture, also flourishes wonderfully. A large circular bed of this grew near by, 12 yards round and solid to the centre.

GREENWOOD PIM.

A colour study. The purest blues among flowers, unlike other colours that look best for the most part grouped in graduated harmonies, seem to demand some sharp contrast in the colour of their companion plants, such as a pale clear lemon. Such a happy contrast may be seen now in the rock garden, where wide cushions of Lithospermum prostratum are close to some tufts of Cheiranthus alpinus. Both are in their best bloom at the same moment, and the contrast is delightful. V. T.

GARDENING OF THE WEEK.

FRUIT GARDEN.

PEACHES.

GOOD colour is an important point, and is obtained by exposing the fruit to the direct rays of the sun and free ventilation in the ripening period. Those at this stage which are shaded by leaves may be assisted by moving the leaves and picking off a few.

When the Peaches begin to ripen, to prevent them falling to the ground, a fruit net should be fixed under them at such a distance that they will not be bruised by the fall on to the net. Any that are on extreme parts of the tree that would not fall into the net may have a piece of net fixed round each fruit, quite loosely, forming a bag. For this purpose an old worn-out net may be cut in pieces.

The exact stage for Peaches to be in when gathered depends whether they are for home use or to be packed and sent a distance. They are of the best flavour when allowed to ripen on the trees; therefore, for home use they should be on the point of falling, and should part very easily from the trees. It is better for them to fall into the nets than to be gathered too soon. On looking over trees a practised eye quickly discerns those fruit that are ripe. When Peaches are intended for packing and sending a distance they should be so near ripe that they will be quite so when they arrive at their destination.

Ripe Peaches are very delicate, and require very careful handling and packing. So as not to bruise them each fruit should be wrapped in a square piece of a suitable size of tissue paper, and wool wool or cotton wool used for packing round them. Light boxes of a suitable size for packing them in are 18 inches long, 12 inches wide, and 3½ inches or 4 inches deep, inside measure. The boxes may be divided so as to have a division for each fruit, or they may be fairly well packed without divisions. The same advice applies to Nectarines, except that the boxes in which to pack them should be shallower.

From the time the fruit begins to ripen syringing should be discontinued until after it is gathered, after which it should be resumed to cleanse the foliage of red-spider which almost invariably attacks it. Also after the fruit is gathered prune out wood that has borne fruit this season, so that the foliage and the wood for bearing fruit next year may have the fullest benefit of sun and air. Give water to the roots as needful and ventilate the house freely. Trees with fruit that has about finished stoning and required to ripen as soon as possible may be brought along in temperatures higher than would have been advisable in their earlier stages, ranging from about 65 by night, and 2 or 3 higher during the day from fire-heat, with a rise of 10 to 15° from sun-heat. Liberal syringings should be given once or twice daily, and copious applications of water, with manure added to the roots.

The late Peach trees may now have their final thinning of fruit, taking care to leave a suitable number for the crop according to the size they attain when ripe. Take out superfluous shoots and tie in sufficient to cover the trellis without crowding. Shoots on wood-bearing fruit may be stopped when they have grown to their limit. Syringe once or twice daily as advised for trees in an earlier stage, and water as often as required. A short period of neglect in this respect might cause the loss of the crop. G. NORWAS.

The Gardens, Hatfield House, Herts.

ROSE GARDEN.

DISBUDDING.

WHERE quality of flower is desired, be it for exhibition or house decoration, with some varieties disbudding is absolutely necessary. It is a simple operation in itself, yet one that requires care. Of course one would never entertain a thought of disbudding the garden Roses. The more abundant

their blossoms the more they are appreciated. By garden Roses I mean the Rugosas, Mosses, Briars, Hybrid Chinese, Chinese or Monthly, Polyanthas, and Bombons, also Hybrid Teas, such as Camoens, Marquise de Salisbury, Gruss an Tophitz, &c. Neither is it wise to disbud what are known as button-hole Roses. With such the bloom is but a day flower, a charming bud in the morning and a full-blown, semi-double bloom by the evening if allowed to develop. Many of the beautiful Tea Roses are far more lovely when permitted to grow and perfect their trusses of bloom in their own way without artificial thinning; but some of the hard openers, such as Mme. Cusin, Comtesse de Nadaillac, The Bride, Catherine Mermet, and the like, need severe disbudding if good flowers are desired. This disbudding cannot be undertaken too early. A goose quill should be used, and the tiny buds removed immediately they can be detected, retaining, of course, the centre one. Many of the Teas in fact, nearly the whole of them—send out new growths along the stem before the flower buds develop. With the type of Rose last mentioned these new growths should be stopped, so that all the sap is directed to the perfecting of the bloom.

It is imperative that nearly all the Hybrid Perpetuals be disbudded; they are much given to producing a huge bunch of flower-buds at the end of their growths, and unless these are reduced, not a flower will be produced worth looking at. Mme. Victor Verdier is a typical variety of this description. Remove all buds but two, and two fine flowers will be obtained in succession.

When Roses are in good health and timely stimulants afforded, it seems very unreasonable to retain merely one bud on a shoot, for they are quite capable of perfecting two. I would advise that the seed-pod be removed as soon as the first flower has fallen, for it is well known the energies of a plant are considerably taxed by allowing it to seed.

A word of caution as regards disbudding is necessary. A careless workman would disbud all alike, but in order to prolong the flowering period in some cases the centre buds should be removed, retaining the most perfect of the side buds. This certainly makes from seven to ten days' difference, and more with very double kinds. The Baroness Rothschild race, comprising Merveille de Lyon and others, does not bloom in clusters, but as soon as the bud is formed they send out new growths immediately under it, and unless these are removed the flower is considerably weakened. For exhibition purposes, except, perhaps, in the Victor Verdier race, the centre bud should be retained. The exhibitor usually has some maiden plants to follow the cut-backs, so that he does not require to prolong the flowering period. The Victor Verdier section is notoriously addicted to producing malformed centre buds. It is best to watch these carefully, and before removing the side buds to make sure that the centre one is perfect. This is a very large section, embracing such varieties as Captain Christy, Comtesse of Oxford, Pride of Waltham, Mlle. Eugène Verdier, Suzanne Marie Rodocanachi, &c. PHILOMEL.

INDOOR GARDEN.

EDGING PLANTS.

THE various plants used for draping the stages of hothouses lose most of their charm when they begin to get starved for want of room in the small pots in which they are necessarily grown for this purpose; consequently, to have them with the fresh appearance one likes to see, batches of young stock should be put in at intervals during summer, and the earlier-struck may be thrown away. Those to be treated in this way will include Pilea muscosa, Tradescantia, Panicum variegatum, and Selaginellas in variety, all of which will strike quickly and will not need to remain long in the propagating boxes.

YELLOW CALLAS.

Those started early in the year will soon finish their growth for this season, and when this is seen to be the case, the water supply should be gradually lessened until the plants have died down,

after which it should cease altogether, and as these plants will not flower satisfactorily, even in the case of those with tubers large enough for flowering, unless they have a long rest and a thorough ripening, they are best kept on a sunny shelf in a cool house during the summer months, removing them later to a dry and frost-proof position, in which thoroughly ripened tubers may be wintered safely. Seedlings raised early in the year will also now be finishing their growth, and the same routine should be followed with these as with the older plants, *i.e.*, dry them off and keep them dry. The tiny tubers, small as they are, will keep plump in the soil without water, which if given now and then will only render them stubborn at starting time; in fact, these plants behave in exactly the same way as Freesias do under similar treatment, and the culture should be in the main identical.

WHITE CALLAS.

For late-flowering plants it is still a good plan to plant out now the divided crowns into trenches prepared much the same as those for Celery and feeding them well while growing. I only recommend this treatment for a portion of the plants, as pot culture throughout is best for early work, but very strong plants may be had in this way which, if lifted in August or early in September before they have grown big and treated well after lifting, will hardly feel the check.

PRIMULAS.

Frame treatment is the best for these throughout, but it is not always convenient when bedding plants are being hardened; consequently, many growers raise their seedlings and grow them on for a time in the houses, treatment which answers very well if they are kept pretty cool. As the frames become available, the young stock, whether seedlings of single forms or rooted crowns of the doubles, may be drafted into them, standing the plants far enough apart to prevent their leaves from becoming interlocked. Young plants pricked off into boxes, as advised earlier, should be now transferred to pots, in which they should be potted deeply, the old method of keeping the collars well up being the worst kind of treatment that can be given, as it induces rather than prevents injuries to the stem and causes an ungainly habit. Primulas delight in moist surroundings, though not in being over-watered; therefore the ashes on which they are stood should be damped daily, and whenever there is promise of a mild and calm night the lights should be left off so that the summer dew may fall on them. A light shade will be needed in sunny weather. J. C. TALLACK.

Shipley Hall Gardens, Derby.

KITCHEN GARDEN.

THINNING VEGETABLE CROPS.

THERE should be no delay in thinning most kinds of vegetable crops. Take Peas, for instance; it may be necessary to sow much thicker than the plants can grow, but this shows the necessity of early thinning, a point often overlooked in many gardens. Marrow Peas fail to produce in quantity if the plants are so much crowded that the haulm cannot expand and fill out.

The early-sown Onions should not be overlooked. I know that in some cases the seedlings are left to allow of the plants being used in a young state, but they are often left much too thick, and I would advise thinning now, leaving a row or two only for salad purposes. For good-sized bulbs I would recommend ample space, from 3 inches to 4 inches, between the plants, as if left too close, mildew is troublesome in wet seasons. Carrots, Turnips, Beet, and similar roots should be thinned early, also salads, such as Lettuce, as a much stronger plant will then be secured. Herb beds sown some time ago will need looking over, and in some cases filling in may be required when thinning.

One of the most important crops raised from seed is Asparagus, and the same advice holds good as regards giving the seedlings space as soon as the plants are large enough to handle, for if thinning is delayed the plants left suffer badly.

AUTUMN VEGETABLES.

To have a full supply of autumn vegetables it will now be necessary to plant in quantity. The

autumn Cauliflowers are most useful, but they need liberal treatment, such as a good root run and an ample supply of moisture in dry weather. Few plants pay better for deep cultivation, and to secure a full season's growth the plants should be got out as early as possible. Much the same advice applies to the early autumn Broccoli, such as the Protecting and Michaelmas White; these may be planted on land just cleared of winter Spinach or similar crops, but they should not follow a Brassica crop, as this induces clubbing to spread.

The quarters devoted to the early varieties of Borecole should be in readiness for the plants, and in light soils it is a great gain to plant early before the seedlings get drawn in the seed beds. Where large quantities of vegetables are needed, the autumn varieties of Cabbage, such as St. John's Day and Christmas Drumhead, are most serviceable; these planted in June will give good cutting from October to Christmas, or later. There should be no longer delay in getting out the Brussels Sprouts for an autumn supply, Leeks also, and the early Celery should now be in their permanent quarters. For September and early October supplies a small sowing of the Rosette Colewort should be made in good land, sowing thinly to secure strong plants. Parsley should also be sown for use in the autumn and winter months.

CELERY

There should be no delay in getting the seedlings to the early crop in their permanent quarters, and, as I previously remarked, there will be a considerable saving of labour if the trenches were prepared some time ago, as the recent rains will now make planting out more easy. In any case it should be borne in mind that Celery is a moisture-loving vegetable, and if the plants do not droop at planting, but are lifted with a compact ball of roots and earth, there will be much better material. I find it a good plan in dry weather to clamp the plants overhead late in the day. This keeps them growing freely, and we rarely get any plants that run to seed or with hollow stalks, which is the case with plants that suffer from drought.

Trenches should be prepared for later plants. In our case the mid season supply will occupy the ground just cleared of Spring Cabbages. In the case of late plants for the supply from January to April, we plant direct out of the seed bed. Of course if this is done, thin sowing or thinning freely in the seed beds is a necessity, but given ample room the plants are sturdier, more hardy, and better able to stand our variable winters. For latest supplies I have found no variety superior to Standard bearer. G. WATERS.

Spin House Gardens, Bradford.

OVER-RATED PLANTS.

A CASUAL perusal of some catalogues, not to speak of advertisements, which often form interesting reading enough, is perhaps safer amusement for the gardening enthusiast who has had a few years' experience than for the complete novice.

I would not insult so delightfully comprehensive a paper as THE GARDEN by supposing for a moment that all its readers are skilled and experienced gardeners, for although it is, of course, of the greatest possible use and interest to them, and primarily intended to be so, there is also ample entertainment for the merest tyro who wishes to learn; therefore, in enumerating a few over-rated

things are generally not so pushing.

Then there is that great Cow Parsnip (*Heracleum giganteum*), the big Parsnip which is not bad for wild gardening, but distinctly unsuited for the front borders of a villakin plot, where some of its descriptions would not be unlikely to take it. I cannot at this moment find an advertisement which has very constantly introduced it to notice, but the impression distinctly given was that it had a head of blossom of gigantic size. So, perhaps, it has; but what a blossom, or rather what hundreds of individually very ignoble blossoms! It is Cow Parsnip, only bigger, and there you have it, and it eats up a good deal of soil. I would rather have a Sunflower any day in my ordinary garden than this coarse, weedy thing.

Gypsophila paniculata (the Gauze Flower), sheets of white bloom, &c., may be a Fern—save when people use it instead of a Fern—but it does not produce the same effect. It is an insignificant little thing as blossom goes, just useful to give an appearance of brightness to certain kinds of floral

flowers which in their appointed times have taken the writer in, a not altogether unnecessary hint may save disappointment to the complete amateur.

It is invidious to give any plant even an undesired priority, but as I must begin somewhere, it shall be with *Apios tuberosa*. The violet-scented Pea is, in my humble opinion, not worth a pot, and hardly worth 6 inches in a big garden. It is a North American tuber (ground-nut), and flowers of its insignificant produce of a few dingy little Vetch-like blooms can be called flowering in summer. As for the scent, "not bad" is about all that can be said for it; at any rate, there are plenty of pretty and even showy things which smell as good or better. It does not deserve the praise it gets, and takes up a good deal of room with its long shoots and uninteresting leaves.

Next, let us take *Boussingaultia baselloides*, whose big mouthful of a name is the best thing about it. The Bewitched Vine or Romantic Elephant Plant, as I have heard it described, or Madeira Vine, is a Spinach by rights. It flowers late in the autumn, and the flowers are slightly scented, small and white, turning blackish as they fade. They are of little account; it is the thing's frantic growth which recommends it, and the fleshy tubercular excrescences on its stems, which may, or must, have suggested romantic elephants to someone of lively, not to say strained, imagination, or perhaps they thought its big fleshy leaves like elephants' ears. But why romantic? I see no romance. It takes up space where you could have a Rose or even a pennyworth of Morning Glories, and if you are poor, for I think it is mostly people who no shame to them, want to make their gardens and greenhouses pretty for a very small sum, who buy these over-rated things and believe the too glowing descriptions. The tubercles of *Boussingaultia baselloides* vegetate with the same haste as its red stems grow, so it evidently

table decoration. In itself it is hardly to be called pretty; it is smoke or a film, through which other flowers, if you have them, may have their beauty enhanced.

Of the beauty of the Flame Flower there can, of course, be no question; but it is unkind to say that anybody can grow it anywhere, because anyone who believed the statement would probably be very much disappointed on putting it to the proof. The glorification of very ordinary flowers by a halo thrown round them by the vendor's imagination is, perhaps, the less to be blamed, since many otherwise good flowers are much discounted by their flourishing "proper names." I do not know whether anybody else has experienced the same disappointment, but to give an instance, and so end, I shall never forget my feelings when I first gazed on what ought to be the queen of stove flowers if nomenclature is to be a guide, and what actually is pretty enough *Gloriosa superba*. I should like to know if other readers of THE GARDEN agree with me. M. L. W.

AN ARTIST'S NOTE-BOOK.

EPIDENDRUM WALLISIO-CILIARE SUPERBUM.

IN November, 1895, the original form of the hybrid *Epidendrum Wallisio-ciliare* was exhibited by the raisers, Messrs. J. Veitch & Sons. It was derived from the intercrossing of *E. Wallisi* and *E. ciliare*, and partakes of the compound name. It is a most interesting hybrid. In habit of growth the influence of the *E. Wallisi* parent is most prominent, while in the flower the



SPRAY OF THE HYBRID EPIDENDRUM WALLISIO-CILIARE.
(From a drawing by Miss Gertrude Hamilton.)

characteristics of both parents are clearly defined, both in colour and in the form of the flowers and inflorescence.

The subject of the accompanying illustration, *E. Wallisii-ciliare superbum*, was exhibited by Messrs. J. Veitch & Sons on January 23 of the present year. The flowers are altogether larger and finer in colour than the typical forms. The sepals are about 1½ inches long, bright yellow, and suffused with a bronzy shade of colour; the petals are bright yellow and equal to the sepals in size. The lip is upwards of 1 inch across; the outer margins are white, much crested on the edges, and somewhat reflexed; in the centre area there are numerous bright purple veinings and a suffusion of a lighter shade of colour. Towards the base the ground colour becomes yellow.

The plant exhibited carried a five-flowered raceme. Like most of the *E. Wallisii* hybrids, it flowers in the depth of winter, and they last for weeks in perfection. This section of hybrids does well in a moist position of the warm intermediate house where an even temperature of about 60 can be maintained. They require a liberal amount of moisture while in an active condition of growth at the roots, but slightly drier treatment will be required for a few weeks after the flowering season is over. An open and porous potting compost should be afforded.

H. J. C.

general character of leafage the plant may be said to come more or less intermediate between *R. speciosus* and *R. acris*. The flowers are not long-lived individually, but the number, when a good patch is formed, is some compensation for this. The plant may be easily grown by anyone in a moist soil, or, failing this, a cool, partly shaded spot, such as is given to Marsh Marigolds, would answer well. E. J.

A BULB FARM IN IRELAND.

The season of the spring garden has been greatly prolonged and its interest enormously heightened and increased by the *avante* of the new forms of Daffodil. Few gardens are without many varieties of this charming flower, and the possession of what we have only makes us more and more anxious to increase our stock. Many have been studying the question "clinically" during the season now (May 8) very nearly at an end. Many have, unfortunately, been debarred for a variety of reasons from so doing, and it is for them that I venture to send to *THE GARDEN* a few notes on an educational expedition I paid about a fortnight ago to a most interesting collection. Mr. Robertson, of the well-known

firm of Hogg and Robertson, of Dublin, has lately established a bulb-farm close to Rush, about twelve miles north of Dublin. I was fortunate in having a lovely day for my visit, and enjoyed it exceedingly. It lies very near the sea and the soil is almost pure sand.

Mr. Robertson has not been able to obtain one large extended area, but has picked up an acre here and an acre there, as the spots fell vacant. Each of these was a gorgeous mass of colour. The first acre I saw was devoted to Hyacinths, but these were nearly out of bloom. I merely noticed a very beautiful straw or primrose coloured one, King of Yellows.

Then I passed on to the Tulips. Very brilliant and lovely they were. One fancied oneself in Holland. Here is my list: Globe de Regent, Bacchus, Montresor, Thos. More, King of Austria, Vandermeer, Salvator Rosa, La Grandesse, Yumbak, Greigi, Ophir d'Or, Admiral Reimier. Thence on to the Daffodils, which were the main object of my visit. I noticed a curious sport among the "Emperors" with straight trumpet, and much more perfectly formed perianth than its parent has. I do not mention in my list any of the enormously expensive kinds, such as Mme. de Graaff or Mme. Plomp, as I write for the general run of gardeners, who are not anxious to accelerate their march to the poor-house by indulging in such wild expenditure: Captain Nelson, Queen Sophia, J. B. M. Camm, Autocrat, Queen Bess, Goliath, Princess Mary, Albicans, C. W. Cowan, Grandis, Minnie Hume, Duchess of Westminster, M. J. Berkeley, Victoria, Mrs. J. B. M. Camm, Michael Foster, Ophir, John Bain, Falstaff, King of Netherlands, Leeds (not the type), Mrs. Langtry, C. J. Backhouse, Maximus. No one can go wrong who invests in any of these.

I noticed that the Tulips were extremely dwarf, and the Daffodils generally not so deep in colour as they are on my heavy clay soil. I attribute this in both instances to the sandy soil. The man who showed me round told me that large quantities of cow manure were used, but that there is always (unless under stress of circumstances) a previous crop of Peas or Potatoes, &c., taken before the bulbs are put in. We all know that fresh manure is fatal to Daffodils, but I always give them at planting some bone-meal and wood-ashes, with very good results. I may add, to show the length of the Daffodil season, that my first Ard Righ (or Irish King) unfolded on the last day of February, and that I have clumps of Bicolor grandis planted in the shade of Rhododendrons, which will not be in bloom for about ten days.

I hope these few remarks may prove an assisting guide to the enthusiastic purchaser.

C. J. Carron.

DENNIS KNOX.

[These notes have been unavoidably held over. Eds.]



RANUNCULUS CARPATICUS.

(From a drawing made at Kew by H. G. Moon.)

RANUNCULUS CARPATICUS.

THE genus to which this plant belongs is without doubt one of the most extensive in the whole army of hardy flowering plants. As is very natural in so great a number of species, not a few may be found that, on account of their inconspicuous flowers, are scarcely worth a place among the better class kinds. Thus not a few are little known to cultivation, and others are crowded out entirely. This is at times not the result of trial and unworthiness of certain species, but is due to the great and laborious task of proving their worth, and waiting also till this may be recognised by the gardening public. It is not unnatural, too, that the hardy plant nurseryman prefers to grow quantities of plants that are constantly being asked for rather than the merely botanical species that are never in demand, and only asked for on rare occasions. Under these circumstances a good plant may be found in one or other of the botanic gardens of this country that is but little known in nursery gardens. The species illustrated is of this number. For a year or two past it has flowered in a cool spot in a rather low position in the Kew rock garden, where it reaches about 15 inches high, and produces showy, golden, buttercup-like blossoms of a large size and highly varnished surface.

I have little doubt that in moister and heavier soil the plant would be even more vigorous than at Kew, where it forms quite a pretty attractive group in the early spring. As may be gathered from the illustration, the foliage is very deeply divided, while in

BOOKS.

The Gardener's Assistant. This is one of the most praise-worthy of gardening books, the original edition of which was issued in 1859 by Robert Thompson, at one time the superintendent of the Royal Horticultural Society's Gardens. It is of a strictly practical nature, and in its new form, under the editorship of Mr. William Watson, will be a decidedly useful addition to the horticultural library. The first volume is before us, and we must praise the excellent information given, the clear type and general get-up of the whole work, but the illustrations are somewhat hard and coarse. A coloured plate of *Cypripediums* as a front-piece

is interesting. Many good gardeners and horticulturists have contributed to its pages information of sound practical importance, and if the volumes that are to follow are of the same excellence as the first one, the work will be in every way, as the prospectus tells us, "comprehensive." Mr. Watson has accomplished his task admirably, but it is only right to say that Mr. A. F. Barron and Mr. Badger commenced this new addition, but were unfortunately, through ill-health, unable to complete the task—not, however, before some progress had been made and the services of numerous specialists enlisted. The work is being published by the Gresham Publishing Company, 25, Farringdon Avenue, E.C., and bound in cloth is 8s. each, also in eighteen parts, price 2s. 6d. each.

Deeds that Won the Empire.—Historic battle scenes by the Rev. W. H. Fitchett ("Vedette"). A sixpenny edition of this series of vivid pictures of famous battles by land and sea. A book that every British boy should read, and a thousand times healthier than the maudlin rubbish that goes by the name of "Tales for Boys." Published by Messrs. George Newnes, Ltd., Southampton Street, Strand.

STRAWBERRIES IN A COUNTY DOWN GARDEN.

NOTES FROM A DIARY.

May 7, 1900. This is my hobby in fruit culture, but I do not confine myself particularly to any special flower, as I like them all. Perennials, however, give least trouble, and always look well. This morning is damp; before breakfast I do nothing but stroll through my garden. I find Royal Sovereign and St. Joseph in flower, and Monarch almost bursting into bloom. Latest of All with its compact habit is showing strong flowering trusses, but they are much behind the others. My new runners of Auguste Nicaise, Empress of India, Vicomtesse Henriette de Thury, Elton Pine, Dr. Hogg, Veitch's Perfection and Waterloo are doing well, and are looking quite fresh and green. In making a new plantation of Strawberries, I find it desirable to make up the bed at least two months before. I choose first the site, and in doing this I am guided by three considerations. For early fruiting varieties, such as King of the Earlies, Vicomtesse, La Grosse Sucrie, and Royal Sovereign, I give the benefit of a good south border thoroughly trenched two spades deep, keeping down the subsoil and well incorporating with farmyard manure. For main-crop varieties, such as President, Monarch, Fillbasket, and Montmore, a border sloping towards the west is preferable, and for such varieties as Latest of All, Frogmore Late Pine, Veitch's Perfection, and Elton Pine a north border, perhaps partially shaded, is the best. Early autumn I think is the best time of year for planting, as if strong plants from pots are put in then, they will produce a good crop next season. Open ground runners are good enough for general purposes, but for those who wish the highest success and the best results, plants in small 2 inch or 3 inch pots are best. The plants in our west border for the main crop are 2 feet apart and 3 feet between the rows. They are looking very well now; they consist principally of President and Monarch. These are mostly new plants, and I do not intend to let them produce their full quantity this first season. They are mulched with heavy straw at present, and are free of weeds. Several plants I noticed, out of about 200, are not showing flower. These in case of failure I will dig out, as they are merely drones.

May 11, 1900. Our main crop Strawberries are planted on a bank facing the west; they are protected on the east by a Beech hedge, which at present is of a beautiful vivid green. Immediately within the hedge is a row of Yellow Champagne Gooseberry bushes, and standing apart from them are Apple and Pear trees (all standards), red and white with bloom. These trees are Bramley's Seedling, Lad Sulfield, and Irish Peach Apple and Williams' Bon Chretien Pear. The Currant bushes are Carter's Black Champion and Lee's Prolific.

These, together with the Beech hedge, make a fine shelter for our main-crop Strawberries, which are now rapidly coming into flower. I have been watering them since April once a week with lime water, and once a week with soap-suds. They were well mulched in February with long stable manure, the straw of which has since been well washed with the rain and has got clean and white. Some of the plants are year-old, but these I do not intend to let fruit much this season save to see their class and the quality of their produce.

May 14, 1900.—I am going to make up a new plantation this autumn, and was looking at the ground this morning. It is planted at present with Peas, Beans, Potatoes, and seedling Oriental Poppies. I intend to have the ground thoroughly dug over and heavily manured with partially or well-decayed farmyard manure. I shall then divide the ground into nine beds, each of which will contain two dozen plants. I have always chosen the following varieties for experimental purposes, hybridising, &c., and I hope to have some pleasant recreation. Those I have chosen for the above purposes are: Auguste Nicaise, Vicomtesse, Keen's Seedling, Royal Sovereign, Monarch, Fillbasket, Empress of India, Veitch's Perfection, Latest of All, Dr. Hogg, Waterloo, Elton Pine, St. Joseph, and the Red Alpine; Dr. Hogg and Empress of India for flavour, Auguste Nicaise for size, Monarch for strong vitality, and I think I will get a few plants of Black Prince for colour. In looking down from our house on the Lough (Belfast) one sees the hunting flying in all directions for the Queen's Birthday. May her closing days be full of peace and repose!

May 25, 1900. In looking at a plant of St. Joseph which I hybridised with Royal Sovereign I found the berry half ripe. When fully ripe I will squeeze it through a fine sieve and separate the small seeds from the pulp. I will then dry thoroughly in the sun, and finally sow in boxes in a cold frame. Germination generally takes about three weeks, as I find in the case of two boxes of Red Alpine seedlings which are just coming up, these having been sown on the 1st of the month. The yellow blossoms of Monarch and the white fully expanded blooms of Royal Sovereign are very conspicuous now. I moulded up a new row of Veitch's Perfection without covering the crowns, as I want to give this berry a fair chance. Two of Auguste Nicaise new runner plants appear to have died off. I cannot account for this unless some kaimit which was incorporated in the bed had touched the tender roots. These fertilisers must be used with great caution. Superphosphate of lime, sulphate of ammonia, and kaimit are no doubt powerful manures, but I think they should be very carefully used when top-dressing and only put on in showery weather. WALTER SWATH.

TREES AND SHRUBS.

EMBOTHRIMUM COCCINEUM.

A MOST brilliant feature in Messrs. Veitch's delightful group of flowering shrubs at the recent Temple show was a branch of this South American proteoid, which was sufficient to cause a feeling of envy towards the dwellers in the extreme west of England where it succeeds so well. In the specimen shown the orange-scarlet tubular blossoms were so freely borne that one longed to see a large plant in full flower. Considering that in some parts of Cornwall this Embotrium attains quite tree-like dimensions, the height (3 feet) as given in the "Dictionary of Gardening" is most misleading. In common with the majority of plants belonging to the same order, such as Proteas, Banksias, Dryandras, Hakeas, and Greivillens, this Embotrium does not readily strike from cuttings, yet by following a certain mode of procedure I have succeeded with it fairly well. Cuttings taken from vigorous outdoor specimens gave but very poor results, hence a couple of plants in pots were kept rather warmer and closer than they had hitherto

been, and the shoots produced under such conditions were, when about half ripened, taken off and treated as cuttings. This practice is at times successfully followed in the case of plants that are difficult of increase in the ordinary way. The cuttings of the Embotrium were taken off at a length of about 4 inches, cut cleanly just below a joint, and enough leaves removed at the base to allow for insertion. They were then dibbled firmly into 4-inch pots, well drained, and filled with very sandy peat. Placed in a close propagating case in an intermediate house temperature, nearly all the cuttings struck in about three months, when they were hardened off and potted singly. An attempt to increase some of the Banksias and Dryandras in the same way met with no success. The Embotrium may also be propagated by seeds, which sometimes ripen under favourable conditions, while in the case of large specimens out of doors layering may be resorted to.

[We believe that the branch of Embotrium shown came from Cornwall.—Ebs.]

THE NEW DEUTZIAS OF LEMOINE.

THE name of Lemoine is so well and favourably known in connection with new varieties and hybrids of garden plants, that the following particulars with regard to Deutzias and the work of that firm with them, supplied by Emile Lemoine, cannot fail to be of much interest to our readers:—

Deutzia parviflora was described by Prof. C. S. Sargent, director of the Arnold Arboretum, in *Garden and Forest*, September 26, 1888. A woodcut accompanied the note. This is a hardy shrub, with erect branches covered with small corymbs of white flowers, very different in shape from other Deutzias, for the individual flowers, with their round petals, have the appearance of the Hawthorn. Prof. Sargent, who had received the new plant from the St. Petersburg Botanic Garden, sent us some branches of it and we were able to offer it first in Europe in the spring of 1891.

After many fruitless experiments in an attempt to raise hybrids between the well-known Deutzia gracilis and other species of the genus, such as D. crenata and its varieties, we renewed our efforts, using the pollen of D. gracilis to fertilise the flowers of D. parviflora. It is useless to detail the many and tedious precautions employed to avoid the intervention of wind and insects, as well as the numerous flowers of the shrub which was the subject of the experiment. The result was that we were able to save some seeds, which came up and produced a variety of new Deutzias, which proved to be almost intermediate between the parents.

Of these hybrids only three were retained and eventually introduced to commerce. The first of them was offered for the first time in the autumn of 1895, under the name of Deutzia hybrida Lemoinei. It is a shrub of medium size, as hardy as its parents, covered from top to bottom with large panicles of flowers, each of them carrying from fifteen to twenty-five well-expanded flowers, as erect as those of D. parviflora, but with large, triangular petals, as showy as those of D. gracilis, but with a much better habit. The shrub is perfectly adapted to forcing purposes.

Another variety of the same origin was sent out by us in the autumn of 1897, under the name of Deutzia Lemoinei compacta. As indicated by the name, the shrub is more bushy than the preceding variety; the flowers, if smaller, are much more numerous. A third variety, named D. Lemoinei Boule de Neige (Snowball) was sent out last autumn. Although intermediate between D. gracilis and D. parviflora it shows a stronger relationship to the latter, its panicles being hemispherical and very large; the flowers also have a very good substance and the inflorescences are aggregated on the upper parts of the shrub.

The foregoing varieties do not by any means exhaust the list of recent hybrids of Deutzias, for within the past five years we have produced some very interesting forms in crossing D. gracilis with a new species, introduced from China some years ago by the Museum of Natural History of Paris, under the rather lengthy name of Deutzia discolor purpurascens. This hardy shrub is very showy with its numerous clusters of pink flowers, and we

have secured intermediate forms between it and *D. gracilis* and between it and *D. parviflora*. *D. gracilis rosea*, *D. gracilis venusta*, *D. gracilis campanulata* and *D. discolor grandiflora* are the varieties which we have already put in commerce."
—*The American Florist*.

CAMPANULA GARGANICA.

HANGING from the tips of their slender stalks and leaning towards the earth, most *Campanula* flowers are truly like tiny bells that ring out a mute earth-hymn, a sweet and tender little song only to be heard by the ears of the insect world.

Car le crépuscule
 Sonne un carillon
 D'une campanule
 Pour un papillon.
 Il sonne en sourdine
 Son plus triste glas.
 Air qui se devine
 S'il ne s'entend pas.

the Adriatic, where it is said to grow in abundance. It does not appear to have been recorded elsewhere, although across the blue sea at a distance of 120 miles is found an allied species, the *C. muralis* of Portenschlag, or *C. Portenschlagiana* of Roemer and Schult., which, however, differs from it by well-marked characteristics.

Campanula garganica is hardy, but cannot endure over-much moisture of earth. Many of our English correspondents complain that this plant which they have seen brightly flowering as grown by us rots away on their rockeries. I believe the reason of this to be that they have not taken into consideration that it is a mural plant, absolutely stone-loving, and that it must be given a vertical position. Miss Willmott, who received it from our alpine garden at Geneva, grows it as well as we do, and even better, because she plants it in full sun and among dry and almost vertical rocks. I have not seen it growing wild, for I have never visited this wonderful Mount Gargano, which, according to a friend who has been there, must

and put them in the joints of my wall facing the sun: since that day I have been rewarded with complete success. The same treatment must be given to *C. Raineri*, to *petraea* (a *Campanula* with yellow flowers growing in the Italian Tyrol), to *muralis*, *Elating*, *clatinoïdes* and *exeisa*. As for *C. mirabilis*, it is a plant that plays one all sorts of tricks. It probably desires to be revenged on the author of its introduction to cultivation, for it never will flower with me. When Alboff, who gave it its name, detached it from the limestone rocks of Abkasia, to his regret he could only find one plant. This was covered with bloom, and he secured it for the Boissier Herbarium. When he arrived here with his prize he showed it to me, and among the flowers we discovered a few capsules containing ripe seed. These seeds were divided by the Boissier Herbarium between Herr Max Leichtlin, the Boissier garden, and myself. Mine were the first to be sown and grown, but Leichtlin, that wonder-worker beloved of Flora, obtained flowering plants at once, while I am still waiting for mine to bloom, though I have in my wall one plant of *C. mirabilis* placed by Alboff himself as soon as it was large enough to be planted: this looks as if it might bloom this year. I trust that I may at length see this plant in flower, a sight which would have given much happiness to poor Alboff, who lost his life in Patagonia, a victim to his devotion to botany.

HENRY CORREYON.
Jardin Alpin d'Acclimatation, Geneva.

HERBACEOUS BORDER AND ROCK GARDEN.

This sounds rather pretensions, and I must therefore begin by disavowing any attempt to make my small garden anything of a model either in its construction or in the plants with which it is furnished, but I always find something of interest both for myself and friends who come to see me. There are one or two things which I always strive to bear in mind: one is, not to attempt to grow collections of any special plant, but to select the best of each species: another is, not to attempt any plant very difficult to succeed with. At one time I did not follow this rule, although I ought to have thought that if others of more experience and greater knowledge failed, it was useless for me to attempt to succeed. On this point I do not think that we are all sufficiently careful in the matter of soil. We all know, for instance, how *Rhododendrons*, *Kalmias* and other so-called American plants positively refuse to grow in chalky soils, and there are some herbaceous and alpine plants which have the same aversion, and it would save a great deal of annoyance if we always knew this beforehand and acted on it: while, on the other hand, there are some which revel in limestone soil, such as that lovely little gem *Gentiana verna*. In the west of Ireland it is found in quantities in the limestone formation from the sea-level up to 1000 feet. It is the same with it in the Dolomite region, which is composed of granite and limestone: it is never found in the former, but in quantities in the latter formation. Then I have given up the idea of growing varieties because they are varieties. I know this may sound heresy to many lovers of these plants, but I really do not see what is the use of breaking one's heart in attempting to grow things which however beautiful do not appreciate the care and kindness bestowed upon them. Take for example the lovely New Zealand plant *Myosotidium nobile*. I have more than once attempted it, but was unable to succeed, so gave it up, and I am not aware that it is to be found in any of the herbaceous plant nurseries where such things are grown. Again, there is that lovely alpine, *Eritrichium nanum*. I am told that above Zermatt it actually carpets the ground with its lovely blue flowers, yet the late Mr. James Backhouse told me that he spent £100 in trying to introduce it, and



CAMPANULA GARGANICA IN THE ALPINE GARDEN, WARLEY PLACE.

These graceful lines may be approximately translated thus:

The twilight hour
 Sounds the parting knell
 Of a butterfly's life
 On the wild Harebell.
 The passing bell
 Is muffled around,
 Its tone to be guessed.
 For it scarce may sound.

But there are some *Campanulas* that, instead of hanging their heads and hiding their little bells, stand upright to the sky, and with wide-open eye look up at the bright sun. This is the case in our Alps with *Campanula cenisia*, a kind that grows at the edges of the glaciers: so also does one of the prettiest and most popular, as well as one of the most free blooming of the southern Bellflowers, *Campanula garganica*. This derives its name from being a plant special to that curious Mount Gargano which is thrown out like a spur into the blue waves of

indeed be a marvel. But I know that there *C. garganica* grows in the fissures of rocks and in old walls just as does its congener *C. macrorhiza* in the cracks of the Tour de la Turbie above Monte Carlo. Therefore, it is certainly a plant that must be grown as a stone-loving kind in full sun and in rocky fissures. It is even better to consider it absolutely mural, and to place it in quite perpendicular rocks and old walls.

This *Campanula* of Gargano may be considered the type of a whole category of saxatile Bellflowers, all of which require the same conditions. For a long time I was unable to grow *C. macrorhiza* because I did not know it was a wall plant, but when I saw it in the walls of Turbie and Mentone, in those of the city of Eze and elsewhere, emerging from the stony mass like so many effective strokes of the brush in a beautiful picture, then I understood where I was at fault. On reaching home I at once changed the place of my *C. macrorhiza*,

one of the first questions I used to ask when I visited a brother enthusiast's garden was, "Have you succeeded with *Eritrichium nanum*?" I once asked one of our most distinguished amateurs when I visited his garden how he succeeded with it. "Well," he said, "if you had asked me a couple of days ago I should have said fairly well, but now," pointing to a shrivelled lump, "that is all that remains of it; it went off all at once without any apparent rhyme or reason."

Amongst the most beautiful flowers on the rockery at this season is *Gentiana acaulis*; it is a most lovely deep blue, and though perhaps not quite so attractive as its little kinswoman, *Gentiana verna*, it is most attractive, and yet it has some peculiarities. I have met with persons who have said they could do nothing with it, yet I call to mind two gardens where it grows luxuriantly and flowers in the greatest profusion. One is in a damp situation surrounded by trees; here it forms an edging to many beds of about 1 foot wide. The other is in a dry situation in a town garden in a border facing south, and here, too, its mass of lovely blue colour is a picture every year.

Aubrietia Leichtlini. This is, I think, the most lovely variety of this beautiful spring flower; its large bright pink blossoms, which are abundantly produced, make it very attractive. We owe it to that distinguished hybridist, M. Max Leichtlin. I have another variety on my rockery raised by the late Mr. Ingram, of Belvoir, a great improvement on the old *græca*, which, while excellent in itself, I should also retain for another reason as a memorial of an excellent and good gardener.

Tulipa macrosopila is probably a garden variety from *gesneriana*, of the same bright crimson colour, more dwarf in habit, and having the same dark blotches at the base which are slightly edged with yellow; it is probably a little later in flowering than the type. *Camassia Leichtlini* is said to be between greenish white and sulphur-white, but I cannot consider this a correct description of the plant that I have; it is more of a slaty blue colour. *Camassia Fraseri* is a light blue. *Camassia esculenta*, the older variety, is a bright blue; the spikes are loose, but graceful, and are sure to be attractive in the border.

Androsace sarmentosa. There is very great similarity in the flowers of the various species of *Androsace*, although there is considerable difference in their foliage, degree of hardness, and their cultural requirements. Those from the eastern hemisphere, I think it will be generally acknowledged, are easier to do with than our European species; at least, I have always found it difficult to cultivate *A. carnea* and its variety *A. eximia*, while *A. sarmentosa* is easily grown. I have large clumps of it, and it is now coming fully into flower; its growth is peculiar, and in winter it might almost be taken for a Saxifrage, so close and compact are the rosettes of which it is formed, but in spring these open out and expand and the foliage is more loose. *A. lanuginosa* is only just beginning to show flower, and is a plant of very woolly foliage. This creates a difficulty in culture which has made some people complain that they cannot grow it; it requires to be protected in winter, not from frost, for it is perfectly hardy, but from wet, which is the cause of failure in many alpinists. It has done very well with me, and I protect it during winter by placing a sheet of glass over it slightly elevated.

Fritillaria pallidiflora. This is a very charming species of *Fritillaria*, in height about 18 inches, with glaucous foliage and yellow bell-shaped drooping flowers five or six in number. This is another plant which seems to be overlooked by many growers of hardy bulbs, and is absent from many catalogues. It is a pleasant plant on the rockery and does well in ordinary soil, requiring no special care. H. H. D.

(To be continued.)

SUCCESSION WITH HARDY PLANTS.

OUR beautiful old English hedges, particularly in Devon and Cornwall, give us a lovely floral procession almost throughout the year, although

a large portion of their display consists mainly of foliage. We begin with the Primrose, to follow on with the Dog Violet, the Orchis, the Stitchwort, the noble Lords and Ladies, and many other spring and summer flowers, to end with Ferns lit up with the glorious spires of the Foxgloves nodding as they see the fairies pass by.

In our gardens we can resort to the flowers of many countries, and have thus a chance to imitate a wider nature, which always seems to provide successive forms of beauty, such as may be seen not only in our own hedges, but in the pastures of the Alps, or on a humbler scale in our meadows. The bedding-out system, with its coarse and vulgar blaze of crude colours, is happily dying out, but there is no reason why our hardy beds should be so dull as they often are after the particular variety of flower which they are meant for is over.

For instance, I have two large Peony beds, one for the single and one for the double forms. Before the Peony plants come up the ground is full of Snowdrops, Crocuses, Snowflakes, Snow Glories, and Scillas. Then, as the bronze foliage appears, many sorts of Daffodils flower, forming a beautiful contrast and followed by late tall Tulips. Then come the Peonies themselves, followed for some months by Lilies, such as *excelsum*, *Martagon*, *szovitzianum*, and others, ending with *tigrinum splendens* in the autumn. Then the Peony leaves themselves die off in a blaze of subdued colour. A large bed of Lenten Roses is treated in much the same way, except of course that the earliest dwarf bulbs are not wanted, because the *Hellebores* are full of flower and their leaves would naturally hide such things as Snowdrops. Then a Lily of the Valley bed is also planted with Lilies, some early, but mainly the lanceifolium, which are perennial here. The same idea is carried out in the main herbaceous borders, in which, however, such things as coloured Primroses, Cowslips and Polyanthus are added, while a broad sloping rockery edging, following the lie of the ground, is filled with the ordinary free-growing alpinists, and with *Scilla bifolia*, Snowdrops, *Chionodoxa*, and so on, coming through the foliage of mossy Saxifrages and the like. With a good selection of perennials, a mixed border planted in this way is full of colour from February to September inclusive; with colour suited to our English surroundings, and not (like the Geranium or the *Calcicolaria*) such as to make the "rash gazer wipe his eye" (as Waller so impoetically remarked of what he apostrophised as the "lovely Rose"). Even the queen of flowers may be treated in the same way. My large Rose bed is crammed with bulbs, and when they are over, self-sown Iceland Poppies form a carpet, above which unpruned Roses form wreaths and garlands of bloom running up at the back to 8 feet on wires and to double that height on poles.

It will be gathered that my idea of gardening is to let things well alone. The great foes of natural expression in our home landscape are the spade, the hoe, the fork, and above all the gardener, particularly when he is of the jobbing variety: plants at equal distances crucified on stakes or tied into besoms, and repeating themselves in formal rows, where they are perpetually sacrificed by the spade or the hoe, and where everything is sacrificed to a fancied tidiness, destroying the repose and beauty of nine-tenths of our gardens. We want to repeat in our own gardens on a richer scale of colour and with a more varied flora the general appearance of our fields, our commons, our hedges, or of the alpine pastures of Switzerland. What tidy garden can approach such

scenes of beauty! Of course plants grown for succession in this intensive way in gardens want to be planted in good soil to begin with, and to be top-dressed with leaf-mould, or burnt rubbish, or short manure during the winter. Except in very large places, the idea that our Rose beds must be abominable manure-heaps six months out of the twelve should surely be abandoned. Roses of course want strong food, and plenty of it, but that can be supplied by perfectly inoffensive chemical manures. Hard-pruned Roses festering in a mass of filth are surely garden pictures which we can well spare, and indeed must spare, if our home resorts are once more to be pleasancess. Forbid the spade, the rake, and the hoe in our flower gardens, feed the plants in a cleanly manner, only dividing them at the long intervals really required. Leave your bulbs in the ground from one year to another, and you will soon find the garden a far pleasanter place than is possible under the bad old system. There is only one difficulty—that is, weeds. A garden treated as I am advocating can never be so tidy as the spruce parterre of the genteel suburban villa, and the hand-picking of the weeds is certainly toilsome and not quite effective. The expert use of the hoe (not in the hands of the jobbing gardener) will help somewhat here, and as the beds get well covered with the plants, weeds are less numerous. There is one other unsolved difficulty in connection with hardy plant gardening, and that is the necessity for ugly and laborious staking. Canon Ellacombe recommends iron cages, a remedy no doubt, but I cannot get them made under 3s. 6d. each, and as I should want hundreds, the cost is prohibitive. The capital new coil or twisted stakes for Carnations afford an idea of a possible development if they could be made in 3-foot, 4-foot, 6-foot, and 8-foot lengths, and strong enough to hold such plants as *Delphiniums*, *Dalias*, or *Asters*. The ordinary gardener delights in making his stakes as obtrusive as he can—and for that matter so does the extraordinary gardener as well—as witness *Pelargoniums* and other greenhouse plants at our shows, got up as a fretful porcupine, with a *chenour-de-frise* of deal sticks. Nothing is perfect in this life; but even with stakes and with weeds there can be no comparison between a garden grown for apparently natural succession and one blazing with summer bedders, alternating with manure-heaps for the Roses. The one is full of interest for eight months out of the twelve, and not without flowers and beauty of leafage for the other four months. The other is a mud-heap in winter, spring, and early summer, and an animated Turkey carpet, with the colours unsorted and glaring, during a part of June and the months of July, August, and September. R.

IN THE GARDEN OF HAM HOUSE.

THERE are few more pleasant gardens, restful and simple, than surround the historic Ham House, by the Thames-side at Richmond. Our illustration shows a part of the west garden, with the house in the background. The house itself was built by Sir Thomas Vavasour in 1610, but soon came into the hands of the Tollemaches, Earls of Dysart. Mansion and garden are in perfect keeping. There is a delightful outlook over the garden from the south front, where the low terrace wall is skirted by a border planted with masses of hardy flowers. Here at this time white Lilies and pale blue Larkspurs are flowering, followed later by Hollyhocks and such beautiful things as the *Alstromerias* and *Galtonia candicans*

and there are groups of white Canterbury Bells, Sea Holly, Evening Primroses, Irises, China Roses, and many other favourite flowers, whilst the walls are garlanded with many interesting climbers, not merely of the garden, but of the house also, such as *Eccremocarpus scaber*, Clematis, Fuchsia, Magnolia, Honeysuckle, and Ceanothus. Beyond the border is a well-kept lawn, with groups of Rhododendrons and other evergreen and flowering shrubs on either side.

In another garden the fine old red brick walls are covered with Roses and other climbers, and the borders are filled with perennials. The lawn here is broken up by rectangular beds, filled with Roses and perennials, and fruit trees cast their shadows on the grass. It is one of the most charming of English gardens.

CORRESPONDENCE.

THE NEW CHISWICK.

[TO THE EDITOR OF "THE GARDEN."]

SIR. It is a pity that the readable letter of "A Practical Fellow" you published recently on this subject should have been marred at the close by wild estimates as to expenditure. In the first place, take his suggested expenditure of £40,000 on a horticultural college, when the council of the Royal Horticultural Society do not propose to expend a single penny for such a purpose, and never did. That is one of the unfortunate results of writing about a

subject in ignorance. It is certain of the county councils which propose to establish a horticultural college, and for the privilege of allowing the students there to have the use of the proposed new Chiswick for practical study, to make to the Royal Horticultural Society an annual grant probably of not less than £1000. That is a very different story, and shows how important it is to know before criticising. Then the suggested cost of the new Chiswick at £40,000 is a huge absurdity. The actual cost of the 50 acres is £5000, and the expenditure of another £5000 at once, all other expenditure being kept to annual income, will suffice for all present practical purposes. That means £10,000, a sum the council practically have in hand, but not £40,000. There would be an annual saving of rent, of considerable rates, of water, and labour would be much cheaper. Then there is credited to Chiswick a sum of £180 pension, which ought to be credited to those gardens. Most certainly the new gardens, whilst eventually far more productive, would be worked at much less cost than old Chiswick is. I am surprised to learn that any "practical" Fellow thinks that the work of conducting trials can be left to seedsmen and others. Surely that is on consideration too absurd. If that were so, one of the great purposes of the society falls to the ground, and it would remain a mere exhibition society only. Well may the good sense of the Fellows pray to be saved from some would-be friends.

ANOTHER FELLOW.

ARUNDO DONAX.

[TO THE EDITOR OF "THE GARDEN."]

SIR. Can you tell me the proper treatment for an *Arundo donax*? I planted one last autumn and

cut the canes down to the ground this spring. It shows no sign of growth. EVE.

[It is very possible that your *Arundo donax* may yet start into growth, but it is a pity that you cut it down. Even in the case of well-established plants, cutting down during the dormant season invariably weakens the growth, and in your instance the specimen, having only been planted in the autumn, had no time to form roots in the fresh soil, and was therefore less able to stand the check than if it had been in position for a year or two. Where cutting is necessary, this is better practised as soon as the young growths have attained a height of about 2 feet above the ground, when any crowded, weak, or unnecessary canes may be cut out. In the south-west this *Arundo* attains a great size, one that we lately saw in South Cornwall being 20 feet in height, but in these cases the growth is never removed during the winter months. This advice applies with even greater force to the more tender variegated form. EDS.]

PEACH-LEAF BLISTER.

[TO THE EDITOR OF "THE GARDEN."]

SIR. In reply to "A. D.'s" letter in *THE GARDEN* of the 19th ult., in which he says, "But gardeners have often found that their experience and scientific deductions have not always been unanimous." I should like to point out that it is not a scientific deduction, but a fact that whenever a Peach leaf is affected with blister it is infested with particular fungus. Whether the unhealthiness of the leaf was caused by the cold wind and the fungus took advantage of the leaf being in a morbid condition to attack it, as is often the case, or whether the fungus was the original cause, may be



IN THE GARDEN OF HAM HOUSE, RICHMOND.

a point on which difference of opinion may arise. "A. D." asks why blister is so restricted to the Peach family and does not extend to other stone fruits. My reply is that the fungus, like many others, only attacks plants of one kind. And may I ask "A. D.," if the cold wind is the only cause of the blistering or curling, why other stone fruits are not similarly attacked? This fungus has little or no effect on the leaves when they are healthy and their growth not suddenly checked by cold, but when the check occurs, the cells of the leaf are in a condition favourable to the growth of the fungus, of which the latter immediately takes advantage. It is just the same with the canker fungus. While the roots are running in sweet, well-fed soil the trees are in such a healthy condition, that the fungus is not able to live on them, but when the roots make their way into un congenial soil some change takes place in the tree, which enables the fungus to live on it. Fungi, like other plants, only live on what is to them a suitable soil. G. S. S.

ANEMONE RANUNCULOIDES.

[TO THE EDITOR OF "THE GARDEN."]

SIR, My experience of the culture of this charming little spring flower differs materially from that recommended by the writer of the interesting article in THE GARDEN of May 26. The soil here is particularly loose and open, being very sandy in nature, whilst chalk is not to be found for many miles. Twice recently my clumps of this plant have been moved, and yet this year they were a mass of flower and foliage, although we had a terrible drought last summer, during which no water was given. As evidence of my success with this, which is to many growers a difficult subject to manage, I would mention that a note from a well-known writer appeared in THE GARDEN some twelve months since commenting on how well *A. ranunculoides* did with me. I have one clump in a position which enjoys some six hours' sunshine daily during the summer and another in shade, but both do equally well. Close by are clumps of *Anemone apennina*, *A. robinsoniana*, and *A. sylvestris*, and all of them flourish and flower freely. Since trying *Anemone ranunculoides* many years ago I have not been once disappointed. Last year some I had in full sunshine increased and multiplied greatly.

Anemone tulgens is invariably a failure with me, but the plant which has tried my patience more than any other is *Gentiana acaulis*. I have experimented with it in many ways, but never once have I succeeded in flowering it. This spring I bought some strong examples of *Gentiana acaulis* and *Gentiana verna* and planted them next to one another. The latter gave me many beautiful blooms, but not one did I get from the former. Other growers I know are as unsuccessful as myself with *Gentiana acaulis*. Last week I mentioned to one of the principal exhibitors of alpine and hardy plants at the Temple show the difficulty I had with this plant, and he admitted to me that he could not prevail on it to flower.

W. G. B. C. D. P.

W. A. BUNY.

A CURIOUS WISTARIA AT SOHAM HOUSE.

[TO THE EDITOR OF "THE GARDEN."]

SIR, In the fine collection at Soham House, Newmarket, of the dwarfed, aged, and contorted specimens of Japanese art there is much to interest those whose fancy favours oddities in plants. Some specimens represent ships, others animals, while many have the look of age and yet are only pignons. Among the latter the gnarled stem, jagged broken limb, and stunted head are found. The greatest curiosity I saw, however, was a *Wistaria* which had the appearance of having seen fifty summers, and taken that time to attain a height of 5 feet, including the tub it was growing in. Its head resembled an umbrella with a blank like a "V" in it, and was about 5 feet across. The repressed energies of the plant throughout the years of its existence seem to have burst forth in one final effort to attract and please, and thus secure more

generous treatment in the future. From this comparatively small head, considering its age, over 100 racemes were hanging when I saw it (April 11). These varied from 3 feet to 4½ feet in length, and each had from 100 to 136 blooms.

Other plants of *Wistaria* were growing in the same house, but there was nothing unusual in the length of their racemes to attract attention. If this *Wistaria* will adapt itself well to outdoor culture it will indeed be an acquisition. There is, nevertheless, the possibility that this inordinate display of bloom may only be a freak of Nature, and that it will again return to normal conditions in the future. Mr. Aslett, the head gardener to Mr. Wallace Johnstone, at Soham House, seems to favour the idea that the flowering properties of this *Wistaria* are permanent. It is to be hoped his opinion will be verified, and that he will be able to train it to make rambling growths as well as maintain its length of racemes and fulness of flowers.

Rougham.

J. RIDDELL.

SNOWDROPS AND OTHER PLANTS AMONG IVIES.

[TO THE EDITOR OF "THE GARDEN."]

SIR, "W." opens up alluring possibilities (p. 368) of lighting up thick screens of Ivy with Hellebore, Snowflakes, three kinds of common Violets, wild Primroses, Hepaticas, Windflowers, Periwinkles, Daffodils, Solomon's Seal, Lily of the Valley, Trilliums, *Dieltannus Fraxinella*, Martagon Lily, *Campumulus*, Cyclamens, and Ferns. Of these, "W." tells all readers of THE GARDEN that they all seem to be happy in their covering of Ivy, and at flowering time reach out long stems nodding over it. "W." says what is probably quite true, that many plants would do equally well in the same position, and invites all to mention any they know. In answer to this appeal I would name the white and the pink *Honesty*, the Cornflowers of all colours, Poppies, Candytuft, Collinsias, Clarkias, *Eschscholtzias*, *Helichrysums*, *Godetias*, Larkspurs, *Love-lies-bleeding*, Lupins, Malopes, *Nasturtiums*, Silenes, Sunflowers, Virginia Stocks, Wallflowers, &c. But the majority of these and other annuals or other plants used will thrive or fail very much in the ratio of the density and stature of the earth screen or first crop of Ivy.

Of course "W." or few other readers of THE GARDEN need hardly be told that there are Ivies and Ivies, and amongst them there are small-leaved dwarfs and huge-leaved giants, the first delicately fringing the earth with small lines and touches of many-sized multi-coloured verdure and beauty; the latter, often called Tree Ivies, meriting their name through the height of their stature and their far-reaching spread of tree-like stems and foliage. It is comparatively easy amid dwarf and moderate-growing Ivies to find an available speck of earth for the annuals, bulbs, and other plants that have been named or may be suggested for running abreast with Ivy to enhance the beauty of the latter. Among the so-called Irish or Tree Ivies, in which a full-sized man may quickly sink to his waist, we should require to use gaints or climbers to keep the flowers nodding over the Ivy. Unless they do this, little or nothing is gained by mixing bulbs and other plants with Ivy. The stronger-growing Ivies are generally gross feeders, and will be sure to have the lion's share of any good thing to be found in the soil. True, the Ivy may keep the bulbs or roots of the other plants cool, but this may often prove of doubtful service at the best.

Still, the charm of sub-cropping Ivy with flowering plants may be generally enjoyed by using small-leaved and delicate-growing varieties and species. In this mode of double cropping the Ivy should be planted wider apart to make room for its flowering partners. In choosing Ivies for the dual cropping of banks, braes, hillocks, and mounds, avoid all the larger-leaved Ivies, such as *Hedera grandiflora*, *H. arborescens*, *H. emariensis*, the Irish Ivy, &c. In our common Ivy (*Hedera Helix*) we have almost innumerable varieties varying very widely in the size and colour of their leaves and stems and in their ratio of growth. Any of the more moderate-growing and prettily coloured and variegated sports

from the common species would answer for dual cropping. Among more choice and striking varieties the following should find a place: *H. Helix*, any of the smaller green and variegated; *H. H. conglomerata*, *H. H. cuspidata minor*, *H. H. donegalensis*, *H. H. gracilis*, *H. H. lucida*, *H. H. marginata*. By this there are four or more varieties of different colours and sizes, and under several names, one of the more striking of which is the red *marginata rubra*, which is also met with under the name of tricolor, the red colour seldom appearing until autumn and disappearing in the spring. The most brilliant gold Ivy yet met with for this mode of culture, covering walls, or climbing trees was first seen in the stable-yard of the Duke of Marlborough's at Blenheim, near Oxford. D. T. F.

TWO CHARMING SHADE-LOVING PLANTS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I can endorse all that Mr. William Earley so well says (page 368) about *Hepatica angulosa* and the Spring Navelwort (*Omphalodes verna*).

The two vital conditions for the successful growth of Hepaticas are undisturbed roots and shadow, more or less complete, for their foliage. Those who have grown the largest and best of all Hepaticas are not likely to forget the tender character of their first young foliage, nor how grateful partial shade and protection would be likely to prove to them. This is no doubt the chief reason why this and other Hepaticas are seldom at their best in the front of shrubberies, on the sides of grass lawns, and in home woods, plantations, &c.

A foot or so of sandy loam mellowed and enriched with a fourth or so of humus or leaf mould will produce a vigorous growth, which, if encouraged to ripen seed, will form an ever-expanding colony at the feet of the parent plants. I have also met with the *Omphalodes verna* in perfection in wild gardens, rockwork, and woods. But I doubt if it is as easily naturalised as the *H. angulosa* or some of the other wild species of Hepaticas. There are only three other species of *Omphalodes* known in our gardens: *O. linifolia*, a white annual with at times a dash of blue, seldom seen; a white perennial, *O. nitida*, blooming in May; and *O. Lucilia*, a blue-lilac perennial, almost as large again as *Omphalodes verna*, blooming throughout the summer. The spring-flowering species has so far been the most popular, though the other two species deserve to be generally grown, alike for their variation in size, season of blooming and colour.

The chief season for the spring Navelwort is from March to May, though it may be had in February in sheltered situations if the plants have been raised from its young runners somewhat like Strawberries early the preceding autumn. The flowers are of such a lovely blue, with a white throat, as to have earned the common pet name of the wool Forget-me-not, where it has become popular. It may also be readily raised from seeds, sown either so soon as ripe or early in the spring. When a stock is secured and grown in sandy loam and leaf mould the plants hold their own against all fair competitors. Still, we have few plants, not even the queen of all our Forget-me-nots of the garden, *Myosotis dissitiflora*, that more deserves annual propagation from runners or root division, and growing in thousands on rich sandy loam in the kitchen garden, to be finally massed in bold groups where wanted to bloom in perfection early through the succeeding spring, than the charming *Omphalodes verna*. For many years in my experience *Myosotis dissitiflora* stood first in number and beauty in early spring decorative plants; the *Omphalodes verna* proved an invaluable second; Sweet Violets, single and double, in thousands, and *Violas* were third; *Anthriscus*, *Arabis*, *Alyssum*, *Saxatile*, common Windflowers, hardy Primroses fourth; and Daffodils, Snowdrops, Crocuses, and Tulips fifth. Though the Christmas Roses, winter Aconites, and the previous year's skeletonised seed vessels with the early blooms of the current year often made a show ahead of or abreast with the fair maids of

February, the flood of the floral beauty culminated with the Forget-me-not, Navelwort, and Sweet Violets. F.

STATICE LIMONIUM.

A CORRESPONDENT who has a good knowledge of the coast flora of Sidmouth doubts the identity of *Statice Limonium* as described by "A. M." (p. 387). The Sea Lavender is essentially a plant of the salt marshes, and its occurrence on that part of the Devon coast, though not impossible, would be unusual. As the doubt is reasonable, perhaps "A. M." would be so good as to send us a leaf for identification; we should not expect a flower, as it blooms in the late summer.

POND FOR WATER LILIES.

[TO THE EDITOR OF "THE GARDEN."]

SIR.—I want to make a pond for Water Lilies: will you kindly tell me how deep it should be, whether it is necessary to line it with clay or anything, and what flowering shrubs and plants will suit the margins? I am also making a bank about 3 feet high and 250 feet long for herbaceous plants, and to protect the garden side from the violent westerly winds (direct from the Channel) there must be a dense hedge—evergreen, if possible—and something that will grow quickly. Would *Rosa rugosa* stand the winds? V. O.

[Provision should be made for at least 2 feet of water for the strongest growing varieties. If the soil around is not composed of a clay subsoil so that it is retentive of water: it will be necessary to puddle the bottom and sides with clay to at least a thickness of 6 inches; or what in the end would be better, provided that good tough clay is not readily obtainable, would be to concrete the pond. This can be done by anyone who is conversant with building work. The following plants are suitable for the margins: *Fritillaria Meleagris* and *F. M. alba* (also other varieties); the Common Yellow Buttercup and the King Cup, with other allied forms of the Ranuncul; *Iris Kœmpferi*, in great variety; also other sub-aquatic Irids, *Spiraea palmata* and its white form, also others of the same genus, all of which are moisture-loving subjects; Bamboos in great variety, both dwarf and tall varieties; *Typha latifolia* and smaller forms of *Typha*; *Carex* in variety (Sedge); *Juncus* in several varieties; *Lobelia cardinalis* (most decidedly) and its improved forms; *Mysotis palustris*; *Senecio pulcher*; *Asters*, as the *Michaelmas Daisies*; the *Pampas Grass*, and also *Arundo conspicua*; *Gunnera manicata* and *G. scabra*; *Rhennus* in variety; *Tritomas*, if not too wet. The back row of plants to form a screen to the herbaceous border might with decided advantage be composed of *Tamarix* in variety; these plants grow quickly and thrive well in windy situations, even close to the seaside. Bamboos—as *B. japonica* or *B. Metake*—should also be tried. (Any plants that give with the wind are preferable to those that remain rigid.) The *Eonymus* would do well for a foreground, also the Sea Buckthorn. *Rosa rugosa* requires rather more shelter, and would for the purpose be a doubtful plant. Eus.]

"IN A SMALL WAY."

NOTES FROM AN OBLONG GARDEN. IX. THE oblong is not an Adamless Eden, but the Adam thereof has not inherited his direct ancestor's tastes or necessities, and its walls enclose a little area where female suffrage reigns, or deserves to do so, for its pains. Adam valiantly undertook the weeding when the oblong was first entered upon, also the mowing, and performs the latter operation weekly, with a moderate application of the goad of reminder. The former engagement, however, is now explained to have in no wise comprised any hand-weeding, and resolves itself into a diurnal promenade with a hoe, the blade of which preserves a strict impartiality between weeds and bulls' noses. The mere

female is thus usefully employed as a kind of following harrow, collecting half-severed weeds, smoothing over unsightly scrapes, where a bit of grass has resisted the tool, and making moan over promise below the surface untimely topped, which is generally stigmatised as a base ingratitude for services rendered. Adam is a flower lover, but of the eye only, and neither willing to spend nor be spent in the service. Quite peacefully will he sit—and did he sit all last summer—reading and smoking under the shade of the big Apple tree, while the wretched parched oblong shouted for water. With sweet playfulness did he comment on the unbecoming weariness of those who panted round with splashing cans in its succour; *never* did it appear to him better to draw and give a can of water than to watch a flourishing clump droop and wither. Adam is no gardener at heart, and he likes his gardening done for him, more or less, as circumstances allow, but certainly with the minimum of cost; whereas the true garden enthusiast is totally incapable of thrift in face of a seed list or a catalogue. Who that has only once tasted the delights of marking a catalogue newly arrived hot from the press and post, full of novelties, could think of anything so dull as economy! There are other inmates of the oblong garden, too, who have no horticultural tastes, unless it be for digging, exactly where that operation is least needed—in the middle of the lawn for choice. I do not think that readers who love their gardens like to hear of the deeds of these gentry, to whom bone-meal in a flower bed suggests operations akin to those of the old time gold-miner: they are dark and tailless trials imported from Holland and Belgium, and shall remain obscure, now that I have filled up that last batch of holes in the lawn.

There are one or two plants which year after year, although I know their ways by this time, give me a shock by pretending that something untoward has happened to them, and they are not going to bloom properly. The *Azalea mollis* always plays this little Artemus Wardian "goak" with peculiar zest. Its buds open in the most hopeless way from a tight clump of indefinite drab segments folded together into dry and withered-looking sections, like little bad oranges split up, and for days these remained with no promise at all until the colour begins to stain their tips. Then in two days they have exquisite blooms which last astonishingly beyond their fragile appearance. I think for small gardens like this *Azaleas* are a wonderful boon, and infinitely preferable to *Rhododendrons* in their compactness and their delicious scent. In fact, one could not have *Rhododendrons* in an oblong with any show of dignity whatever, especially remembering them, as I do, in their full beauty in the large garden of a house we once occupied in Essex. The soil there was sandy, and *Roses* did very poorly, but the *Rhododendrons* flourished amazingly, and great veterans many yards through were perfect haystacks of bloom. In this part of the world they are either not popular or unhappy, for no one about here has good ones. But then we *can* grow *Roses*!

I have just shifted on my few *Chrysanthemums*. They are not favourites, but I must have just a few to bring in when there are no other flowers. I cannot give up any of my precious south border to things which are so dull all through the summer, and they will not do anything on the shady side, so they are in pots. But I am letting a single *Chrysanthemum* or two into the sacred enclosure; not the horrid annual single things, which I dislike because I think their foliage mean and their colours rasping and "mixty," but the real

singles. The soft pinks are very pretty, so are the yellows, and the former are distinct among flowers. I saw a couple of well-grown plants in 9-inch pots last year which pleased me very much; they were about 2½ feet high, and covered all over with charming *La France Rose* coloured blooms like pink single *Daisies*, each about the size of a shilling. One is not tired of them as of the ordinary *Chrysanthemum*, which always strikes me as a coloured production, not a flower, and they look very easy to grow. I am dearly fond of pink flowers, and the first of my seedling single *Pyrethrums*, which came into bloom on the 3rd of May, gratified me by being a sweet bright pink thing. These are such nice, wholesome, hearty, thoroughly satisfactory plants to grow from seed, going ahead steadily all through the winter in a cold frame, and turning out of their pots into the open ground without the slightest check when the time comes. They are like people with perfect digestions, and never sulk. I am racing to fill up gaps now before the dry weather sets in, and perennials turned out of pots come in very useful; they often seem to do much better than those planted the autumn before, but of course they expect attention in watering. M. L. W.

Bathwick Hill, Bath.

THE KITCHEN GARDEN.

CELERIAC.

THE selection of good vegetables from Christmas to May is so limited, that many would, I feel sure, find *Celeriac* most useful, and even more so later in spring when green vegetables are scarce. As the name implies, *Celeriac* is closely related to *Celery*, and may be grown with even less trouble, as it needs no earthing up, is quite hardy at least such is the case in most soils—and when cooked is a most delicious vegetable. It is also most useful as a salad, as it is much liked if boiled like *Bectroot* and cut up when cold. On the Continent *Celeriac* is a great favourite, very large quantities being grown for sale, and with most French cooks *Celeriac* is always in demand.

As most of my readers are aware, *Celeriac* is a bulbous-rooted plant, its value being in the root, not the stalk; and though a long season of growth is needed to obtain very large roots, excellent produce may be had by planting early in June or even later, as if the roots are the size of a cricket ball they are quite large enough, and small roots are just as good for salad purposes.

In this country few seed catalogues give more than one variety of *Celeriac*, and some do not describe it at all; but there are about half-a-dozen kinds grown on the Continent, and most of them are very much superior to the one we have in Britain. The best I have grown is called the *Apple-shaped Celeriac*, and this in its growth is quite distinct from others, being dwarfier, and the roots have the advantage of being much smoother. The quality also is superior and the plant remarkably hardy, as though the tops may be injured by severe weather, the roots, if covered with soil, do not suffer. Another very fine variety I had sent me by the late M. Vilmoirin, of Paris, was the *Geant de Prague*, or, as it would be better known in this country, *Prague Celeriac*; this is a very large variety, and is the kind largely imported from abroad. Like the one named above, it is of very fine quality. The *Ermut* variety is also reliable. This plant is largely grown in Germany, and is very fine. There is also the Paris variety called the *Paris Amelioré*, a very delicious root, and excellent for salads. I need not describe others of continental origin, as the above are considered the best for general culture.

A few words will describe the culture of the plants and the best way to produce large roots

Seed should be sown in April for early June planting or later for July planting, and in heat, much the same way as Celery. The young plants should be pricked out into frames or boxes and hardened off in drills 2 feet apart and 18 inches apart in the row. I have grown them on the flat with equal success, but the method described is better in dry seasons, as water is conveyed more readily to the roots. Like Celery, the plants delight in a rich root-run, so that the ground should be dug deeply and manured freely. Ample moisture should be given in dry summers and liquid manure also, or a mulch of short manure between the rows will be of great assistance. Quite four months' growth will be needed to grow large roots, and during growth the land merely needs to be kept free of weeds. In the late autumn the roots may be lifted and stored in a cool place, or left in the soil and merely covered with litter or soil or clamped like Potatoes. They are in season from October to April, and anyone who likes Celery will find Celeriac a valuable addition both as a salad and as a vegetable.

G. WYTHES.

SAXIFRAGA BURSERIANA.

THERE is no more beautiful or interesting plant in the very early days of the year than this Saxifrage. It is a plant that for many years has charmed me greatly, and so interested was I concerning it many years ago, that I took up its propagation from cuttings, *i.e.*, true cuttings of possibly not more than 1 inch in length, as opposed to divisions. Indeed, I believe I was the originator of this method of propagation, which I began about 1877 or 1878. To those who wish to add to their stock I can safely say there is no more interesting work than this; and having grown many of these cuttings into quite large tufts, affords one a far greater knowledge of the requirements of the species than can possibly be afforded when large plants are purchased. After many years' experience I can all the more unhesitatingly say that I do not believe in the idea that *Saxifraga burseriana* is a shy flowering plant, but very much the reverse. I am fully convinced, too, that this shyness to flower, as some assert, is but the outcome of a system of culture that is quite unsuitable to the plant in question. I have seen this shyness myself, but I note that there is invariably also a lack of that silver grey of the tufts of rosettes that is always a marked feature of plants in full vigour, the vigour resulting from a generous cultivation.

There is evidently no half-hearted treatment at Guildford when Mr. Selte Leonard can talk of his 10,000 or probably 20,000 blooms. It is possible that not a few would consider so marked a success to result more from the situation and suitability of Guildford than to any skill or knowledge of what is best for the plant. Quite frequently one meets with plants of this species in say 3-inch pots and not an eggcupful of soil, the plants literally starving among a few stones. Such plants have no possible opportunity of making proper growth, and hence their shyness to bloom. I cannot myself boast of such an array of blossom as Mr. Leonard, but the few that I do possess would, I think, take some beating, solitary plants in 5-inch pots having had some five to six dozen flowers each.

And now a word as to culture, if more is needed, for I really think that "H. K. M." has plainly taught by his failures and his successes that a liberal treatment is the right thing. The successful plants, we are told, "have the advantage of a deep well drained bed filled with loam, made light by a liberal proportion of mortar and sand," and behind are rocks. This small quotation contains all the essential requirements of this plant in the rock garden. It embraces a liberal supply of soil, rendered suitable by additions of sand, &c., while the rocks behind afford that very welcome half shelter from intense heat that is most desirable, it not absolutely essential. The plants should be made as firm as possible. The rocks will afford that cool medium for roots in hot weather which is such an important item with these plants.

I do not quite agree with Mr. Leonard with

respect to glass protection in the form of frames. I have grown this Saxifrage for six years continuously, and some other species for fully a dozen years, in pots fully exposed, not even plunged, and it is doubtful if healthier tufts could be found. In this treatment I took my cue from an experience of nearly thirty years ago, when I had charge of one of the largest private collections of choice alpine near London, every obtainable species of Saxifrage being included. In summer the rarer kinds were in pots on the summit of rock walls in partially shady spots. In winter many of them were taken to the alpine house merely to escape the winter wet, and were ranged on shelves before which the lights along the entire front were always open. After two years I found the plants left outside were much the best, and I gave up housing them. My employer, however, did not altogether approve of this, and it was arranged to test matters, and for half a dozen years the matter was well tested so far as that district was concerned. The housed portion was always the inferior. In the end the plants were moved from the partly-shaded walls to others fully exposed for winter. Of course worms were entirely unknown on these wall tops, while perfect drainage was secured.

It is worth noting in this connection that for some years I paid a winter visit to the late Mr. Jas. Atkins at Painswick. It was a nine miles walk from my native place, and I recall these visits with extreme pleasure. No garden I have ever seen of its size was anything like so finely stocked with rich and rare things. Naturally the choicer Saxifrages were there, some protected in glass covers, *i.e.*, strong sheets of glass resting on a central ridge and side boards, but the greater part were fully exposed to the air, save that the pots were plunged in boxes of the magnesian limestone gravel of the district. I always admired most those that were fully exposed, for these seemed in better condition than the rest. Of course there are exceptions, and here I have lost more than once the free-growing *S. coriophylla*, though side by side with rarer things. Has Mr. Leonard any particular kind to mention as having been lost by winter wet? At Tooting all were grown out in open sand beds in pots plunged to the rim, where even good drainage was not always ensured. The same thing was done both at Tottenham and Chester, not the slightest protection being given, and Tottenham is not a favoured spot.

Hermon Hill.

E. H. JENKINS.

OBITUARY.

MISS MARY KINGSLEY.

WE deeply regret to hear of the death, at Simonstown, Cape Town, of this intrepid traveller. The *Daily News*, commenting upon her work, says: "All the diverse qualities of the Kingsley family—moral, intellectual, aesthetic—were harmoniously blended in the authoress of the 'Travels' and the 'Studies.' She was a woman of the most engaging manners, and of most pleasing expression. The fine, neatly turned forehead, the steady, calm gaze of the gentle eyes, the strength in the mouth and chin revealed the character of the mind within, explained how, notwithstanding the slightness or even frailty of her physique, Miss Kingsley overcame hardships that might have baffled the most robust of travellers. In the seemingly weak frame dwelt an indomitable spirit. But pluck alone would not have enabled her to conquer her difficulties. She had a fine tact, the knack of drawing out what was best in the savages among whom she wandered unprotected. She thought over the chances of being put to 'stew' in some cannibal's pot, but she faced them under circumstances from which many a robust male explorer, unprovided with a little army, would have recoiled. To have to wade up to the chin for hours in a black slimy, stinking mangrove swamp never appeared to disturb the composure of that heroic daughter of the Kingsleys. She

knew what it was to be capsized in rivers among hippos, and in salt water among sharks. She would emerge from some African stream or damp, dripping forest, her body covered with leeches, which she got rid of with doses of salt, but which left behind them streaks of blood, mixed with the slime, on her skin, and Miss Kingsley just counted it in her day's work. She was as frank and downright as her uncle Charles, Rector of Eversley—and that is saying a good deal. Instances of this quality will be found in her published opinions about missionary work and the liquor question in Western Africa. Miss Kingsley discovered that a converted black was only a spoiled fetish-worshipper, and she said so. She thought that use (not abuse) of spirits was beneficial in the damp regions and rotten marshes of West Africa, and she took her precautions accordingly. And, lastly, Miss Mary Kingsley was a good Imperialist. She firmly believed in the special fitness and beneficence of the mission of the English race in the Dark Continent."

NEW AND RARE PLANTS.

RHODODENDRON PINK PEARL.

THIS beautiful hybrid Rhododendron, with probably R. Aucklandi for one of its parents, has already received an award of merit, and shown on this occasion for a first class certificate, which was unanimously given. It is worth any award the committee cared to bestow upon it, and the boxful of noble trusses of flowers cut from a bush in the open garden were one of the most pleasing features of the meeting. Pink Pearl rather aptly describes its colouring, the flowers are very large, quite 4 inches across, and of a charming bright rose colour, which pales off with age, hence there is a variety of shades. Many of these flowers are borne in a single truss, and the bush when in full beauty must be an exquisite picture of bright colours. First class certificate, Royal Horticultural Society, June 5. From Sir Trevor Lawrence, Bart., Burford, Dorset (gardener, Mr. Bain).

ROSE PINK ROAMER.

THIS is a lovely Rose. It is a vision of flowers studding the graceful shoots of pale green leaves, and for festooning an arbour, pillar, pergola, or similar structure is unrivalled. The flowers are not large individually, but pure rose, and are set gracefully upon the long spreading stems. It is one of the Rosa Wichuriana hybrids, a race which we think has created a new interest. If any such were wanted, in the single Rose. Award of merit, Royal Horticultural Society, June 5. Shown by Messrs. W. Paul & Son, Waltham Cross.

HYBRID TEA ROSE TENNYSON.

THIS is a hybrid of the Lady Mary Fitzwilliam class. It has a magnificent flower, globular, with pointed petals, and ivory-white flushed with tender pink. It is undoubtedly a great gain to the exhibition varieties. Award of merit, Royal Horticultural Society, June 5. Shown by Messrs. W. Paul & Son.

ROSA SINICA ANEMONE.

A SINGLE variety of great beauty, and one that should be in every good Rose garden. Its flowers are large, refined, with broad petals and bright rose in colour. Several sprays were exhibited, and we think this kind will rank amongst the most charming single Roses of recent years. Award of merit, Royal Horticultural Society, June 5. Messrs. Paul and Son.

BEGONIA GLADYS HENSLEY.

THIS a very handsome double variety, light rose, with a white centre, a distinct and pleasing flower. From Mr. H. J. Jones, Eycroft Nursery, Lewisham, S.E.

TREE PEONY LORD ROBERTS.

A LOVELY white variety, with a double row of large petals, flushed with a salmon shade at the base. We hope the tree Peony will become more popular in gardens. Such acquisitions as this are priceless. Award of merit, Royal Horticultural Society, June 5. Shown by Messrs. Kelway & Son, Langport, Somerset.

HERBACEOUS PEONY LADY CURZON.

THIS is another beautiful variety from Messrs. Kelway and Son, but of the herbaceous class. The flower is remarkable for its conspicuously high centre, white touched with pink, with broad grand florets of the same shade. Award of merit, Royal Horticultural Society, June 5.

STREPTOCARPUS ACHIMENIFLORA.

AN award of merit was given to this strain of Streptocarpus shown by Messrs. Veitch & Son, of Chelsea. The flowers are of varied colour, and we noticed quite a pure white, which we thought of sufficient importance to single out for special mention. Award of merit, Royal Horticultural Society, June 5.

TREE PEONY CREAM PERFECTION.

A BEAUTIFUL flower, single, and of somewhat cupped form, with broad handsome petals of quite a cream colour, cut into at the base of the inner face of the florets with purple, the yellow stamens increasing the rich colouring. Award of

merit, Royal Horticultural Society, June 5. Shown by Messrs. R. Wallace & Co., Colchester.

LILAC MME. ABEL CHATENAY.

THIS is a Lilac fairly well known, but not sufficiently so perhaps, but we hope such noble kinds as these will be planted freely in the future. The variety in question has strong spikes of pure white double flowers, and is very free. Award of merit, Royal Horticultural Society, June 5. Shown by Mr. W. Marshall, Bexley.

DENDROBIUM BALHOU'S NOBLE.
(DALHOUSIANUM x NOBILE.)

THIS is a most distinct hybrid. In the habit of growth it shows the intermediate characteristics of the parent species, but favours *D. Dalhousianum* in length, being shortened in the joints from the influence of the *D. nobile* parent. The flowers are each upwards of 4 inches in diameter, the sepals 1 inch broad, white at the base, becoming suffused with rosy lilac. The petals are broader than the sepals and more deeply suffused with rose. The lip is 1 1/2 inches broad, 1 1/2 inches long, and in front there is a bright lip of rosy lilac, behind which is a broad band of white. There is a broad band of maroon purple forming the disc, the base white streaked with maroon on the sides. The flowers are produced on two or three-flowered racemes. It is undoubtedly the finest of this section of hybrid *Dendrobiums*. It received an award of merit from the Orchid committee at the Drill Hall meeting, June 4, when exhibited from the collection of Sir T. Lawrence (gardener, Mr. W. H. White).

CYPRIPEDIUM GODEFROYE.
(LEUCOCHEILUM WIGAN'S VARIETY.)

THIS is a desirable hybrid. The dorsal sepal is white with some indistinct network of purple in the centre area. The petals are 1 1/2 inches broad, white, thickly spotted in the centre and basal area with purple. The large lip is white, covered with small purple spots. The disc is white, with a green blotch in the centre. It is a pretty addition. The plant which carried three flowers and two buds came from the collection of Sir F. Wigan, Bart., (gardener, Mr. W. H. Young). It was exhibited at the Drill Hall, June 5, and received an award of merit from the Orchid committee.

STRAWBERRY TRAFALGAR.

AT the meeting of the Royal Horticultural Society on the 5th inst., at Westminster, the Messrs. Laxton staged a beautiful new Strawberry that could not fail to attract notice. Those who tasted it found it compare favourably with the queen of Strawberries, the old British Queen, which has no superior as regards flavour. The new variety is named Trafalgar, and is the result of crossing Latest of All (one of the Queen progeny) with the well-known Frogmore Late, the latter a very late fruit. In this case the new variety, as regards flavour, more resembles the Queen, but appears to have the free growth of the Frogmore Pine; it certainly will be the Strawberry of the year. Everyone admired it, and its raisers speak highly of its cropping qualities, and it appears to force well. The latter is a gain, as some of the Queen family are none too good in this respect. The Messrs. Laxton, who have raised many good Strawberries, will find in Trafalgar one of their best, and one that will become a standard variety on account of its free growth and splendid flavour.

SOCIETIES.

ROYAL HORTICULTURAL SOCIETY.
ORCHID COMMITTEE.

SIR F. WIGAN, Bart., Clare Lawn, East Sheen, sent a group comprising *Thunia Marshalliana*, *Laelia purpurata* and some finely-flowered dark varieties of *L. tenebrosa*. *Cattleya Mossiae* was represented by several dark and finely-flowered varieties, among the lighter varieties being *C. M. Reinckiana*, with nine expanded flowers; *C. M. E. Ashworth* very similar to the last-named, but has a distinct bluish tint on the front lobe and a slight tint in the sepals and petals. Among the many forms of *C. Mendellii*, *Nellie Wigan* is a pure white form, except a blotch of lilac-purple in the centre of the lip. *C. Warneri* was also well represented. Among the hybrids was the natural hybrid *Laelio-Cattleya Arnoldiana*, with two racemes of four and three flowers respectively; several good varieties of *L. C. eximia* (*purpurata* x *Warneri*), *Cattleya Prince of Wales* (*calumnata* x *Mossiae Wagneri*), with faintly-tinted sepals and petals, the front lobe of the lip rose purple streaked with crimson. Some finely-flowered *Miltonia Vexillaria* and *Epidendrum* were also included. Among the *Phalenopsis* were some grand varieties of *P. amabilis* and the brown and yellow-flowered *P. Manni*. *Cypripedium* were well represented, one of the most distinct being *C. Godefroye*, Wigan's variety, the flowers being white, except some brown spots on the petals and indistinct mottling on the dorsal sepal. Other interesting plants were finely-flowered *Acridas Fieldingi*. Several species of *Dendrobiums* and *Odontoglossums* were also included. A silver floral medal was awarded.

Mr. H. F. Pitt, Rosslyn, Stamford Hill, was awarded a silver Banksian medal for a neat group consisting of finely-flowered *Cattleyas* and *Laelias*, the rare *Zygopetalum Wallisi*, some fine varieties of *Z. (Pescatorei) Klabochorum* and *Dendrobium*, *Deardi*, finely-flowered. *Miltonias* were also well represented. Among the many fine *Odontoglossums* was *O. excelens*—Rosslyn variety; this is undoubtedly the finest form of this hybrid. The flowers are fine in shape and substance. The sepals yellow, blotched with brown, and the petals white margined with yellow and with a large brown blotch in the centre area. The plant carried a nine-flowered raceme.

Mr. A. H. Snee, Hackbridge, sent a fine variety of *Cattleya Mossiae* and a dark variety of *Cypripedium Lawrenceanum*. Mr. D. B. Crawshaw sent *Odontoglossum citrosum roseifolium*, one of the finest of the yellow ground section we have seen, and *O. crispum Cecile de Rochfort*, a pretty spotted variety with starry-shaped flowers; *O. Andersonianum candidum* and *O. elegantissimum*.

Mr. A. H. Tracey sent a good variety of *Cattleya Mossiae* and a dark form of *Brassia longissima*.

Mr. J. Douglas sent a pretty variety of *Cattleya Mossiae* and one of the original varieties of *C. Warneri*.

Sir J. Miller, Bart., sent *Laelia-Cattleya Lady Miller*, with orange yellow and purple flowers.

Mr. R. J. Measures sent the original plant of *Succolabium ampullaceum Monbainense*, with five spikes of flower, and the distinct *Meltonia Vexillaria*, Cambridge Lodge variety. The petals marked as in the lip, and having a suffusion of deep rose-lilac through the centre.

Mr. E. Kromer, Bandon Hill, Croydon, sent the pretty brown and yellow-flowered *Oncidium Manni*, which received a botanical certificate.

Mr. W. A. Gillett, Eastleigh, Hants, sent a fine variety of *Odontoglossum crispum*.

FLORAL COMMITTEE.

There were many exhibits before this committee, hardy flowers being especially numerous. A splendid group of *Eremurus* and *Primula japonica*, shown by Messrs. James Veitch & Sons, received a gold medal. The *Eremurus* were *robustus*, pale pink, and *himalaicus*, white.

Messrs. W. Paul & Son, Waltham Cross, showed a very fine group of Roses, which obtained a silver Banksian medal. It included, among many others, Austrian Copper, *Wichuriana Pink Roamer*, which received an award of merit, *Ella Mary*, *Polyanthus Lenchster*, *Madame Wagram*.

A good group of hardy flowers was exhibited by Messrs. R. Wallace & Co., Colchester, being composed of such plants as *Hises*, *Peonies*, *Omithogalum arabicum*, *Iris Iberica*, a fine plant, and various *Liliums*. It was awarded a silver Flora medal.

Group of herbaceous flowers, also obtaining a silver Flora medal, was shown by Messrs. G. Jackson & Son, Woking, and contained several varieties of *Clematis*, *Iceland Poppies*, *Pyrethrums*, *Incarvillea Delavayi*, *Dianthus alpinus*, &c.

Messrs. T. S. Ware, Ltd., showed a group of hardy flowers, and obtained a silver Banksian medal. Such plants as *Campyula speciosa alba*, *Cypripedium pubescens*, and various *Hises*, were represented.

Another collection of hardy flowers was sent by Messrs. Barr & Sons, Covent Garden, being awarded a silver Banksian medal. It contained several Flag *Hises*, *Pyrethrums*, *Centaurea montana*, sulphurea, *Double Peonies*, *Poppies*.

Messrs. Kelway & Son, Langport, showed a splendid group of *Peonies* and *Pyrethrums*, which won a silver-gilt Banksian medal. Among the *Peonies* were Mrs. Wegelin, Dorothy, Lord Cromer, and Langport Belle, while the *Pyrethrums* were represented by James Kelway, Firefly, *Lalysmith*, Lord Rosebery, Carl Vogt, and others.

A fine exhibit of Sweet Peas, winning a silver Flora medal, was sent by Messrs. Dobbe & Son, Rothesay.

A silver Banksian medal was awarded to a collection of sixty varieties of *Rhododendrons*, shown by Messrs. W. Paul and Son, Waltham Cross, including *The Queen*, *Paxtoni*, *Lord Clyde*, *Exvelyn*, *Sappho*, &c.

From Mr. W. T. DIXON, Hailsham, Sussex, came a fine group border *Carnation*, which received a silver Banksian medal. It included such kinds as *Dervish*, *Lady Hindlip*, *His Excellency*, *Major-General Baden-Powell*.

Messrs. Paul & Son, Cheshunt, showed a group of cut flowers, such as *Betula tricolor*, *Rose*, *J. B. M. Camm*, *Chimonanthus Boridius*, *Rhododendron Essex Scarlet*, *R. Duke of York* and *R. Duchess of York*.

Cut Roses *Ringsa Blanc Double de Conbert*, *Rubifolia*, *Harrison*, *Garmine Pillar*, &c., came from Messrs. Frank Cant & Co., Colchester.

Messrs. R. A. G. Cuthbert, Southgate, showed a pretty group of *Astilbes*, namely, *W. E. Gladstone*, *H. Witte*, *Professor Suringar*, *Dr. Cotte*.

A fine group of *Begonias*, *Gloxinias*, and cut flowers, staged by Mr. H. J. Jones, Lewisham, was awarded a silver Flora medal. Among the cut flowers were *Peony officinalis*, *anemoidora*, *Spanish Irises*, *Spirea palmata*, &c.

Messrs. J. Veitch & Sons exhibited an excellent group of *Gloxinias*, which obtained a silver Flora medal. Among other varieties were *Seraph*, pink; *Mephisto*, purple; *Monarch* and *Empress of India*, crimson.

Several plants of a new yellowish white *Carnation Lady Gerard* was sent by Lord Gerard, Ashford, Kent (gardener, Mr. Walters). Mr. F. W. Moore, Glasnevin, Dublin, sent a white *Peony*, a cross between *Emodi* and *officinalis*. From Sir Trevor Lawrence, Bart., Bafford, Dorset, came *Peony*, *Mr. W. Bain*, came blooms of *Syringa Bretschneideri*, and also of *Anthurium Lawrencei*, a fine white form.

Mr. S. Bide, Farnham, sent a new pale yellow *Calla*, *Primrose League*. A good pink *Carnation Fanny Wilcox*, came from Messrs. Cutbush & Son, Bighgate. A basket of a pretty *manve Senecio*, *S. lilacinus*, was sent by Messrs. Paul and Son, Cheshunt. Messrs. J. Laine and Sons exhibited three fine double *Begonias*, namely, *Miss Gattie*, pink; *Lady Plowden*, salmon; and yellow gem. Some large *Poppies*, *Admiration*, *A. W. Chilly*, Devonshire Lass, *Victory*, *Attraction*, and *Exmouth Gem* were shown by Mr. W. J. Godfrey, Exmouth, Devon.

Messrs. Kelway and Son, Langport, Somerset, exhibited a bright pink tree *Peony*, *Her Majesty*, a double herbaceous *Peony*, *Sir George White*, and *Pyrethrum*, *Lady Randolph Churchill*.

Messrs. J. Veitch and Sons, Chelsea, showed a stand of their lovely greenhouse *Rhododendron* hybrids; they also had two fine *Gloxinias*, *Miss Topsis*, white, and *Rosina*, pink; *Pyrus coronaria* fl. pl., and *Deutzia crenata*.

Mr. H. J. Jones, Lewisham, showed some handsome *Begonias*, namely, *Gunney Russell*, *Albion*, *Catherine Shackleton*, *Mrs. J. Powers Mallis*, and *Mrs. E. Kruss*.

FRUIT COMMITTEE.

There were some splendid exhibits before this committee. Messrs. Sutton and Sons' vegetables, Rivers' Nectarines, and one new Strawberry being especially fine.

An award of merit was given to Strawberry, Laxton's Trafalgar, a beautiful fruit, of delicious flavour, and a cross between Latest of All and Frogmore Late Pine; it is a light-coloured fruit, wedge-shaped, solid, and partaking of the British Queen flavour.

Messrs. Sutton and Sons, Reading, staged a remarkably good lot of Peas in pots in a growing state. Potatoes in boxes with a glass front to show their tubers, and a new *Cucumber*, grown in pots, named *Lord Roberts*. The latter in appearance resembles the *Telegraph*, but is darker in colour, very prolific, and also handsome as regards its length and shape. No award was given, as some of the fruits were very near the parents in appearance. In this collection were grand dishes of the new *Winter Beauty Tomato*, a splendid new *Potato* called the *May Queen*, and having large tubers, also the *Ninetyfold*, *Sutton's Ashleaf A1*, a round, beautiful tuber, and *Sutton's Harbinger*. Peas in pots were really grand, the kinds were the well-known *Early Giant*, a splendid *Marrow*, *May Queen*, one of the best of the dwarf section, *Empress of India*, and *A1*. The plants were in 12 inch pots, and were laden with pods. A silver-gilt Knightian medal was awarded.

Messrs. Rivers, Sawbridge-worth, staged some of the finest Nectarines ever seen, the varieties being *Cardinal* and *Early Rivers*, twelve fruits of each, and certainly they well merited the silver-gilt Knightian medal awarded them.

Mr. Leopold de Rothschild (gardener, Mr. Hudson), Gammersby House, Acton, also sent a remarkable exhibit of Nectarines in three varieties, and though smaller than those noted above, the fruit was very fine. The varieties staged were *Early Rivers*, *Cardinal*, and *Lord Napier*. A silver Knightian medal was awarded.

The Right Hon. Lord Aldenham, Elstree (gardener, Mr. Beckett), also sent a splendid box of *Lord Napier Nectarines*, beautifully coloured and of large size; these well merited the silver Banksian medal bestowed on them.

Messrs. Laxton Brothers, Bedford, sent four baskets of Strawberries, splendid fruits, the varieties being *Mentmore*, *Fillbasket*, *Leader*, and a new variety of great value, not yet in commerce, and a few pots of the new *Trafalgar*. This exhibit was much admired and received a silver Banksian medal.

BATH AND WEST OF ENGLAND SOCIETY.

ONE of the most popular features of the exhibition of the Bath and West of Southern Counties Society is the flower show, which is generally of small extent, but always varied, and characterised by great taste in the arrangement of the exhibits. The gathering at Bath formed no exception to the rule, and the flower tent was crowded during the greater part of the five days on which the show was open. The plants and cut blooms were arranged around two sides of the tent on stages. At one end was a splendid collection by Messrs. George Cooling & Sons, and the centre was devoted to noble groups of plants by several exhibitors. Altogether the effect was most pleasing. Messrs. Garraway, of Clifton, made a speciality of *Petunias*, *Cacti*, and foliage plants, and Messrs. John Laing, of Forest Hill, staged a large number of *Begonias* (including representatives of the small bearded or crested section), *Caladiums* and *Crotons*. Messrs. Paul & Sons, Cheshunt, collection of *Alpines* and hardy plants in pots came in for a large share of attention. They included *Saxifrages*, *Phlox*, *Adiboroughensis*, *Sedum ternatum*, *Ambrieta Frobelli*, *Armeria Lauchea*, *Erodium*, *Globe Flowers*, *Anemones* and *Gemm* *miniaturum*, all in splendid condition. The firm also showed in the centre a number of *Roses*. The most imposing collection naturally came from a local nursery, Messrs. George Cooling & Sons, of Bath, making most effective use of the large space allotted to them. At the head of the tent was a bold arrangement of rockwork, while climbing *Roses* (*Crimson Rambler*) covered pillars and peeped out from among foliage plants. Large masses of *Azalea mollis* were given a foreground of Japanese Maples and smaller plants, while the flank was filled up by a number of extremely well-grown large-flowered *Clematis*. Messrs. Cooling also staged many Ferns and fine foliaged plants, including *Dietyocranna japonica* variegata, a basket of *Adiantum rhodophyllum* (a fine bold Maiden-hair), *Pteris Victoria* and *Osmunda palustris*. Messrs. Kelway, of Langport, made a special feature of *Pyrethrums*, and tree and herbaceous *Peonies* of very brilliant colours, Mr. E. Hooper, of Bath, of *Roses*, *Ferns*, and *Iris*, and Mr. Walters, Bath, of *Pelargoniums*. Messrs. William Cutbush & Sons, of Bighgate, in the centre, in addition to *Yellow Arums*, *Heaths*, and *Peonies*, showed a collection of *Carnations*, one variety of which (*Baldwin*) attracted considerable attention on account of its vigorous growth and evident good qualities. It is a variety to be desired. Near at hand were Messrs. R. Veitch & Son, of Exeter, whose exhibits comprised the white *Ranuncula pyrenaica*, a new double variety of *Pouladelphus* (*Bonle d'Argent*), *Genista Andreana* (which by the way always figures prominently at the Bath Show, and comes in for much admiration), *Eremurus himalaicus*, *Senecio*, *Heritieri*, *Calceolaria violacea* and Fortin's variety of the *Lily of the Valley*, with blooms of great substance.

BRISTOL GARDENERS' ASSOCIATION.

THE opening meeting of the Summer Session was held at St. John's Parish Room on Thursday, May 21. Mr. G. Brook presided over a large attendance. Mr. W. J. Hockey, of Yatton, was the lecturer, his subject being "The Kitchen-gardener and what is expected of him." In a clear and concise manner he described the most suitable position for a vegetable garden, the soils best fitted for vegetable culture, with the best methods of treating it, advocating good drainage, trenching, effectual manuring, and an abundant supply of water laid on. With regard to manuring he insisted strongly on the advantage of some knowledge of

chemistry to gardeners, especially in the use of chemical manures. He also advised all to keep a complete diary of all their operations for reference as well as comparison of one season's results with another. He claimed for kitchen gardening that it was the highest point in the gardener's operations, and urged the constant endeavour to secure the best possible results. A short discussion followed and Mr. Hockey was heartily thanked for his attendance and lecture. Prizes were offered for three cabbages and brace of Cucumbers. Those for the former being secured by Messrs. Ross and Benfield, the latter by Messrs. Hutton and Marshall. Certificates of merit were awarded Messrs. Ross and Shaddick, each for a *Cyripedium barbatum*, Mr. Thoday for Carnations and Gloxinia, and Mr. McCulloch for a collection of Zonal Pelargonium blooms. A feature of the exhibits was a collection of several varieties of Lilac bloom shown by Mr. E. Poole, F.R.H.S., gardener to Lady Cave, Cleve Hill, Downend.

THE SUMMER SESSION.

Meetings held at St. John's Parish Room, Redland, on the last Thursday in each month, at 7.30 p.m.: May 31, "The Kitchen Gardener and what is Expected of Him," Mr. W. J. Hockey, Yatton; June 25, "The Culture of Strawberries in Pots," Mr. W. Staddon, Westbury-on-Trym; July 26, "Sweet Peas," Mr. J. C. House, Coombe Nurseries; August 30, "The Herbaceous Border," Mr. W. Ellis Groves, Redland; Sept. 27, "The Advantages to be Derived from the Study of Horticulture," Mr. J. H. Vallance, Redland. Prizes will be awarded at each meeting.

THE WHITSON MANCHESTER EXHIBITION.

A full report of this important show will appear next week.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS

Questions and Answers. *The Editors intend to make THE GARDEN helpful to all readers who desire assistance, on matters of the household gardening nature, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITORS OF THE GARDEN, 20, Tottenham Street, Covent Garden, London. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used on the paper. When more than one query is sent, each should be on a separate piece of paper.*

Names of Plants. *Miss Veranda Louceira in-volverata.* *Cucurbitaria.* The plants are both the same, namely, *Saxif. purpurea*, but they may be from male and female plants.

KITCHEN GARDEN.

Markbey (A. K.). The vegetable is without doubt Good King Henry (*Chenopodium Bonus Berriens*). We read in Joins "Flowers of the Field." The leaves are used as Spinach, and the plant is cultivated in Lincolnshire under the name of Mercury. This would account for Markbey, no doubt a corrupted form of Mercury.

Egg plants (D. F. R. E. D.). You may put your Egg plants out on a warm border if you wish, and if they be fairly strong now they may fruit there better than if kept in pots, unless you can give them constant attention. But to secure good well finished fruits the plants will be best if you can shift them into pots 6 inches in diameter at least, and even a little larger may be desirable using a compost of turfy loam three parts, the rest being old, hot-bed manure, leaf soil, well decayed, and sand. Once well rooted in such pots the plants will need water once a day. Stand them in ample light and air and see that if insects appear on them they are washed off by syringing the plants. The fruits are usually cooked by string them then tying in butter. Next year obtain seed of the long purple Aubergine as well as of the white one.

Chicory (F. M. B. S. E.). You express surprise that this valuable winter vegetable is not generally grown. We agree with you, but yet are not surprised as our British public is very singular in its tastes and does not at all feel disposed to patronise a product, however good, because it is popular in France or elsewhere. Yet Chicory is easily grown from seed in the spring if sown in drills 4 inches apart in good soil, the plants being thinned in the rows to 10 inches, to enable the long tapered roots produced to become strong. When the leaves are down the roots can be lifted, and put a few at a time into a dark warm place in soil, and watered, will soon produce blanched leaf and stem heads 6 inches to 8 inches long that can be either eaten as salad or stewed, making a capital cooked dish. The best variety is that known in commerce as the Whitloof.

Obtaining Asparagus (E. V. E.). For obvious reasons we do not from recommending individual nursery men, but we note that the leading firms advertise the seed of Argentinian Grand Asparagus if they do not offer the roots. Seeing the difficulty you have experienced in procuring the latter, and also that the season is now almost too far advanced for transplanting Asparagus successfully, why not buy the seed of the variety you require and sow it at once. If sown thinly on deep rich ground, strong roots will form during the coming season and if these are well thinned throughout the summer and carefully planted in properly prepared trenches next April you will find you have not lost much time and probably your own raised seedling transplanted carefully direct from the seed bed to their permanent quarters would overtake older roots which perhaps have been

out of ground some time and retarded for sale. Buy the seed at once from a reliable firm, so as to get the true variety, sowing it for a couple of hours in tepid water, and sow very thinly in drills 1 foot apart. This will allow plenty of room for root extension during the summer, and the ground between is more easily kept free of weeds than when thick, broadcast sowing is resorted to.

FRUIT GARDEN.

Beetles and fruit tree blossom (F. P. ARCHBOLD). The beetles attacking the blossoms of your fruit trees are nearly allied to the cockchafer, their scientific name is *Tropinota hirtella*. I have never been in Rumania, and am unacquainted with the habits of these insects, but if they are the same as those of the cockchafer, they might be shaken from the trees during the day, when they are somewhat sluggish and would fall to the ground, where they might be swept up or caught on sheets, tarred boards, etc. If the trees are quite small they might be protected by netting which would prevent the beetles from getting at the blossoms. I do not see that any insecticide would keep them away as it would be impossible with safety to apply them to the flowers. The grubs of these beetles feed on the roots of plants, but they would probably be very difficult to destroy even if you could find out where they were, for insecticides become so weak after passing through an inch or so of soil that they are practically harmless. G. S. S.

Gooseberry bushes and grubs (W. S. TILLET). Your Gooseberry bushes are infested by the grubs of the Gooseberry saw fly (*Nematus ribesii*). Many different methods have been tried with more or less success for destroying this insect. A very effectual way is to give the bush infested by them a sharp sudden shake, as this will generally cause many to fall, when the back of a spade will make short work of them. Those that do not fall should be picked off by hand or the bush might be shaken again. Dusting the bushes whilst they are wet with dew with sulphur, road dust, or in fact any fine powder is very useful. Some poisonous ones like powdered white hellebore, or Paris green are much recommended, but they cannot be prevented from getting on the fruit, which may be dangerous. Various washes would have a good effect in killing the grubs but the fruit would be spoiled. When the grubs are full grown they bury themselves about 3 inches below the surface of the ground, and become chrysalides, in which condition they remain until the following spring, if therefore during the winter the earth containing the chrysalides be removed, burnt, buried not less than 1 foot deep, or placed where poultry can scratch it over, there will be no saw flies the next spring to lay their eggs on the young leaves, and your bushes will not be attacked again unless some flies bred on a neighbour's premises visit you. If everyone in a certain district would agree together to adopt this plan, the pest might be practically stamped out in that neighbourhood. G. S. S.



WINTER CHERRY.

culture is high and soil rich than where it is hard and almost poor. Trees raised from seed stones, and not later budded or grafted, seem to suffer less from this trouble than do worked or budded trees. We have found less trouble when the soil contains a good deal of mortar rubbish, wood ash, and fine crushed bone as manure, the soil being made quite firm, than where it is of the ordinary light garden border order. You will have to cut out the dying branches.

FLOWER GARDEN.

Hepatica leaves (F. A. S.). There is nothing remarkable about the leaves sent; they are ordinary forms of the common Hepatica. Both wild and in cultivation they are sometimes plain and sometimes marbled, and in a wild state the colour of the flowers varies from white to full blue and occasionally pink. The leaves also vary in shape, the lobes are often much rounder. But all the varieties, single and double of this class of garden Hepatica, came originally from the wild European plant *Anemone hepatica*.

Increasing Aubrietias (Mrs. E. L. E.). It is quite easy to make a stock of Aubrietia by dividing in the autumn.

As soon as the bloom is over, cut the plants right down. In autumn (middle or end of September) they have only to be pulled in pieces and replanted. Any tufts that seem specially good should be saved for seed, and the seed sown either as soon as ripe or early the next spring. The Pansies should be treated as proposed, i.e., cut down after blooming, and cuttings made of the young growths.

Columbines (FAUSTA). The flower sent by you is of no species, but is from one of the seedling hybrids, now so plentiful, that have resulted from the original crossing of *Aquilegia chrysantha*, yellow; *A. cerulea*, blue and white; *A. Skinneri*, red and yellow; and other species. The original crossing was made some years ago and it has been followed in other directions, so that now they are not only stocking these plants everywhere, but they have developed great variety in coloration, almost all are of two colours, and all have the long spurs and light elegant appearance that characterises the flowers of the original parent. Seed is cheap, and should be obtained and sown at once in shallow pans or boxes as it germinates badly outdoors in hot dry weather. The plants thus raised being quite hardy may be planted out in September, and they will bloom profusely and most charmingly for several successive years.

Fancy Pansies (J. F. C.). The huge and finely blotched Pansies you refer to are grown in certain nurseries in various parts of the country, expressly for market sale, and constitute, without doubt, the finest strain in cultivation. Myriads of these plants sold in the market at 1s 6d. per dozen, equal the finest named varieties. The strain originated in Belgium, and were, when first introduced here, termed Belgian Pansies. Now they are generally known as Fancy Pansies to distinguish them from show or bedding Pansies, none of which have the large deep blotches which mark the strain we refer to. If you find difficulty in obtaining seed why not purchase a couple of dozen of the plants, and putting them out into a shaded place and in good soil, seek to obtain a few pots from them. But it is not easy to get the strain to come so fine in gardens, as the market places are dibbled out into cold frames and in very rich soil in the autumn to stand the winter.

W. E. Harrison (Waverley). The Thalictrum is *T. aquilegifolium atropurpureum*. It is among the showiest of its tribe. It is well known to cultivators of the best hardy flowers, but is certainly none too plentiful in gardens, though we scarcely know why. "Feathered Columbine" is a capital name for this section of the Meadow Rue family. The creeping blue flower is *Lithospermum prostratum*, which in certain districts is not happy, and in particular where the plants are in touch with badly drained or poor or heavy soil. If you could plant some fresh young plants on a raised piece of rockwork where the roots could descend into a narrow and deep fissure between rock or stones, while the tops could overhang the stones and otherwise enjoy something of a shady position, there is hope for greater success. Now and again we see the plants quite happy on very opposite formations, so that it is not easy to deduct from such what its real likes or dislikes may be. Yet we are assured that partial overhead shade is well-nigh essential, and coupled with this a sandy and rich loam, where extremes of dryness are out of the question, equally by the depth of soil afforded as by the position above suggested. With almost constant cooling shade we have seen this plant on the lightest of soils a perfect carpet of verdant green studded with its lovely flowers, of indescribable blue. Then it is worth growing. Strong sun-heat and dryness combined are the greatest enemies to its progress; growing plants may be pruned with impunity, as the plant will break quite readily from old shoots.

Double Spring Flowers (AMATEUR). It is an old fancy of yours to wish to have a collection of hardy double spring flowering plants. The list of these is not an extensive one. Still, we can help you to a few which you may not have. There is the new double white *Arabis*, quite hardy; so also is the double yellow *Alyssum saxatile*. Then, not commonly known, and little grown, is the double white flowered *Saxifraga granulata*, and still less known is the double *Candamine patensis*. To these may be added the well known double Primroses, double white wood Anemone, white pink, and deep red Daisies, the dwarf double yellow Wallflower, Harpur Croze, and to add to these something of rich perfume there are beautiful double intermediate Stocks, which, raised from seed sown at the end of July, grown up in pots in a frame, and planted outdoors in April, make fresh bedding plants.

TREES AND SHRUBS.

Judas trees flowering anywhere (A. K.). We are unable to throw any light on this except to point out in the well-worn misquotation from Dr. Watts, "For 'tis their nature to."

Correction. We much regret that in our last issue, at p. 281, a note describing *Leucjum vernum* and an illustration showing *L. aestivum* were unfortunately put together. Eds.

FORTHCOMING EVENTS.

- June 13. York Floral Fete (three days).
- " 18. Royal Agricultural Show at York (five days).
- " 19. Royal Horticultural Society's Show at the Drill Hall, Westminster.
- " 27. Royal Horticultural Society's Show at Richmond in connection with the Richmond Horticultural Exhibition.
- " 27. Salisbury (N. R.S.) and Southampton.
- " 28. Canterbury, Colchester, and Isle of Wight (Ryde).
- " 30. Maidstone and Windsor.

THE GARDEN.

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[JUNE 16, 1900.

PRESERVING THE BEAUTY OF OPEN SPACES.

THESE are many in England who feel that places of beauty belonging to the State that are accessible to all, whether of enclosed public park or wild nature, should be under the authoritative protection of persons of the highest taste as well as of the most able administrative ability.

An extract from a letter we have lately received from the honorary secretaries of the Hampstead Heath Protection Society expresses this feeling in these words:—"The want of some artistic authority in England, such as the French Minister of Fine Arts, is deeply felt by lovers of natural beauty. Lord Leighton often urged the necessity of this. The New York Art Commission is therefore an interesting study.

"We have found the enclosed extracts from an article by Mr. Samuel Parsons in the *The Outlook*, May 7, 1898, have interested all those to whom we have pointed them out.

"People have come fully to recognise that pure air, rest, and quiet, combined with country sights and sounds, are the choicest possessions that a park can have.

"The standard of the design and management of New York parks is high, and the ideal is one that the public is determined to sustain.

"Under the new Charter this high ideal is carefully provided for. The importance of thoroughly supported and fully equipped artistic control is, in the first place, recognised by the appointment of a landscape architect, who can veto the construction of anything in the parks down to the smallest detail. No planting, gardening, erecting of fences, buildings, roads, or walks can be done if he objects.

"The Board may remove him; but while he retains the confidence of the public, abstains from politics and self-schemes, few boards will attempt to displace him.

"But so important have the framers of the Charter deemed this artistic control that they have gone even further than the establishment of a landscape architect of wide and dominant powers.

"They have created an entirely independent body in the Fine Arts Commission, that can veto any memorial or commemorative artistic construction undertaken by the Park Board, and, be it remembered, the Park Board cannot remove them. In other words, they are equal in power to the Park Board or any member of that body.

"They are chosen in this manner: The Federation of Artists' Societies of New York consists of delegates sent by each of the ten or twelve art organisations of the city to the Central Society or Federation.

"This Federation is empowered under the Charter to name three painters, three sculptors, and three architects, as well as nine lay members, who, with the Mayor, the President of the Metropolitan Museum of Art, the President of the Public Library, and the President of the Brooklyn Institute of Arts and Sciences, shall constitute the Fine Arts Commission.

"This Commission has absolute power over all memorial or commemorative structures, whether in sculpture or architecture, and on request of the Mayor a veto power may be exercised by the Commission over any object of art, be it sculpture, architecture, the arrangement of grounds, walks, roads, or planting.

"If citizens, therefore, find that the Park Commission is exercising its functions in a manner prejudicial to the parks, and the landscape architect is remiss in his duty, they may petition the Mayor to secure an opinion from the Fine Arts Commission, which will be final."

Mr. Parsons writes further thus to the honorary secretaries of the Hampstead Heath Protection Society:—"My belief in the principles which have governed the design and construction of New York parks has been the source of many strenuous struggles against the attempt of more or less well-meaning but ill-instructed citizens to destroy characteristic natural beauties, the presence of which was of more importance to the beauty of the city than all the French and Italian sculpture and architecture that the art of America of Europe can produce. It is only lately that we have been delivered by good fortune from a soldiers' and sailors' monument in the form of an ancient temple of Vesta, which was intended to take the place of a great rounded glacier-riated rock, 40 feet high and 150 feet broad, whose existence was to be obliterated for the sake of this bit of classicism, inspired by the Ecole des Beaux Arts of Paris.

"For me, gardening has no value whatever if it destroys, except for actual positive comfort and convenience, an atom of the essential and inherent natural charm of the territory.

"Within the last six years we have organised in New York State a Society for the Preservation of Scenic and Historic Objects which must resemble your National Trust for places of Historic Interest or Natural Beauty. Our

society has been so incorporated under the laws of the State as to enable it to hold property and accept deeds of trust. Already the New York State Government has placed under our charge Stony Point on the Hudson, a distinguished battle-ground and a territory of great and impressive beauty.

"We fought effectively for the preservation of the great rock from the Temple of Vesta, and are now assisting with all our power to save one of the grandest pieces of natural scenery in the world, the Palisades of the Hudson, from the inroads of the quarrymen, for a great City and State park.

"There are many legal and other difficulties in the way, and we have already had and will doubtless yet have much discouragement; but we are going, by hook or by crook, to succeed.

"My work in landscape gardening takes me all over the American States, and I am happy to be able to testify that the education of people to save natural beauties is rapidly advancing in this country, and it gives me pleasure to learn from you that the good work is going on also in England."

THE EDITORS' TABLE.

THE WILD LADY'S SLIPPER (*CYPRIPEDIUM CALCEOLUS*) FROM IRELAND.

MR. F. BEDFORD, Straffan House, Straffan Station, County Kildare, sends us flowers of the pretty *Cypripedium calceolus*, fast becoming extinct in the British Isles, and our correspondent mentions that "it is only to-day that I found out that the flowers were very sweet-scented, my reason for sending them." We are always pleased to receive such precious native flowers as these, and this *Cypripedium* is more beautiful in colour than many of the tender species and hybrids so numerous in our gardens. The flowers were very fragrant, reminding one of the Primrose, a delicate and distinct perfume.

PERNETTYA MUCRONATA.

The enclosed flowers will show that in addition to being a most valuable berry-bearing plant, the *Pernettya* is well worth a place in the garden as a flowering shrub. A. K.

[The spray sent is loaded with the pretty little white waxy bells in closely-clustered spikes so ornamental in shrubs of this family. They are all the more conspicuous because the $\frac{1}{2}$ inch long arching flower-stalks and the calyx are of the same waxy white colour. Eds.]

ANEMONE KING OF SCARLETS FROM LINCOLNSHIRE.

We doubt if there is a richer scarlet flower in our gardens than the double variety King of Scarlets, which Mr. John T. Gilbert, of the

Anemone Nurseries, Dyke, Bourne, sends us. The flowers are quite double, a solid mass of florets, and of intense brilliancy. A bed of this variety in the full sun must be almost painfully bright.

CALOCHORTUS PULCHELLUS.

MR. GILBERT also sends flowers of this pretty yellow Calochortus "now in full bloom in the open air, the bulbs having been planted last November; they received no protection whatever during the winter."

SWEET PEAS FROM IRELAND.

FROM Mr. Hartland, of Cork, comes a gathering of Sweet Peas, representing varieties of good colour, and obtained from seed sown in the autumn.

BLUE CORNFLOWER.

MR. HARTLAND also sends for our table flowers of the Blue Cornflower (*Centaurea Cyanus*) gathered from the open air. Our correspondent mentions that the "seed sows itself each autumn."

BOOKS.

Notes of Observations of Injurious Insects during 1899. Miss Ormerod has recently published her twenty-third annual report of injurious insects, which is the first report of the second series. In her twenty-second report she mentioned that she was going to commence a second series with the next report, and that she hoped "to continue to publish yearly results, but with a little difference in the plan." The inconvenience to those who wish to consult a work of this description in dividing it into two or more series is very considerable, and such a division should not be made without some very good reason, such as really altering the style of the publication, or perhaps changing the size of the paper, but in this instance there is no reason of this kind. The report under notice is exactly similar to its immediate predecessor in outward appearance. It contains, it is true, fifteen pages more matter, and the arrangement and style of the contents are just the same, except that at the end, under the heading of short notices, four different insects are reported on, the notice of each being over a page in length; but these might just as well have been incorporated in the body of the report. After the usual index an index is given of the plants mentioned in the report and the pests that feed on them, which is very useful, and an index to unclassified hosts. Twenty-nine pests are noticed in this report, of which seven have not been mentioned in these reports before; but out of the seven three injure flour and grain, and one, the cheese and bacon fly (*Piophilæ casei*), injures cheese and bacon. The three pests that are injurious to plant life are the "Spinach" moth, whose caterpillars attacked some Red Currant bushes at Wellingborough and fed upon the leaves, doing considerable damage. The caterpillars are about 1 inch or rather more in length, and are of a bluish-green colour. The mottled Willow weevil (*Cryptorhynchus lapathi*). The grubs of this weevil tunnel into the shoots and branches of Willows, and were found doing considerable damage to Willows at Bexhill, Sussex. The weevil is about one-third of an inch in length, mostly black in colour, but with the sides of the thorax, a somewhat V-shaped band near the base of the wing cases, and the ends of the wing cases yellowish; the grub is whitish and about half an inch long. The snail slug (*Testacella haliotidea*) finds a place in these reports for the first time. It is a curious creature in many ways, but is by no means uncommon in various places; it may easily be

known from any other slug by having a small, somewhat ear-shaped shell close to the end of its body. It is also remarkable from being carnivorous, feeding chiefly on earthworms, but also on other slugs and snails, so that they are well placed in this report under the heading of "Beneficial." A full-grown specimen may measure as much as 3 inches in length; they vary in colour considerably, but are generally of a yellowish-brown, mottled with a darker colour. They may often be found at the roots of plants or under dead leaves. Another curious creature is also reported on for the first time, one of the flat worms or ground planarians (*Bipalium kewense*). These worms appear to be entirely carnivorous. The species reported on by Miss Ormerod is sometimes found in greenhouses in this country, but it has undoubtedly been introduced. There is a much fuller account of these creatures in the second volume of "The Cambridge Natural History" than in Claus and Sedgewick's "Text Book of Zoology," quoted by Miss Ormerod. Several pages are again devoted to the Hessian fly, but only one report was received of its presence, and that was from the neighbourhood of Marlborough. It appears that there were more enquiries than usual about the attacks of wireworms, and some experiments in trapping these insects or rather the parent beetles were made in Kent, and it was found that numbers of these insects can be caught in Hop gardens by laying tiles about under which the "Click beetles" hide themselves. If this be the case in Hop gardens there is no reason why it should not be available in other places. The Pear gnaw midge (*Diplosis pyrivora*) seems to be a pest that is becoming more frequent in this country. Why this insect should be called a "gnaw midge," when it is neither a gnaw nor a midge, is curious. It is, however, not altogether unlike one in general appearance, but then there is no reason or sense in giving it both names; on account of its small size the term "midge" is the more appropriate of the two. Full particulars are given as to the best means of destroying this pest, which are, gathering the fruit that has been attacked, or if the tree be too large, shaking them down and collecting them; they should then be at once burnt. The object is to destroy the fruit before the grubs leave them to bury themselves in the ground. If it is probable that many have done so the earth under the trees should be dug in the course of the winter or autumn, and the surface turned well down so as to bury the chrysalides so deep that there is no chance of the flies being able to make their way to the surface, or the ground should be given a good dressing of "kaimit." Among the short notices at the end of the report a receipt is given for a caustic alkali solution for spraying fruit trees with in the course of the winter. I cannot help thinking that some mistake has been made as to the ingredients, which are equal parts of caustic soda and caustic potash, the action of these two chemicals being, I believe, almost identical, and the caustic soda being much cheaper than the caustic potash, there seems to be no object in adding the latter instead of a double quantity of the former; the usual receipt is 1 lb. of caustic soda, 3 lb. of pearl-ash (carbonate of potash), mixed together in one gallon of water, and when all is well mixed add nine gallons of water and then stir in 10oz. of soft soap that has been already dissolved in a little hot water. This report, as usual, contains a large amount of valuable information, but it is very difficult to find any particular point that one wants to refer to.

G. S. S.

Cyclopædia of American Horticulture.—This is naturally of more interest to American than British horticulturists, but it is a work we are pleased to see, and a record of great research, for the object has been "to make a complete record of the status of horticulture as it exists in North America at the close of the nineteenth century." The work discusses the cultivation of fruits, flowers, and garden vegetables, describes

"Cyclopædia of American Horticulture. By L. H. Bailey, Professor of Horticulture in Cornell University, assisted by Wilhelm Miller. In four volumes, price 25s. each. First volume A-D.

all the species which are known to be in the horticultural trade, outlines the horticultural possibilities of the various states, territories, and provinces, presents biographies of those persons not living who have contributed to horticultural progress, and indicates the leading monographic works relating to the various subjects. Judging from the first volume, we think the editors will fulfil the task they have set before themselves, and certainly to all interested in horticulture the book is important and instructive. It is freely illustrated, clearly printed, and well bound.

Amateur Rose Culture.*—This pamphlet contains the experience of a successful amateur grower of Roses, who in the preface says: "In submitting this little treatise in book form I am actuated solely by the desire to give some simple but useful information, which I trust may prove of assistance to beginners and to those who desire to grow Roses in a manner which will prove satisfactory to themselves, and worthy of the beautiful flower in question. It originally appeared in *The Rosarian*, edited by the Rev. H. D'Oubrain, hon. secretary of the National Rose Society. It is at the request of many friends that I have decided to publish it in a separate form, and I hope it will prove useful." There are so many amateur Rose growers that no doubt the information set forth will be much valued; it is quite simple, as may be judged from the following quotation upon "How to Prepare the Rose Bed":—

"Many growers and exhibitors of Roses go to great expense in the preparation of the bed. No doubt this is the right thing to do, and to those to whom expense is no object, I would say, by all means prepare the best bed you possibly can; but I want to show that when the conditions are at all favourable this expense is by no means a *sine quâ non*; on the other hand, provided due care is exercised in selecting hardy types of Roses when planting, even where the soil and other conditions are not favourable, a very considerable amount of success may be obtained without any expensive preparation beyond thorough trenching and manuring. In my own case my only preparation has been thorough digging and manuring; but I admit that I have a very suitable garden for Rose growing. For the information of those who think that an expensive and elaborately prepared bed is an absolute necessity, I may here state that although I have about 1,250 trees, and being a busy man my time given to gardening is limited to a few hours before breakfast (except in the month of June, when I take my holiday), I do most of the work myself, as I only keep one man, and the remainder of the garden requires most of his time. All the work he does to the Roses is under my own supervision. My own success, I think, conclusively proves that good Roses can be grown without going to great expense in preparing a bed. One of the most essential things is to have good drainage. Rose roots like moisture but not cold toes; if the drainage is bad the young roots die and the plant flags. The bed should be trenched and prepared at least two months before you plant the trees, so that the soil may get thoroughly settled down. The manure, which should be mixed with the soil in the preparation of the bed, should be thoroughly rotten cow manure. Stable manure is good, but that from the cow-shed is better. Where the soil is clay do not be discouraged, for the Rose likes some clay, only be sure you have obtained the proper drainage. Clay is very retentive, it retains moisture, and it also retains manure; and if the clay is well broken up and mixed with your own top soil and a plentiful supply of yellow loam and cow manure, you will have an almost ideal mixture. Where there is no clay, and the subsoil is gravel, the soil is what we call 'huugry,' because it has no retentive power, and both moisture and manure quickly filter away, and great difficulty is experienced in preventing plant life from being burnt up in hot dry summers. Here let me remark that watering with hard water direct from the mains is not advisable."

"Amateur Rose Culture." By R. E. West, published by the Surrey Seed Company, Limited, Redhill. Price 1s. nett.

* Notes of Observations of Injurious Insects during 1899. By F. A. Ormerod, LL.D. Simpkin, Marshall and Co.

IN THE GARDEN OF STRATH-FIELDSAYE.

THE accompanying illustration shows the terrace garden at Strathfieldsaye, the residence of the late Duke of Wellington, whose funeral took place on Tuesday last. The house and grounds are amongst the most interesting in the county of Hampshire, and there is abundant evidence that gardening is carried out here for the enjoyment it affords. The terrace garden is bright with flowers during the summer months, and another interesting feature is a Lavender walk, whilst hardy flowers, exotics, and fruits are skilfully grown.

bushes in this fashion would make rather an ungainly hedge at first, for the lower portion of the branches would be bare of leafage; therefore I would suggest hard pruning of every alternate plant. Cut it down nearly to the ground, and some fine young growths will appear that will the second year after planting be gay with their yellow blossoms. Thus we should have in two years a hedge of yellow Roses flowering profusely both at the base and summit. Subsequent treatment would be to let them alone, merely removing a dead or overcrowded branch. Do not forget to give the bushes a little assistance in the form of liquid manure. A still further improvement to such a hedge would be to plant at intervals of about 6 feet a tall standard of the same variety. Cut back the

flora is probably nowhere better grown than at Abbotsbury, where many of the grass paths are edged with this handsome plant, whose white flower-wands often attain a height of 4 feet. Around the verge of the ornamental water, which was studded with the white, Hawthorn-scented blossoms of the Cape Pondweed, the Arums reared their snowy spathes, contrasting well with the feathery Bamboos that grow in profusion round the confines of the lakelet. One of these latter—*Bambusa Simoni striata*—was coming into flower. It has been asserted that, with regard to the flowering of Bamboos, the whole species blossoms simultaneously and not isolated examples, and that subsequent to flowering the clumps die. It will therefore be interesting to note if this proves the case in the instance of the Bamboo above cited. *Paulownia imperialis* is represented by fine specimens in these gardens, and seed has been produced from which young plants have been raised, such an event being probably unique in England. By the side of the lakelet a *Beschorneria* had thrown up a handsome spike some 7 feet in height, and in the rock garden facing the Chesil Beach many *Mesembryanthemums*, of which a splendid collection exists at Abbotsbury, were flowering with gorgeous effect, one of the most striking being the rose-coloured *M. edule*.—S. W. F.



THE TERRACE GARDEN, STRATHFIELDSAYE, THE RESIDENCE OF THE LATE DUKE OF WELLINGTON.

NOTES OF THE WEEK.

Schizanthus in Ireland. The value of the *Schizanthus* as a conservatory plant was impressed upon me recently when visiting the charmingly laid-out gardens of Sir John Malcolm Inglis, Montrose, Donnybrook. The plants were growing in 6-inch pots, and were several feet in height, the principal hues being white, with a pale tinge of blue or mauve, blues in very pale shades, also deep ones. The miniature blooms were borne in profusion, and some were finely marked. They were grouped in masses, whilst well-furnished spikes of *Gladiolus the Bride* were fittingly interspersed, the whole being edged off with *Coleus*, Ferns, and an occasional *Gloxinia*. In some lesser groups the single white *Petunia* and *Pelargoniums* were brought into requisition, setting off the conservatory to perfection. —A. O'NEIL.

Austrian Briar Rose Harrisoni. This beautiful double form of *Rosa lutea* is always welcome, coming as it does in the sweet June time, when the garden is bright with *Rhododendrons* and *Azaleas*. Even among the latter its pure gamboge-yellow flowers have no rival in point of colour. This Rose makes a grand hedge plant when well cared for. In starting, the bushes should be planted in well-trenched soil, setting them rather close together, say, about 15 inches apart. When purchased these bushes have two or three strong upright growths 3 feet to 4 feet in length. If these growths be merely tipped, shoots start out from the upper part, and the following season will blossom all over. To have all the

growths to 2 feet the first season, the subsequent growth being suffered to remain untouched, when a pretty semi-pendulous tree will be secured. —P.

Shrubs in bloom at Abbotsbury, Dorsetshire. In the early days of June the sheltered gardens of Abbotsbury Castle are bright with varied flowering shrubs, and on the 2nd of the month presented, as is the case at any season of the year, many objects of interest and beauty. Here giant *Aralias* spread their deeply-cut glossy foliage over a circumference of some yards. *Eucalypti* of diverse species exhibited the most vigorous health, some being already in bloom, as were many of the choicer *Rhododendrons*, great bushes of *Cytisus Andreanus* 12 feet in height were sheets of chestnut and gold, *Weigelas* ranging in colour from pure white through various shades of pink and rose to the deep maroon of *Eva Rathke* were in profuse flower, and *Ceanothus dentatus* formed a pyramid of bloom some 8 feet in height. *Spiraea confusa*, one of the most charming of the shrubby Meadow-Sweets, was at the zenith of its beauty, its slender sprays covered with countless ivory-white flower-panicles, while *Spiraea prunifolia* fl. pl. was still in bloom. The Judas Tree (*Cercis Siliquastrum*), with its spreading branches thickly hung with blossom to their very extremities, glowed a soft purple-pink, *Solanum crispum* was rapidly expanding its lilac-blue, yellow-centred flowers, and *Xanthoceras sorbitolia* held its long white bloom-racemes. The first white flowers were opening on widespread colonies of *Cistus florentinus*, and the pale yellow Scotch Briar, which is numerously grown, was here and there displaying a foretaste of its soft colouring. *Libertia grandi-*

for seventy-five years, and shortly to be transferred to Dahlem, near Berlin, in the vicinity of the new Botanic Garden; the Royal Institute of Pomology at Proskau, near Oppeln (Silesia); and the Royal School of Pomology and Viticulture at Geisenheim-sur-le-Rhin. The kingdom of Wurtemberg has, since 1860, possessed a private institution, the Pomological Institute of Reuthingen; and Saxony, since 1895, has maintained a School of Advanced Horticulture in Dresden. At Koestritz is an establishment for general instruction. Elementary schools of gardening are sometimes in connection with, sometimes independent of, higher grade schools; they are maintained by different confederate states, or by the government of the provinces. Prussia includes twenty-three, Bavaria five, Saxony two, Wurtemberg four, the Grand Duchy of Baden, Saxe-Weimar, and the Grand Duchy of Hesse, each one. In all these establishments instruction is given in the culture and utilisation of fruits and vegetables, &c.; moreover, instructors continue this course of training in different towns. In certain cities, such as Berlin and Leipzig, are schools of gardening for young men, who do practical work in the day; in other cases, again, in Berlin for instance, there are gardeners who themselves make arrangements for obtaining courses of instruction; often apprentices and youths attend the popular courses for the adults. In some localities they teach gardening and the cultivation of fruit trees to children in the gardens attached to their schools.

Hardy Azaleas and Douglas Pine.—In a letter from the Rev. W. P. Anderson, Winsford Vicarage, Delverton, he mentions that

he has two Azaleas now in full flower, which from their size and beauty are worthy of attention. They are at least 10 feet in height and more than 90 feet in circumference, and are a mass of golden flowers. There is also a Douglas Pine on the lawn which came from Messrs. R. Veitch and Sons' Exeter nursery some forty years ago, and is one of the largest in England; Mr. Anderson planted it when it was not a yard high, and now its girth is 11 feet at a distance of 4 feet from the ground. The Cypress also, which was purchased at the same time, is a well-grown tree, in which the wood pigeons build their nests.

Darwinia macrostegia. In the days when specimen hard-wooded plants used to occupy a prominent position at the various horticultural exhibitions, this Darwinia was generally represented, but nowadays it is rarely seen, though shown in good condition at the recent Manchester exhibition. It is a native of Australia, and forms a neat-growing, freely-branched shrub, clothed with small oblong deep green leaves. The flowers, which are borne in clusters at the points of the shoots, are small and inconspicuous, and completely hidden at the base of the large pendant bell-shaped involucre, which forms by far the most notable feature of the inflorescence, and is by many regarded as the flower itself. The bracts composing the involucre are white, streaked and marked irregularly with red. This Tulip-shaped portion of the inflorescence remains fresh and bright long after the flowers are past. Good peaty soil, firm potting, a free circulation of air, and careful watering at all seasons are essential to its well doing. It is plentifully supplied with names, being included in the genus *Genetyllis* and *Hedraoma* as well as *Darwinia*, while the specific names of *macrostegia* and *tulipifera* have been applied to it. — H. P.

Eremurus and Japanese Primulas. No doubt Messrs. James Veitch and Sons' courteous grower of the noble spikes of *Eremurus* shown at the Drill Hall could tell your readers his method of culture, which seems to have been conducted at Langley in good deep holding soil, holes for each plant having been opened, well broken up, and manured before the plants were put out. But that a good deal is due to the innate excellence of the Langley soil there can be no doubt. The remarkable growth seen on the Japanese Primulas, which formed the carpet of the group of *Eremurus* spikes, was the product of water immersion in a ditch at Feltham, where scores of these plants are thus treated. Removed from cold frames, they were a few weeks since stood in an adjoining ditch under the shelter of a low hedge on the north side. Here, with bays formed at intervals to keep the water of a sufficient depth to cover the pots, the plants I saw a few days since were growing and flowering luxuriantly. Whether owing to this treatment or to variety the colour was very rich. — J.

Large Nectarines. It will not do for anyone to assume that the huge fruits of Cardinal and Early Rivers Nectarines, shown recently at the Drill Hall, represented average size or culture. What these fruits really are under normal cultural conditions was best seen on the trees shown at the Temple Gardens by Messrs. Rivers and Son and Mr. James Hudson, from Gunnedbury House, and also by the latter grower and Mr. E. Beckett at the same time that Messrs. Rivers' huge fruits were presented at the Drill Hall. It was evident that whilst the latter fine ones were the product of quite young trees, possibly not more than two years worked, and each bearing but one or two fruits, the others were the product of trees of mature years, and carrying good crops. The latter fruits were also superbly coloured, whilst the Savoybridgeworth fruits were not. It is so important in all these matters to prevent incorrect deductions that the fullest particulars as to means of production should be stated. — A. D.

Fruit Prospects, &c., in Scotland. The prospects of superabundant crops of hardy fruits of all kinds, with perhaps the exception of Pears, were never better than this year. Apple trees in particular flowered most profusely, and though the weather was dull and cold during the whole of the flowering period, the set of fruit is

very large indeed. With the exception of the counties on the west coast, the country generally is suffering for want of rain, and where bedding-out still holds sway a vast amount of labour was involved in watering the young plants. Banksian Roses, which are somewhat shy to bloom so far north, have this year been covered with their dainty blossoms. *Choisya ternata* has bloomed unusually well, and Roses of all kinds are making extra healthy growth.

Royal Horticultural Society.—The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, June 19, in the Drill Hall, James Street, Westminster, at 1.5 p.m. A lecture on "Aquatic Plants," by Professor G. S. Boulger, will be given at 3 o'clock.

Anacyclus formosus.—This was raised from seed sent me by my valued correspondent, Mr. E. Whittall, and proves in my garden perfectly hardy in a dry border partially shaded by a Pear tree. It is certainly one of the most elegant plants of its class in foliage and flower, but is difficult to divide and seeds but little with me. I have, however, raised a few seedlings. — H. J. ELWES, *Colesbourne, Gloucestershire*

Armeria cephalotes alba.—One cannot pass this handsome Thrift without a feeling of comfortable congratulation, partly to oneself for having so good a thing in the rock garden, and partly to the plant because it has such a satisfactory air of vigorous health. Both the large white bloom and the strong tint of deep green leaves proclaim sturdy health in a way that is hardly so emphatically expressed by any other rock plant. It is about double the size of the common Thrift.

The Royal Horticultural Society and Election of Fellows. At the last meeting no less than 116 Fellows were elected, which establishes a record, and is a sign of its great prosperity; perhaps, also, of its go-ahead policy. We are a conservative nation, but we hope this spirit will not prevail to the extent of making this splendid organisation an organisation of flower shows, held in an elaborate and expensive hall, which will, we fear, be the home, not merely of the Royal Horticultural Society, but every horticultural society which has its gatherings in London. This is one of the best ways to obliterate a society which should be national in every sense, and represent horticulture in all its branches in this country.

The Persian Lilac. I enclose herewith a photograph of a splendid specimen of this most desirable flowering shrub, which has been much admired from its most profuse bloom. It is backed by two fine specimens of the upright "Florence Court" Irish Yew, and has for neighbours in the group on one side a large bush of common Barberry now covered with its small yellow blooms, and later on a mass of scarlet fruit, on the other *Spiraea prunifolia* fl. pl., whose white wreaths contrast beautifully with the Lilac mass; this plant in the autumn gives a splendid show of bright crimson leaves on its graceful branches, thus prolonging from one season to another a beautiful bit of colouring, and this without the constant care that smaller and less hardy plants demand. — J. H. POE, *Riverston, Nough, Ireland*.

[A very pretty photograph was kindly sent by Mr. Poe, but unfortunately too small to reproduce. — Eps.]

Addition to the Edinburgh Botanic Garden Library. There has lately been added to the books in this library, through a legacy left some years ago by Mr. John Hope falling due this year, the botanical works which belonged to his ancestor, Professor John Hope. Dr. Hope succeeded Dr. Alston as King's Botanist for Scotland in 1761. The Botanic Gardens at that period occupied a small piece of ground now covered by part of the Waverley Railway Station. In a work by Dr. Alston it was designated "Hortus Medicus Edinburgi" and was known popularly as "The Physic Gardens." In an Index Plantarum (1749) only 103 species are named and described. Dr. Hope was instrumental in obtaining more suitable ground in Leith Walk for the gardens, where they remained till the year 1822, when they were removed to the site they now occupy in Inverleith

Row. Dr. Hope was a member of numerous learned societies, a friend of Linnaeus and other scientists of the eighteenth century, and it is understood his botanical library was a rare and valuable one. The University of Edinburgh also benefits in its library from the same legacy. Miss Frances Hope, so well known to the gardening world in the sixties and seventies, was a sister of the late John Hope, and many will remember it was mainly through her that *Helleborus altifolius* and *H. angustifolius* were widely distributed throughout the country. She was also, if not the first, at least one of the earliest, to revive the culture of the single Dahlia.

Clematis montana.—I was asked to have one of my Clematises photographed, and I send a view of a small portion of it. This enormous plant has taken possession of about 20 yards of old garden wall, covering up the rampant Irish Ivy with its long trailing growths, mounting to the top of a chimney on an adjacent garden house, sheltering from spring frosts a large *Cydonia japonica* (the old scarlet) and almost bullying to death a strong growing old Rose "Anna Alexieff" that dared to dispute its progress. Its numerous starry flowers made quite a "milky way" along its rough old wall, and I thank it for keeping the troublesome, greedy Ivy a little in subjection. I only wish I could induce *Clematis Jackmani* and its relations to grow as it does, but something in my soil is distasteful to it; it cannot be lack of nutriment, for they get plenty of it. — J. H. POE, *Riverston, Nough, Ireland*.

[We thank Mr. Poe very heartily for the photograph, but, as in the case of the Persian Lilac, it is, unfortunately, too small to reproduce. — Eps.]

Sale of Japanese dwarf fruit and forest trees.—The sale of the late Dr. Hart's collection of Japanese dwarf fruit and forest trees at Willis's Rooms recently, by Messrs. Robinson and Fisher, attracted as much attention and bidding as if it had been a sale at Christie's twenty years ago, of some of those exquisite specimens of Japanese handiwork as were in those days first seriously attracting the envy of collectors of objets d'art, Japan's works of nature, aided by human ingenuity, are as quaint as her works of art. Perfect miniatures of cedars eighty years old, red-leaved Maples 1 foot high, with gnarled and hollow trunk; tiny Wisterias under 3 feet in height, and an Oak 3½ feet high were among the various exhibits. Stunted humanity is the reverse to beautiful, however well proportioned; but these quaint specimens of Nature in miniature were in most cases as beautiful as curious. The highest price, thirty-two guineas, was paid for an *Acer palmatum*, eighty years old, 34 inches high, in a white crackle-china dish; a *Larix leptolepis*, 180 years old, 20 inches high, of which only 5 inches were occupied by the trunk, fetched twenty-five guineas; and a 24-inch Maple Tokaido was sold for twelve and a half guineas in a sea-green china pot. The sale also included an interesting collection, formed by Mrs. Hart, of Japanese illustrated books on gardening and flower arrangement.

Rambler Rose Leuchstern.—As might have been supposed, raisers have not been slow to utilise Crimson Rambler as a seed or pollen parent. This variety is almost an exact counterpart in growth of Crimson Rambler, but the flowers are single and of a delightfully rich pink shade with a distinct white centre, occupying from the base of the petals fully one-half of the blossom. When developed, the five petals have a star-like appearance, there being about half an inch space between each. As a single Rose it is as pleasing as the Penzance Briars, but of course is without the fragrant foliage. The flower is not unlike that of Janet's Pride. When a specimen is well developed upon the stump of a tree or as a pillar it must present a pretty sight, but it can never be so lasting in its effect as the Crimson Rambler, by reason of its single flowers. The quantity of buds in a truss appears about the same, and it has the characteristic habit of the latter in flowering upon quite the lower branches. For this reason it must be very effective as a pot Rose. I should like to see a very dark and double form of Crimson Rambler produced. Perhaps we shall obtain this before long. We see in the new Psyche how this

clambering Rose has endowed a lowly Polyantha of Mr. Bennett's raising, named Golden Hairy, with quite a rambling habit and very distinct and pretty panicles of flowers; so perhaps if our raisers produce a maroon coloured dwarf Polyantha Rose and this is crossed with Crimson Rambler a very dark climbing kind may be obtained in the near future.—P.

The Lilacs.—Happily for English gardens the flowering trees and shrubs are more planted now than a few years ago, and gardeners and others are getting better acquainted with the more beautiful varieties. This is true especially of the Lilacs, a lovely group of flowering shrubs, and of recent years varieties of fine colour have been added to the family. Beyond the common Lilac (*Syringa vulgaris*), the following may be grown:—Persian Lilac (*S. persica*), a pretty dwarf species with delicate lilac-coloured flowers; there is a cut-leaved form of it named *laciniata*. *S. Josikaea* is very distinct, its flowers of a mauve shade, and there is the Ronen or Chinese Lilac (*S. chinensis*), also called *S. rothomagensis* and *S. dubia*. It is, however, amongst the varieties of the common Lilac that the most beautiful colours are found. The ordinary Lilac of gardens is a shrub of much charm, the colour soft and pure, without trace of that purplish shade so conspicuous in many of the darker varieties. The common white Lilac is eclipsed by such beautiful forms as Marie Legray and *grandiflora*. Of double Lilacs none is so precious as *Lemoinei* fl.-pl., the clusters bold and the individual flowers like little rosettes. *Souvenir de Louis Spach* is the deepest in colour of the group, but we care less even for this than the refined lilac tint of the common kind so abundant in shrubberies. Charles X. is the best known of the purples and forces well, the variety used so much in France for bringing early into flower being *Rubra de Marly*. Lilac forces well, and the fragrant clusters in late winter have peculiar fascination. A few shoots in some simple vase form a dainty decoration. *S. amurensis* was shown under the name of *S. Bretschneideri* at a recent meeting of the Royal Horticultural Society, and is an interesting species with a close spike, but not so beautiful and graceful as many garden forms. —V. C. T.

The Sandworts.—The Sandworts or *Arenarias* form a large family, but few kinds are grown in gardens, the chief of these being the little mossy *A. balearica* and *A. montana*. The Balearic Sandwort, by which name the former is generally known, is a useful plant; it covers the facing of the stones in the rock garden with delightful verdure, relieved during the summer months with a thousand starry white flowers, and it may be used also to cover walls where *Aubrietias*, *Pansies*, *Fumitories*, *Toadflax*, and other dainty things can establish themselves. The *Arenaria* always grows most freely in the cooler parts, which is natural, as the growth surfaces the stone. The mountain Sandwort (*A. montana*) has much larger flowers, of purest white. It is, indeed, altogether bolder, and in warm soils very hardy. Neither kind cares for severe winters, especially when the soil is cold and damp.

The Ophrys, or Bee and Fly Orchids. These dainty flowers are becoming rarer in England as the tourist and tripper seek out the wilder retreats and destroy their flower life. We may point out, however, that not ten plants in a hundred lifted from the chalky bank, or wherever the Orchids may be growing, live for any length of time. The Ophrys in particular are very hard to satisfy. Where there is a good rock garden then a position may be allotted them, choosing a rather dry spot, the soil loam with which limestone is freely mixed. Let some creeping plant cover the surface to retain moisture. The Bee Orchid, with its beautifully coloured bee-

like flowers, is worth coaxing into vigorous growth, and an interesting companion to it is the Fly Orchid (*O. muscifera*).

The single Jew's Mallow.—A common shrub in cottage gardens throughout the British Isles, as far as our experience goes, is the double Jew's Mallow, or *Kerria japonica* fl.-pl., but the single kind is rarer. We were pleased to see a group of it a few days ago in the Royal Gardens, Kew, at the lower end of the rockwork. The plants made a bold effect, every shoot being studded with small yellow flowers. We have never seen a prettier group, and backed with Evergreens its yellow colouring gained in clearness and beauty. Frequently in horticultural periodicals one reads a disparaging note about this single-flowered shrub, because, we suppose, the writer has never seen a good group of it or a plant reasonably cared for.

THE PÆONIES.

WHEN spring meets summer a noble group of hardy plants is in flower—we mean the Pæonies, of which there are a hundred beautiful varieties, some as delicate as a Tea Rose in colour, others

border plant. The illustration shows a Pæony border 130 yards long, and the plants carried individually from 75 to 100 flowers—a glorious colour effect unrivalled in June when the late Tulips have departed and the true summer flowers scarce expanded.

Herbaceous Pæonies are very hardy, and succeed in different situations—in a border as here represented, in beds with Tea Roses and other flowers, or in the woodland, where, screened from hot suns, the flowers gain in depth of colour and linger over a longer season. By shrubbery margin, shady drive, and in the grass the plant will flourish, the deep self colours, as the old double-crimson Pæony one loves so well, presenting the richest pictures. There are many ways of planting Pæonies, apart from the somewhat conventional style of using them in the mixed border. A small bed filled with them on the outskirts of the lawn is pleasing, and they should be used freely in the woodland or wilder parts of the garden, where they are as effective almost as the Azalea, which is in its fullest beauty at the same period. A group of the double-crimson Pæony in the subdued light of the woodland is pleasant to see. One may, in truth, place them with the best shade-loving flowers, and



A BORDER OF PÆONIES 130 YARDS LONG, EACH PLANT WITH NEARLY 100 FLOWERS.

sumptuous in hue, big heavy blossoms, welcome for their effect in early summer days.

Few hardy plants have become so fashionable, if one may use such a word about an effective garden flower, as the Pæony, thanks to such raisers as Messrs. Kelway and Son, Barr and Sons, and others who have created new characters in the family and increased the variety of colours.

There are two great Pæony groups, the tree or Moutan and the more commonly seen herbaceous kinds, which have emanated from *P. officinalis*, the European species. This, with others from the same continent, has been crossed with the Chinese representatives of the family, such as *P. albiflora*, hence the beautiful hybrids that now enrich our gardens.

Few hardy perennials have grown more rapidly in popularity than the Pæonies. Many readers are doubtless about to commence their culture and to plant bold groups in garden and woodland. The illustration that accompanies these remarks is instructive. It reveals the habit of the Pæony, and its picturesqueness and beauty when used as a

positions few plants enjoy. We shall ever remember a group of the crimson Pæony in the grass, where the plants were happy in the moisture and protection from hot suns and keen winds. The evening light seemed to shine through the big crimson flowers, dyeing them with a strangely deep and glorious colour.

Although Pæonies will succeed in ordinary garden soil, the finest flowers are seen upon plants in good loam, moist, and with which is mixed plenty of cow manure. Trench the ground where the Pæony bed is to be about 4 feet deep, and let each plant be the same distance apart to give ample space for expansion. It is a mistake to crowd leafy plants such as the Pæony, which increase in size and vigour with age.

There are so many varieties, that to give a list would be monotonous. If possible, an intending grower of the Pæony should visit some good nursery or garden where there is a named collection, and select the most beautiful for colour. The following are the varieties that please the writer, but they do not represent a typical collection. A

good place should be given to the beautiful May-flowering double European Peonies, of which the most familiar are the old double-red, rose, and flesh-white. A more precious trio of May flowers does not exist, and they are unrivalled, even in the face of a hundred hybrids to usurp their position. Place groups in the woodland, and rejoice in the flower-colouring seen against tender green foliage. The double anemone-flowered red, and the charming fennel-leaved *P. tenuifolia* fl.-pl. are of much interest and value. We delight to find the double *tenuifolia* in the grass or in the woodland. It is effective in leaf and flower. Blooming also in May are the single European Peonies, *P. anomala*, *P. arietina*, *P. Broteri*, *P. corallina*, *P. decora*, *P. Emodi*, *P. peregrina*, *P. tenuifolia*, and the primrose-tinted *P. Wittmanniana*, followed by the beautiful single Chinese Peonies which gladden the garden in June.

The double Peonies are a big family, and comprise flowers of delightful colouring, accompanied by sweet, rose-like fragrance. It is sometimes forgotten that the Peony has many beautiful attributes. The crimson stems appearing above the brown earth when the Daffodils are fast hurrying away are as pretty as a flower itself, and in early summer the big blooms make noble decorations when gathered into large bowls and vases. A sweet perfume pervades a Peony-adorned room, a perfume as delicious as the Rose, though more pronounced in some varieties than in others. The writer cares greatly for the following: *Alba plenissima*, with a strong rose fragrance; *Candidissima*, primrose; *Festiva maxima*, pure white; *La Vestale*, white, blush outer or guard petals; *Solfaterre*, primrose colour when first expanded, passing to white with age; and *Viscountess Folkestone*, also white. Of the blush-coloured varieties, *Belle Chatelaine*, *Délicatissima*, *Faust*, *Rosea maxima*, and *Grandiflora carnea* are very beautiful. So, too, are *Alice Crousse*, rose; *Mme. Ducl.*, salmon; *Rose of Castile*, pink shade; and *Mme. Lebon*, cherry rose, and very fragrant.

As regards planting, this may be carried out in autumn, favourable weather in winter, and early spring. V. C. T.

THE FLOWER GARDEN.

SWEET PEAS AT FAWKHAM.

A REMARKABLE stimulus to the cultivation of the Sweet Pea has been given by the proposed celebration of the bi-centenary of its introduction into this country, and there is little doubt that on the occasion of the exhibition held in connection with the celebration there will be a phenomenal display, both as regards the number of exhibits and the quality of the majority of them. No matter in what direction one may travel, there is evidence on every hand of the interest in this charming annual, and as more than ordinary attention is being devoted to its culture, the results will probably exceed the most sanguine expectations of its promoters.

That the collection of Mr. Percy Waterer, at Fawkham, Kent, will give a good account of itself there is good reason for believing, as a more promising lot of plants it is hardly possible for one to meet elsewhere. Like many other growers, Mr. Waterer has batches of plants raised at different periods, and in this way he is far more likely to be in a position to get the blossoms at their best than would be the case if the whole of the plants had been raised at one time. The date of the exhibition (July 20 and 21) is quite late enough for southern growers, the committee no doubt fixing this somewhat later than is perhaps desirable in the south at least, in fairness to the northern growers, and as far as possible to enable the growers to compete on equal terms. The difficulty in the south will be to keep the plants in good condition, and growers' positions will be considerably strengthened where there are plants raised rather later than is the usual practice.

Plants raised in a cool glass structure about the middle of February, and which were planted out recently, are remarkable for the sturdy and robust character of their growth, this resembling the stronger kind of growth of the perennial Pea (*Lathyrus latifolius*), and giving evidence of the highest culture. Some wonderful groups of the charming soft-yellow Sweet Pea, *Queen Victoria*, were very conspicuous, and, in comparison with most others, were exceedingly robust. Of the white sorts *Blanche Burpee* was noted for its strong and vigorous growth, and this will doubtless stand in as one of the very best white sorts. Gorgeous, the lovely salmon orange-coloured Sweet Pea, was recognised by its distinctive foliage and the character of its growth, and was among the more conspicuous of the robust kinds.

Two methods of culture are adopted here. A goodly array of those planted in clumps, of five plants in each clump, were particularly promising, and as the clumps and the rows of clumps are each about 4½ feet apart, it will be well understood that ample space has been allowed for the development of their growth, and at the same time permitting light and air to do their work. Three-long, double rows of plants, the plants arranged about 8 inches apart right throughout the rows, also promise well. Strong timber uprights are arranged at equal distances, and held in position by others fixed along the top of them. Strong twine is run along each side of the uprights. As the plants make progress, the tendrils readily cling to the twine, and in this way it is hoped to dispense with the ordinary Sweet Pea sticks. It is supposed to be an American method of support for the Sweet Peas, and it will be interesting later to learn whether it is a successful one.

The ground devoted to the culture of the Sweet Peas here is something over 40 feet long by 75 feet wide, and as the soil has been deeply cultivated there is every reason for anticipating a grand display of blossoms in a few weeks. The level of this portion of the garden surface has been raised some 18 inches, and as the garden soil beneath has also been thoroughly tilled to a depth of 18 inches, and in each case a most liberal dressing of good manure incorporated, there is now a depth of soil of 3 feet into which the vigorous roots can freely work, and thus assimilate all the constituents that are there to build up plants which must of necessity give exceptional results.

We appear to be but just on the threshold of ascertaining what are the possibilities of the Sweet Pea, and there is little doubt that before the present season of flowering is over we shall be much wiser in this matter and also in many other points of culture than we were when beginning the work of the season. D.

RAISING AURICULAS FROM SEED.

As many persons sow seeds of Auriculas in April and May, and as the seeds are such as were harvested in July and August last, there is urgent necessity for patience on the part of those who sow. This caution is very necessary, because some persons who sow, if the seedlings do not appear in two or three months, conclude at once the seeds were bad, and straightway send a strongly worded complaint to the seedsman who supplied them. It is very necessary to caution such not to be too hasty in their condemnation. Those of us who are raisers of seedling Auriculas are well aware that the seed grains germinate irregularly and at long intervals, and the higher the value of the strain from which seed is taken, the greater the necessity for patience. It is found in experience that the plumpest seed grains, which are almost invariably the foremost to germinate, produce strong plants of inferior types, and so it is well, as soon as these forerunners of the seed crop are forward enough, to carefully remove them and prick them out into pans or pots of suitable size rather than permit them to remain in the pans in which seeds are sown, where they would over-shadow the later produced, but tiny plants. In so far as it is practicable, I prefer sowing Auricula seed as soon as ripe, as much valuable time is thereby gained. It is sometimes convenient to sow

a portion only in autumn and the remainder in spring where space for housing in winter is limited.

In sowing, shallow boxes, pans, or pots may be used. I prefer the latter, choosing to sow in two or three pots in preference to one box. Six-inch pots are a very useful size for the purpose. They should be scrupulously clean inside and out and should have at least 2 inches of drainage. Over this is placed some moss or rough fibre, and then a good Auricula compost is filled in and pressed firmly down until within an inch of the top. By pressing this down firmly, undue shrinking of the soil is prevented. Then half an inch of finely-sifted light sandy compost is added, pressed gently down to make it level and the surface even, and the seeds are sown.

Thin sowing is a decided advantage. In the case of seeds taken from carefully cross-fertilised parents or from the finest selected flowers they are never too numerous, and they should be distributed over the surface as evenly as possible. One raiser of my acquaintance, owing to the seeds of Auriculas being so much the colour of the soil, adopts the practice of reducing a lump of dry whiting to fine powder, and sprinkles some over the seed grains and makes them white, so that they can be more readily seen and distributed evenly over the surface. Having sown them, a very slight covering is given to them, and they are put away in a cold frame or greenhouse with a piece of glass over each pot. When water must be applied it is best to stand the pots up to their rims in a vessel of water, so that it may gradually rise to and saturate the surface. This avoids the risk of displacing any of the grains when sprinkling is done overhead.

In August, 1898, I sowed as soon as ripe some seeds of Auriculas taken from special plants. But very few indeed of the seeds germinated in the autumn of that year, a few in the spring of 1899, a few, also, in the autumn of that year, but the most plentiful crop has come this spring. One pot in particular gave me only three plants up to March last. Since then three times that number have put in an appearance. The Rev. F. D. Horner and other raisers of seedlings from fine fertilised show varieties find it necessary to keep their seed-pans for three years, so rarely are some of the grains in germinating.

This successive appearance of seedling plants emphasises the importance of pricking off the seedlings as soon as they are large enough for removal. A finely-pointed stick put under a tiny plant will raise it up from the soil with some of the latter adhering to its tender roots, and by one act the plant can be transferred to its new quarters. Much of the romance of plant culture comes into the process of seedling raising; the raiser leads on the tiny subjects from stage to stage until they bloom, and whether the result be satisfactory or the reverse, there is always the enjoyment of pleasant, hopeful anticipation that is an effectual spur to the attempts of the raiser. R. DEAN.

THE ROOF IRIS OF JAPAN.

"The grey thatched roof here on its crown a waving fringe of Iris leaves." "The Custom of the Country," p. 161.

The author of "Things Japanese," *v.* GARDEN, p. 304, thought that Iris *tomiophila* and other kinds were planted on the much-covered ridges of cottages in Japan in order to secure the thatch, &c., from being blown away.

Mrs. Hugh Fraser, however, in her book of Japanese tales, entitled "The Custom of the Country," page 161, gives another version or reading, as follows: "Once there was a famine in the land, and it was forbidden to plant in the ground anything which could not be used as food. The frivolous Irides only supply the powder with which the women whiten their faces, but their little ladyships could not be cheated of that. 'Must we look like frights, as well as die of hunger?' they cried; and so every woman set a tiny plantation of Irides on the roof of her house, and there in most country places they are growing still."

This little note is interesting as showing how

similar things are applied to similar uses in localities and countries widely apart. In Italy, for example, the growth of *Iris florentina* and other kinds has long been quite an industry, the dried roots or rhizomes being the basis of "orris" or Iris-root, and the so-called Violet powder of the shops.

When Mr. Peter Barr was in Italy a year or two ago he sent me rhizomes of three or four varieties of white and purple-flowered Flag Iris, which he found there in cultivation for the making of "orris" or Iris-root powder. F. W. B.

TREES AND SHRUBS.

RHUS TOXICODENDRON.

SOME years ago a form of this poisonous *Rhus* was largely sold under the name of *Ampelopsis Hoggi*, and numerous instances occurred of a kind of eczema caused by the sap having come in contact with the skin. Repeated cautions were

given in horticultural papers, with the result that this *Rhus* was, to a certain extent, banished from dwelling houses or wherever it would be likely to be handled. That this caution has even yet been overlooked by some is shown in a recent number of the *Gardener's Chronicle*, where an instance is given of severe skin irritation, caused by the sap of this *Rhus* when being trimmed. The specimen had been planted as an *Ampelopsis*. Notwithstanding the fact that any one with a fair general knowledge of plants is aware that this so-called *Ampelopsis* is really a *Rhus*, the name of *Ampelopsis Hoggi* I see still occurs in the catalogue of a prominent nursery firm. The name of *Ampelopsis japonica* is also sometimes applied to the same plant. It occurs wild in Japan as well as in North America, and Professor Sargent, in his "Forest Flora of Japan," speaks of it thus: "Our Poison Ivy (*Rhus Toxicodendron*) is one of the common plants in all the central parts of Hondo and in Yezo, where it grows to its largest size and climbs into the tops of the tallest trees. The leaves of the Japanese plant are larger than they usually grow on the American form; they are thicker, too, and more leathery, and turn to even more brilliant autumn colours, often to deep shades of crimson, which are rarely seen on this plant in America. In October no other vine is so handsome in Japan." In reading this it must be remembered that the term vine is in the States applied to climbers in general. H. P.

A DOUBLE-FLOWERED HYDRANGEA. (H. HORTENSIA FLORE-PLENE.)

The accompanying illustration gives an excellent representation of a very charming variety of the old *Hydrangea hortensia*, which was shown by Messrs. Veitch at the recent exhibition in the Inner Temple Gardens. The common *Hydrangea* has many varieties, some of which are hardier than others. For using out of doors the typical form is of little value in the London district, as it flowers indifferently. The best hardy forms belong to the *stellata* group, and it is to this group, fortunately, that the one now figured belongs. Its double flowers give it a substance and fulness that none of the single forms possess. In well-chosen sheltered positions it will prove an interesting and pretty shrub in the open air. As a plant forced early into bloom for greenhouse or room decoration the picture affords an excellent idea of its value. Like all the *Hydrangeas* of this group it can be

increased with the greatest ease by means of cuttings, and its flowers last long in beauty. The variety figured is probably the one that was raised and sent out by Mons. Lemoine, of Nancy, some ten or twelve years ago. It was named *H. stellata rubra plena*, the flowers on first opening being of a rosy white colour. *Stellata* is now regarded as a variety of *H. hortensia*. W. J. B.

ELEAGNUS MULTIFLORA.

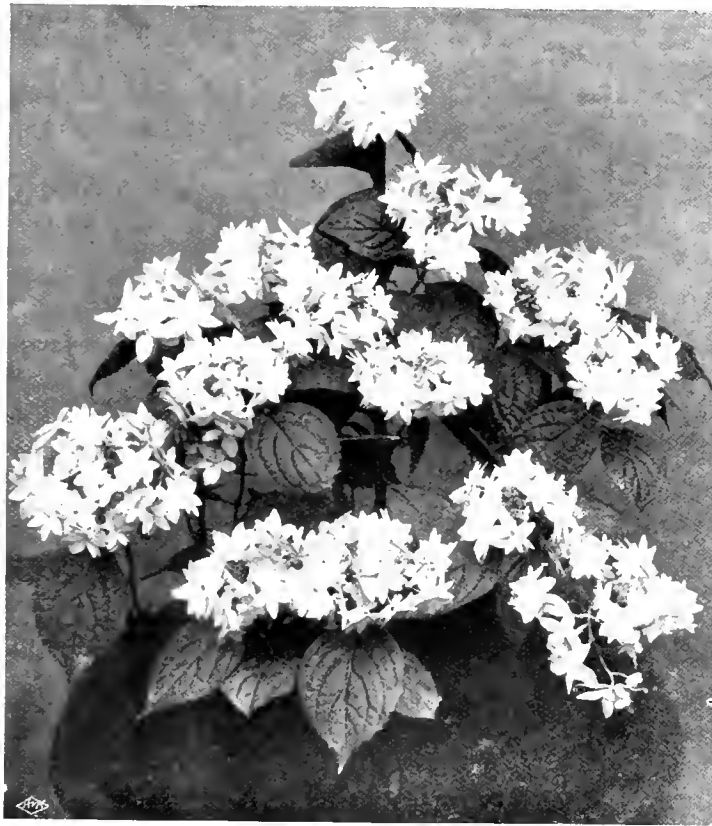
The genus *Eleagnus* contains many ornamental plants, the majority of which are well known in gardens, but none of them have any other quality to recommend them, with the exception of the subject of this note, which, if not so ornamental as some of the others, has fruits which are edible and freely produced. *E. multiflora*, also known under the names of *E. edulis* and *E. longipes*, is a dense, spreading shrub 9 feet or 10 feet high, and as much, or more, in diameter. It will grow in almost any soil, but prefers a light sandy loam, in which it seems to thrive and fruit admirably. The flowers are borne in the axils of the young leaves on thin,

use of our highways and byways is increasing with the popularity of bicycling, and when the part the motor-car is destined to play in road locomotion becomes an accomplished fact, many of our shrivelled roads will no longer suffice for the requirements of the traffic they will have to accommodate. The breadth of the metalled surface of many of our principal roads has diminished as the number of vehicles using them has decreased, this narrowing in of the surface from motives of economy being often very noticeable. Although the property in land dedicated to the use of the public for roads is vested in the adjoining landowners, the right of way remains in perpetuity. This, however, by the suppleness of local authorities, has not always been observed, and the interests of the public have been in consequence sacrificed in many instances. If we take, for example, the old Roman Watling Street, one of the most important roads in the country, we find that over the hilly part between Edgware and St. Albans, where the traffic is light, the highway has dwindled to the dimensions of a lane, and in places cottages have unmistakably been built upon what was once the roadway. Nor is this the worst that has happened, for about one mile beyond St. Stephen's this famous road has been entirely obliterated and absorbed in the fields for some two miles of its obvious course. The same thing has occurred near Crick, in Northamptonshire, where the telegraph wires alone give an indication of its course, fences having been erected across the road and one hedge removed. Nowadays it is customary when a road has to be widened for land to be purchased at a heavy cost to the ratepayers, so that it is doubly necessary that a stop should be put to the systematic filching of roadside wastes which is continually going on. We frequently see cases where fences have been quietly advanced almost to the edges of the metalled surface, because for the time being the full width of the road is not required, and it is evident that local authorities are not always to be trusted to safeguard the public interests in these matters. If the maxim once a highway always a highway holds good it should be possible to deal effectively with these encroachments, whatever time has elapsed; otherwise the case calls for an Act of Parliament which is retrospective in its action. *The Field*.

ROSES IN INDIAN GARDENS.

Roses grown on their own roots are, according to *Indian Gardening*, undoubtedly the best in India; but then to this there are a few exceptions. In the hills some

Roses that require warmth to develop their blooms, such as *Marechal Niel*, are best budded on strong growing stocks of varieties of the Rose that are hardy and stand the winter well. The *Marechal* blooms in profusion in the plains, and grows to an immense size as a climber, or, in truth, the only way it should be grown, as it does not do satisfactorily as a bush or pillar. Its rods, if pruned, should only have the tips slightly shortened, and some of the old and weak wood should be thinned out. In the hills the *Marechal* is not such a strong grower, especially at high elevations, nor is it so profuse in its bloom, which appears in spring and autumn. Particularly then is its colour very fine, much finer than I have ever seen it in the plains, if carefully cultivated and watered copiously and at intervals of three days with liquid manure. For this cup of gold I advocate this treatment in the hills, as it stands generous treatment, and in this respect it is an exception with a few other varieties which do not grow so vigorously, and the bloom requires warmth at the root of the plant



A DOUBLE VARIETY OF THE HYDRANGEA (H. HORTENSIA FLORE-PLENE.)

pendent stems about an inch long, of a creamy-white colour, changing to yellow with age, and covered with minute scales on the outside. They are followed later by succulent, oval fruits about three-quarters of an inch long, each containing a single seed. When ripe, they are of a shining red colour and very juicy, with a sharp and rather unpleasant flavour when in a raw state, but when made into a preserve it is considered by competent judges to be quite equal to Guava jelly. The leaves are 2 inches to 3 inches long, ovate-acuminate, and finely serrated, of a dull-green above, and covered beneath with small, silvery scales. It is a native of China and Japan. L.

THE FILCHING OF ROADSIDE WASTES.

The alienation or appropriation of roadside wastes is a question that will have to be seriously considered at no distant date. Year by year the

to force it. Among the Teas may be found others that are not strong growing in the hills, and shy bloomers, which will succeed well with this treatment.

Rose, William Allen Richardson in the hills is a very strong grower, and a thing of the greatest beauty, though by no means an exhibition Rose in form, but in bud it is beautiful both in form and in colour. Later on, when the whole plant is covered with an immense wealth of bloom, words cannot tell how beautiful it is, and how distinct it is in colour. I cannot speak of it in the plains, but in the hills nothing can exceed its beauty as a garden or decorative Rose. I have no doubt it is very pretty in the plains, but I question if it comes up to what it does in the hills *in masse*. The great rosarian, Deah S. Reynolds Hole, writes of a child on seeing this beautiful and distinct climbing Rose exclaiming to her mother: "Oh, mamma, look at the poached eggs!" Well, I must say there is some similarity, but I do not think poached eggs half so beautiful, if they are beautiful at all.

This Rose does not show its lovely colour in such perfection at home or on the Continent as in this country. The centre of the Rose is deep orange or apricot, the outside or the reverse of the petals are lighter, but on the side facing the sun it has a lovely flush of slightly peach coloured red, or red without the peach colour; I call it "sun-kissed."

This Rose must be grown on its roots to be perfect in the hills. It is hardy in the hills, but if it is just mulched round its roots in winter it makes assurance doubly sure. In pruning only thin out very slightly.

Another hint and I am done with William Allen Richardson, but being an important suggestion I

must not omit it. Plant your climber near a wall, or any other position, where it only gets the morning sun. The full day's sun seems too much for it. I find this Rose rather thin, and it does not last well among cut flowers.

A FINE NEW EUPHORBIA.

As I have had occasion to come to Bath for a short time, I have found the greatest relief from the monotony of the place in repeated visits to the Botanic Garden, which is quite close at hand.

Bath is fortunate in having a place of such interest, which is thrown open to all, and no time of the whole year is better for the inspection of plants than the merry month of May, which, however, does not come up to its proper character this year.

A gardener who was walking about the grounds, and who seemed to be examining everything with great care, told me that he had counted seventy plants in blossom, and though I did not go through the process of verifying him, I daresay he was quite right. At any rate, many of my old friends presented themselves to me at once, and *Jeffersonia diphylla*, *Leucojum aestivum*, *Arenaria grandiflora*, *Adonis vernalis*, *Tiarella cordifolia*, *Dryas octopetala*, *Viola obliqua*, *Trollius asiaticus*, *Stylophorum diphyllum*, and *Daphne Genkwa* were among those in blossom, and many others soon came into view. But with all these I am well acquainted, and have nearly all of them in

Ryde. It was after a short survey of the garden that I lit upon a plant which was quite new to me, and was a glorious surprise. I refer to a fine specimen of *Euphorbia Wulfenii*, which I have never heard of before and never seen in my garden I have visited. I at once put it down in my mind as quite one of the finest things of the sort which I have come across for a long time, and I was anxious to get to know all about and, I may add, to possess it. Mr. Milburn told me that he had the *Euphorbia* from Canon Ellacombe, and from that well-furnished garden from which so many good things have been obtained. I wrote to Bilton at once, and I was informed that *Euphorbia Wulfenii* had found its way there from Glasnevin, and that Mr. Moore could tell me all I wanted to know. This Mr. Moore has certainly done, and from him I learn that this splendid *Euphorbia* was raised from seed which he had from Dalmatia. He considers it to be perfectly hardy, and praises it as an acquisition on which he sets great store. The height of the plant which is growing in the Botanic Garden here seems to be nearly 5 feet, and it is rather more than 5 feet across, so that it is a bold and striking object, and stands out in a way which is different from any *Euphorbia* I have seen. The colour is most peculiar, and, saying in the case of some other *Euphorbias*,

I have not met with it before, and even with them it is not quite the same. It is a sort of yellowish-green which I cannot attempt to describe, but which commends itself to me at once, and the foliage, which is of a bluish-green, does the same almost equally so. As a rule, with the exception of *Ixia viridiflora*, I never saw a green flower I liked, but this yellowish-green *Euphorbia* must be put in a different category altogether. The habit of the plant is good, the foliage certainly befits it as well, and when I came across it on a most beautiful May morning, which was an exception to the rule, I seemed to be in fairyland and gazing on an object for which I was quite unprepared. The odd thing, at any rate to me, is that Mr. Moore tells me that when it first came into his hands he could not get any admirers for it. It is proverbial that tastes differ about flowers, but I should have thought it impossible that there could be any question at all about a matter which seems to speak for itself, and therefore I am glad to be able to say that though the verdict of the Dublin people was not ecstatic at first, as soon as some two or three recognised judges of these things came across the plant they gave it no stinted praise. Mr. Moore's words are that Mr. Robinson and Mr. Burbidge *admired it immensely*, and as he also does the same, as well as Mr. Milburn of this place, I feel in good company, and I have no occasion to retract an opinion which was given without a moment's demur. All plants cannot be Lilies, nor Irises, nor Roses, and I feel sure that *Euphorbia Wulfenii* will obtain a very high place in the estimation of those who go a little farther afield, and can think of some other orders as well.

Bath.

HENRY EWBANK.

P.S. Since the above was written, THE GARDEN of May 5 has come into my hands. The Botanic Garden here is very beautiful indeed, it is so well laid out, and Mr. Milburn deserves the greatest credit for the success to which he has attained. I can endorse all that has been said about it, and the great breadth of *Aubrietia*, *Alyssum montanum*, and other things are exceptionally fine.

THE FRUIT GARDEN

UNPRUNED ORCHARDS OF WORCESTERSHIRE.

MANy fully-developed Apple and Pear trees may be compared in shape to an open umbrella, and if the reader will imagine the ribs of the umbrella to be branches studded with buds their whole length, he will have an idea what is meant, and what an untrained standard fruit tree is like. The orchard trees I am speaking of are more or less of the above form. The branches are wreaths of fruit buds, and I feel perfectly sure that no amount of pruning and training that the gardener could subject the trees to would ever produce as many buds or as much fruit in the same time as these trees do. This is saying a good deal, I am aware, and a good many pruners may doubt it, but demonstrating the contrary will give them a task. I was told, not long ago, that I was probably right about the time and the quantity of fruit produced, but that the pruned trees produced the finest fruit. I, however, disputed that also, because I am simply unable to see any reason why a healthy, naturally-grown Apple tree should not produce as fine fruit as a pruned and trained tree, provided they are cropped equally. Thinning out the fruit undoubtedly makes a difference to size and quality, but that is not pruning. It is well known that even on the same tree one branch will sometimes



A SINGLE FLOWER STEM OF EUPHORBIA WULFENII.

have few, but fine fruit upon it, and the one next to it many fruit, but all of smaller size. The Worcestershire farmer who grows Apples for cider believes, and with good reason, that he gets the heaviest crops in the aggregate from the trees that are left to bear as much fruit as they can carry.

Big or little, the quality of the cider is the same, and the quantity produced is greater. I am told, however, that there is much difference in the quality of the cider according to the manufacture. On one nobleman's estate the fruit is selected with care, and the cider is of the finest quality; but it is a very common plan to sweep all into the vat good, bad, and indifferent with a considerable addition of any leaves and twigs that may happen to have been collected with the fruit.

I was told that some of the advice given to the Apple farmers was that they neglected the thinning out of the branches of their trees, and that they were advised to remove whole limbs from pretty old and established trees to admit the light and air to the heart of the trees. My own impression, however, was that to do anything of the kind would be next to madness, as it could only result in letting the wind into the trees and in a serious loss of crop for years afterwards. Of course these things can be seen in orchards anywhere, but in the south, where fruit trees grow best, they can be better observed.

Another point is, that under favourable circumstances of climate Apple and Pear tree shoots produce fruit one year sooner than is usual. In the north I have seen young Apple trees of Lord Suffield produce fine fruit three years after they were planted, the maiden shoot having been headed down to its base the first year, so that none of the branches were more than three years old. In other words, the Apple does not, as a rule, produce fruit on the previous year's shoots, but on the three-year-old wood. The first year leaf-buds are produced, the second year fruit-buds, and the third year fruit. In Worcestershire, however, the fruit-buds are often produced on the current year's shoots, the fruit coming the second year, so that young trees planted, say, this year early in the autumn and not pruned might produce fruit the first year. In the experimental grounds of the Worcester County Council, Mr. Udale, County Council lecturer, showed me many young trees with well-developed fruit-buds on last year's shoots. As a rule they were, however, situated at the extremities of the shoots, so that in the hands of a novice given to winter pruning they would all be cut off and the crop lost.

Look at the subject as one may, and be as logical and practical as you please, it is difficult, if not impossible, to see how any fruit tree like the Apple or Pear can be in the least induced to bear either a greater quantity of fruit or fruit of better quality, by the use of the knife, where the tree has room to develop itself and an ordinarily favourable situation. Prune for shape if you choose and to keep trees within definite space, but I have never been quite able to see that one atom of fertility is added by pruning or pinching. What I mean by fertility is the ability to bear the greatest weight or quantity of fruit in the shortest time. J. SIMMONS.

APPLES IN WARWICKSHIRE.

ALTHOUGH taken as a whole the country over last season's Apple crop was a very poor one, the locality in which the writer is interested was fairly favoured, and, indeed, as regards certain kinds I personally obtained a bumper crop. This is to be attributed, I think, in no small measure to the fact that our orchard is a very sheltered one, shaded on all sides by timber, and on the south, indeed, entirely screened by a tall avenue of elms. This in an ordinary season doubtless keeps off the sun a great deal too much, but apparently the extreme heat and brilliant sunshine of last season amply penetrated through the foliage, while at the same time there was no tendency for the sap to dry up, for the fruit tree's turly bed was always cool and verdant. Some kinds, however, had little or no fruit at all. That indigenous and admirable

little Apple the Wyken Pippin (Wyken is an adjoining parish to ours) had but a very scant supply, hardly a bushel on three matured, full-sized trees; though, on the other hand, Brown's Seedling, another local raised kind, a good-sized Apple, very rosy, early, and first-rate eating, had an absolutely huge crop, one tree alone producing nearly eighteen bushels. Beauty of Kent, too, was a very fair crop, and of enormous size and very perfect in form. Warner's King, Queen Caroline, Ribston Pippin, Early Margaret, and a few others had but a sprinkling; but three very large Besspools were loaded with fruit, and had never been of so fine and clean a type, while the Russets and Winter Queenings also bore very heavy crops. This last species, which is generally spoken well of in the catalogues as an excellent market fruit, seemed out of favour in my locality and brought a lower price than, for instance, the Besspools, which I marketed about the same time. With me, however, this particular Apple was blotchy and speckled. Whether this is a not unusual defect, or was owing to the dry season, my experience does not go sufficiently far to say.

Normanton Wonder and Northern Greening had but poor crops, but had, I fancy, borne heavily the previous year. A fine Duchess of Oldenburg had not, I think, a single Apple, and the several kinds of Codlin had a rather indifferent crop, though my French Codlin (a twin on same stock as a Winter Queening) would have rendered a pretty good account of itself had not the cob when turned out for August patronised this tree very liberally. Shropshire Wonder and William's Seedling did pretty well; the former were beautiful fruit, very clean, and of good complexion, while the latter, of an unusually colossal size, proved very bad keepers.

As regards the Pears, the crop was on the whole a good one. Williams, Aston Town, Jersey, Brown Bauré, and Bergamot all doing their part valiantly, though the latter almost to a Pear went rotten at the core, the cause of which I should be glad to discover. As to the cultivation of the orchard, no very special pains are taken over it. It is fed by sheep or small heifers from time to time, and once every few years a crop of hay is taken off to keep the ground from growing rank. I always, however, after a heavy crop like to spread a good mulching of wood ashes under the trees either before the winter or early in the spring. The trees themselves are rarely or ever touched save to thin out occasional branches and keep the centre of the tree well open. VIATOR.

Warwickshire.

THINNING OF FRUIT.

THIS is a matter that does not receive the general attention that its importance claims; at least, some kinds of fruit trees from one or another cause are often allowed to carry a much greater quantity



EUPHORBIA WULFENII IN THE BOTANIC GARDEN AT BATH.

of fruit than they can profitably do. Thinning, it is known, entails a great amount of labour, and without doubt this in many cases is the reason of its being unattended to. Hardy fruits are usually most neglected, although some of them equally compensate for the labour involved, as do the Peach, Grape, &c., in the case of which much pains and time is devoted to thinning. Indoor fruits are, however, brought more under immediate notice than hardy kinds usually are, and consequently the folly of over-cropping and benefit of judiciously thinning their crops is readily observed.

The evil effects of over-cropping are wider reaching than is often considered. It does not rest in causing the inferior quality of one year's crop, but is also frequently the cause of preventing further fertility for some years, and sometimes enfeebles trees to such an extent as to make them quite useless. Its evil effects may be readily seen in small foliage and weak buds, indicating exhaustion, young trees especially being great sufferers. On the other hand, by discreet thinning, health and vigour are maintained, accompanied with regularity of bearing, and the fruit thus produced, being of good quality, is of far more service and value than are the inferior produce of over-laden trees.

Soon after their flowering season trees cast their defective blossoms and the fruit commences to swell, and thinning should then be commenced as soon as it can be seen which fruits take the lead. It is important that it be done early, for if left until the fruit is swelled to any great extent the energies of the trees are uselessly sacrificed and full benefit is not attained. Definite directions for thinning cannot be satisfactorily given; so much depends upon the health of the trees and the variety, as well as the nature of the soil and the mode of treatment they are subjected to in the way of being afforded stimulants, &c., but an observant cultivator can soon acquire knowledge

in this respect. A vigorous tree can safely be allowed to carry double or more the weight of fruit that a weakly one can, and the same remark applies to branches; indeed, much may be done to regulate defective balance in the growth of trees by attention to this matter. Apples and Pears growing under favourable circumstances may carry one or two fruits to each spur, placed at the usual distance apart. Apricots in satisfactory health may have their fruit left 4 inches to 5 inches apart, and Plums may be correspondingly closer together. Fruit required for special purposes should, however, be more severely thinned. In all cases fruits that are perfect and taking the lead in swelling, and so placed as to derive the full benefit of air and sun, should be left. THOS. COOMBER.

AN ARTIST'S NOTE-BOOK.

HARDY LADY'S SLIPPERS.

(CYPRIPEDIUMS.)

FOR a cool and shady as well as sheltered spot in the garden, the whole group of hardy *Cypripediums* is of the greatest interest. Their beauty being of no mean order, it is little wonder that these things attract attention even from the ordinary observer. So recently as the Temple Show a charming lot of these plants, in the exhibit set up by Messrs. Wallace and Co. of Colchester, was literally besieged by an admiring throng. To those who were making acquaintance with these plants for the first time it came as a sort of revelation to discover that the entire group were perfectly hardy in the open garden. There is, perhaps, only one weak point in an exhibit of these plants at this season of the year. It is this, the plants, being grown under glass, and so produced earlier than is their wont in the open air, are, under sized, both as regards flowers and foliage. Under the more natural treatment in the open garden much finer blossoms may be expected, and of course with years a greater profusion also.

The pretty group at the Temple Show was also suggestive of the way in which such things should be grown in the garden, *i.e.* in one little colony as it were, specially chosen, and duly prepared for their reception. Plants such as these, full of interest, which closer inspection or longer acquaintance is sure to increase, are surely worthy of a special plot to themselves, where all that is needed for their well being may be provided. Happily, too, for those who grow them, most of the more showy sorts are the least exacting in their

tastes. This may not be so in every instance, but, speaking broadly, the finest kinds require the least care. Some of the rarer kinds arrive in such poor condition in this country that it is almost impossible to persuade them to thrive. Such as these, however, I will deal with separately, and now direct attention to those kinds that almost everyone delights to grow and may grow with ease.

Position is an important item, and I think it a better plan to group them in one bed than to plant in prepared soil in small batches in the rockery or elsewhere. For preference, a low-lying spot that will attract some of the surface rainfall is generally good. If in such a place that only gleams of sunlight penetrate to it, without rendering it dry and hot, so much the better. It is better to select a spot with somewhat distant evergreen shade or that of trees that early come into leaf, than to hit upon a position where a 9-foot wall or other building may be supposed to provide a similarly snug retreat. There is a wide difference in these, one is cool, fresh, and breezy, the other chilly

and altogether sunless, and, therefore, least likely to bring success in its train. Having fixed upon the position, it will be necessary to remove the original soil a foot or so deep, and to replace it firstly with a few inches of drainage and the remainder of peat and good leaf-mould. Drainage may be composed of brick-bats or clinkers, and is only necessary where the soil is of a clayey nature. In the case of gravel subsoils the drainage is usually perfect naturally, and cannot well be improved. In such instances, therefore, the excavated depth may be modified, for these hardy *Cypripediums* are not deep but shallow rooting subjects. Rough peat and good leaf-soil in equal parts with sand and charcoal, and if at hand some old Sphagnum Moss, may also be incorporated. The latter is helpful in retaining moisture.

In planting a bed wholly of these things, a good plan would be to make a central figure of *C. spectabile*, the finest plant of the whole family, and then follow by arranging smaller groups of the others around. With the exception of *C. Calceolus*, which has a liking for calcareous loam or clay, most kinds will succeed in the mixture above named; indeed, of not a few kinds it is rather a question of good plants than of this or that soil. Given good plants, and these planted in late autumn or as soon as procurable, there is reasonable hope of new roots being emitted from the base of the crown, and upon this much, if not all, of the future success depends.

The following are the best and most useful kinds, placed in order of merit as garden plants: *C. spectabile*, *C. pubescens*, *C. Calceolus*, *C. parviflorum*, *C. occidentale*, *C. acule*. From this list that unique species *C. macranthum* is absent, for I have yet to learn that, as I have seen it stated, it is as easily grown as *C. Calceolus*. It is, however, a lovely thing, and worth many attempts to make it a success. With respect to planting these things, I should like to remark that *C. spectabile* is often procurable in large masses, containing as many as half-a-dozen leading crowns. Such pieces naturally possess a huge mat of roots, and to keep these quite fresh must ever be a chief point. The fresh roots are of a yellow colour, the old or dead and useless ones being nearly black. The latter in planting should be cut away quite close, and when fixing the plant in position take care that all good roots are spread out thinly in a horizontal fashion, that the finer portions of the soil are worked well between them, and finally that all firming be done with the fingers. This is rendered necessary because the



TWO HARDY CYPRIPEDIUMS, *C. CALCEOLUS* AND *C. MONTANUM*. (From a drawing by H. G. Moon.)

usually plump crowns are very deftly hidden in the mass of vegetable matter, and any attempt to firm with the foot or in any similar way may be attended with serious loss. The same remark does not apply to other species for the simple reason that the plants unfortunately do not as a rule come to hand of such a large size. *C. acule* is usually only in single crowns, and in planting this it is best to sink a piece of sandstone and firmly press the crowns against the side of this. This is very dwarf, rarely more than 6 inches high, but it is very handsome. In the matter of soil *Calceolus*, *pubescens*, and *macranthum* may be treated alike, all these preferring calcareous loam mixed with the soil, and liking this rather drier than *C. spectabile*, which may be treated almost as a bog plant. This is a matter easily arranged even in the same bed simply by keeping the last-named in a slight depression. A covering of 2 inches is quite sufficient above the crowns. Most kinds are late starting into growth, which may save fear or anxiety for their welfare.

C. spectabile has very bold flowers of white and rosy pink, large leafy stems, and attains a height of nearly 2 feet, often bearing two flowers on a stem. It is a North American species. *C. acule* has rose-coloured flowers. *C. pubescens* is yellow, very fine and free. *C. parvillorum* is a small yellow kind, with brownish sepals as in the last-named. *C. Calceolus* is known as the English Lady's Slipper, and is somewhat similar to *C. pubescens*, but the yellow lip is paler. This and *C. montanum* are represented in the drawing that accompanies these notes, the latter having pretty and delicate flowers of a rosy white. This is also known as *C. occidentale*, and is a very charming plant. *C. candidum* is the whitest of these hardy sorts, but is very rarely seen in good condition. *C. macranthum* is a lovely Siberian species, rich crimson-purple, with crimson veins. The sepals are very long and only slightly twisted, the pouch of the lip being much extended at the base, narrowing in the upper parts, while the margin is distinctly frilled, as is the case in *Cephalotus follicularis*. It is a superbly coloured form, and one of the gems among hardy plants.

Not the least interesting feature is that these plants flower over a somewhat prolonged season when grown naturally in the open, the large North American kind flowering as late as July. It is worth noting, also, that the same conditions of soil and position are suited to many other plants, so that a special bed may be utilised to the full. *Dentarias*, *Trillium grandiflorum*, *Orchis foliosa*, and *Adiantum pedatum* are some of these, while among bolder flowers that will carry on the display for a longer period such Lilies as *spetalum*, *paradatum*, and *Canadense*, are worth including where space permits of such being employed.

E. H. JENKINS.

IRIS KOROLKOWI.

IRIS KOROLKOWI is a beautiful plant, and it is difficult to say too much in its praise. It was brought from Turkestan to St. Petersburg in the year 1870 by General Korolkow, from whom it has derived its name. It belongs to the subgenus *Regelia*, according to the arrangement of Sir Michael Foster, and it comes very near to, though it is not identical with, an *Oncocyclus* Iris.

The two groups are grown in the same way, and no distinction on this head between them



IRIS KOROLKOWI.

(From a drawing by

H. G. Moon.)

is necessary. Of the two, according to my experience, the brises of the *Regelia* group are easier to manage than *Oncocyclus* brises generally are. When it is established *I. Korolkowi* makes progress at a great rate, and I have found that it hugs the side of the frame in which it is placed very closely indeed and seems to like the position. Like all the rest of these plants, *Iris Korolkowi* should have a very sunny situation with good drainage, and be kept absolutely at rest during the summer months. In spring, when it is growing again, it is all the better for a good deal of water. I may perhaps mention here that a friend of mine, Mr. Blair Cochrane, of Oakleigh, near Ryde, who takes a great deal of interest in these things and grows *Oncocyclus* and other Irises with great success, is of opinion that they are benefited by a large infusion of bone meal in the soil. He has certainly had some very fine flowers this spring, and he attributes their size and exceptional beauty to a thick layer of bone-meal which was put under the plants. I have not heard of such practice before, but I believe that he is quite right in his idea, and at any rate I intend to put it to the test as soon as I can.

Mr. Baker's description of *Iris Korolkowi* runs in part thus: "Stem one-headed, about 1 foot long, bearing a single reduced leaf; spathe, one to two-flowered, 3 inches to 4 inches long; outer valves membranous, green, lanceolate, ventricose; pedicel short. Perianth-tube 1 inch long, cylindrical; limb, 2½ inches to 3 inches long, in the type milk-white, veined with red-

brown; falls reflexing from halfway down, with an oblong blade, with a brown patch at the throat and dark brown beard; standards as long and as broad, erect, oblong-mucronate," &c.

There are three or four varieties, *leichtliniana*, *venosa*, *violacea* and *concolor*, all of which are beautiful, and the last exceptionally so.

H. EW BANK.

GARDENING OF THE WEEK.

CHRYSANTHEMUMS.

ARRANGING the plants in their summer quarters will now engage the attention of the cultivator: fortunate indeed are those that had not done so previous to the first day of the present month, which might well have been mistaken for the 1st of March. For some years I have noticed we are almost certain to have a spell of stormy weather near the last week in May or the beginning of June, and unless the weather is exceptionally genial and settled when the plants are finally potted, a sheltered spot should be found for them. This will apply to all sections, and at all seasons when repotting is carried out. They may be stood pretty thickly together in beds, and kept frequently syringed, and after the watering in has been thoroughly done the summer quarters must be allotted them. Much difference of opinion exists among growers as to the form in which the plants should be arranged, viz., whether in beds on a square or oblong piece of ground, or placed in rows alongside the garden paths. I certainly favour the latter style, if the situation will allow, as, unless a large amount of space can be devoted to them, the plants shade each other when arranged in large beds, and are not so easily attended to. Whatever plan is determined upon the position must be an open and sunny one, especially with the Japanese section, for unless the wood is thoroughly matured high class flowers need not be expected. On the other hand, many of the incurved section will not suffer to the same extent, in fact I have known first rate exhibition blooms produced where little sun had been able to reach them during the summer, so that the most favourable position should always be afforded the Japanese, Anemone, and Reflexed types. The pots should always be stood on boards or slates, and made perfectly level. The distance between each plant must be determined by the room at command, but in no case should the pots be placed closely together: as much space should be given to each plant as possible.

The rows will require to be made thoroughly secure against wind, and the longer the rows the more substantial must be the supports. Strong, neat, wooden posts, painted green, are best, and should be placed at frequent intervals in each row. Stout tar cord is much to be preferred to wire, and four or five rows stretched along will generally prove to be sufficient. It should be well tied to each post, so that in case of these breaking only a few plants will be affected instead of possibly the whole row. The string will naturally stretch and give, but little harm will accrue. Much more serious results will follow if the supports are too rigid, and this is often the case when wire is used: instead of the plants giving with the wind, the points will snap off, especially when strong and well grown. See that each shoot is tied loosely so that the growths do not become crippled.

Specimen plants ought now to be established and growing away freely in their flowering pots. Attend to their necessary training before the shoots become too long and stiff. The foundation of the plants should be formed as early in the season as possible, and the stopping cease immediately sufficient breaks are secured to enable the growth to become thoroughly matured. Weak manure water should be frequently given after the pots become filled with roots. Large specimen Chrysanthemums are capable of taking up a very large amount of manure-water, owing to the large quantity of foliage and blooms which they have to maintain, which should be of high quality, and without which they are of

little merit. Pompons and Pompon Anemones should be transferred from 6 inch to 8 inch pots, potting firmly in a similar compost as advised for the large flowering sections, and these may yet be stopped once more.
E. BECKETT.

Aldenham House Gardens, Elstree, Herts.

KITCHEN GARDEN.

FRENCH AND RUNNER BEANS.

THE early-sown crop of French Beans in many gardens made slow progress owing to the cold weather experienced in May, and those who need this vegetable in quantity would do well to make another sowing for late supplies; indeed, it is well to sow every month from May to August to keep up a full supply. Beans should have a well-enriched soil, deeply worked, and an abundant supply of moisture during growth, and I find in a light soil it is advisable to sow them in deep drills, with a liberal quantity of manure at the bottom of the drill or trench. Another sowing of Runner Beans should now be made for the late supply, and ample room must be given, as at this date nearly every seed will germinate, and both Kidney and Runner Beans are often too much crowded in the rows. By making a late sowing of Kidney Beans now the plants will fruit freely till cut down by frost in the autumn, and the same advice holds good as regards a good root-run, as advised for the dwarfier section. Those who have not yet given the new climbing French Beans a trial should do so.

TURNIPS.

Those sown earliest were, in our case, badly injured by 14° of frost when just pushing through the soil, and the later sowings have thus early in the season suffered badly from drought and cold north-east winds. With genial weather later sowings should be more successful, but it will be well to sow again for July and August supplies, and a cool but open site should be selected. We find a north border good for the season named, but a great deal depends upon the locality and soil. In the northern parts of the country the above advice would be out of place, as, with a well-tilled soil, an open, sunny quarter would be preferable. Few Turnips are superior to the Snowball for use direct from the soil, this being of rapid growth; on the other hand, in thin soils or gravel, I would advise Red Globe for early autumn use. In late localities, also, I would advise a good sowing of the last-named, and as land is cleared it should be prepared for the crop. Those who like the yellow-fleshed roots, and these will thrive where others fail, should now sow Yellow Perfection or the Golden Ball; both are excellent varieties and keep well, and the flavour is delicious. The yellow varieties are much greater favourites in the north than the south, and doubtless their good keeping properties commend them. Those who like the French type will find White Gem, an oval root, one of the best.

CARROTS.

For some years there has been a tendency to produce more variety in vegetables and better quality, and the old method of sowing Carrots, once a year in the spring, is not so much practised, as by making several sowings better quality is obtained, though the size may not compare with early-sown roots. I always make a liberal sowing of Carrots either at the end of June or early in July, and in later districts I would advise the earlier date. By sowing at the season named the roots may be wintered in the ground, and of course to allow of this the soil must be free of pests, such as worms, slugs, and grubs, and it will be well to give a thorough coating of lime, soot, or burnt refuse; indeed, to be on the safe side, we place the latter in the drills before sowing, and treated thus the roots are clean and good till April of the next year. A freshly drawn root is preferable to large ones stored, and tender young roots in the spring are a welcome addition to the scanty list of good vegetables in season. I do not recommend the long-rooting kinds, the best are the Shortton section, such as Early Nantes, Early Gem, and Mod. The latter two varieties are specially good

for the purpose, as they retain their bright colour better than others, and have very little hard core. Both are very hardy and reliable.
G. WYTHES.

INDOOR GARDEN.

CYCLAMEN.

AUTUMN raised seedlings will now be ready to transfer into 5-inch pots, in which some of the plants may be flowered, though the stronger ones will give a better display if potted on once more. When the pots they are now shifted into become full of roots, a suitable soil is that composed of half loam and a quarter each of leaf mould and decayed horse droppings. If vine weevils have been troublesome in the garden in former years, the greatest care should be taken that none of them infest the soil used for Cyclamen, for they eat away the roots and the undersides of the combs and render them useless. The young plants may be grown on in a pit with a temperature of about 55° at night, keeping up a fairly moist atmosphere and syringing freely once or twice a day, according to the weather. After potting, the ventilation should only be slight, though continuous, until the plants get over the check received, and shade should be given during greater part of the day when the sun is shining, but they may be gradually inured to less shading and more air, though it is wise to shade more or less all through the season, and especially on parching windy days. Fumigate the plants frequently to prevent fly or thrips establishing themselves; cleanliness is of great importance. Old plants which have flowered and are considered worth retention may be placed outside in the shade of a north wall and allowed to rest for a while, keeping the soil on the dry side for several weeks. Young plants from the spring sowing may be potted on when they have made two or three leaves, and treated in the same way as those sown in the autumn or late summer last year.

COLETS.

The main batch of plants should be growing in an intermediate temperature in a moist house, the plants being stood on shell-shingle or ashes, which should be always kept damp. No shading should be used, as with a good supply of water the plants colour better without it and are just as fine in the leaf. To grow big specimens a further shift may be given, using a rather light and rich sandy soil. To provide small specimens for autumn use more cuttings should be put in; these root readily if placed for a few days in a propagating box in gentle heat.

CROTONS.

To develop a good colour as well as length of leaf and general good health these need to be grown with their heads fairly close to the glass in a light house. They enjoy moisture in the atmosphere and may be freely syringed twice a day, the house being also damped down frequently. Under such conditions thrips and other noxious insect pests will not thrive. More cuttings, taken from the tops of plants which are getting bare at the bottom, should be put in to supply nice material for table work during the winter months.

BASKET PLANTS.

The various flowering plants used for basket work are more liable from their position to become starved than are plants in pots on the stages; and as most of these, such as Achimenes and Thunbergias, will have filled their baskets with roots they must be fed frequently with weak manure water, choosing for the purpose cow or sheep manure, which is cooler than even weak solutions of concentrated manures and more lasting in its effects.
J. C. TALLEY, N.

Shipley Hall Gardens, Derby.

FRUIT GARDEN.

MELONS.

IN a former calendar advice was given to sow seeds of free-setting varieties for raising plants to plant in frames on hotbeds that have been previously used for Potatoes and Carrots, and for propagating bedding plants, there being sufficient warmth in the hotbed for this second crop if it was well made at the beginning. In most seasons Melons

of first-class flavour may be grown in this way. Melons will grow in the same soil that has done service for vegetables, but if it is considered to be too light some loam may be added. The soil should be trodden very firmly. Form the soil so that it is highest along the centre of the frame, falling slightly to the back and to the front.

Before planting see that the plants are quite free of insects; if there are signs of them dip the plants in an insecticide, lay them on their side and syringe with clean water. Plant along the centre of the frame on small hillocks, two plants to a light.

After planting afford water, and when the roots have taken hold of the soil take out the point of the plant, leaving two joints from which two shoots may be expected to be emitted, one to grow towards the back and one to the front of the frame. When they have grown to these limits take out the points to induce the growth of side shoots, the greater number of which most likely will show fruit.

During their growth afford water, warmed from exposure to the sun, as often as necessary, and on fine days, when shutting up, damp the surface of the soil and the sides of frame. This should be done early in the afternoon so that the temperature rises to 90°.

In the fore part of dull days give a little ventilation at the back of the frame to dry the foliage, and on bright days sufficient to prevent the foliage being burnt.

For three months from the present time the warmth from the sun is sufficient in most seasons to ripen Melons well. From the beginning they should be grown under healthy conditions so as to have clean, healthy foliage until the fruit is ripe. Those plants on which fruit is beginning to colour may have a reduced supply of water, but not so much as to cause the foliage to suffer, and syringing may be discontinued.

The time to cut the fruit is when the stalk has cracked round from the fruit. In cutting, an inch or two of vine should be left behind and in front of the fruit stalk, as this gives a Melon a finished appearance when on a dish. After being severed from the plant the fruit should be kept in a warm room for a few days to thoroughly ripen.

Other work at this time is to water liberally when fruit is swelling, and to syringe thoroughly once on fine days. Give less water to plants in flower, maintain a drier atmosphere, and go over them about noon daily to fertilise the flowers. Go over Melons as often as twice a week for stopping and tying. Make another sowing to give ripe fruit by the end of September.

CUCUMBERS.

Cucumber plants are very accommodating, requiring liberality with consistency to obtain the best results during the warmer part of the year, small and frequent top dressings of light, rich soil, abundance of moisture at the roots, and in the atmosphere a high temperature, with frequent attention for taking out old wood and leaves, stopping at three joints, tying in young growths, and taking out surplus growth. Cucumbers, too, may be grown in frames on hotbeds previously used.
G. NORMAN.

The Gardens, Hatfield House, Herts.

THE FLOWER GARDEN.

THE chief work in this department will now consist of clearing up and making tidy every part of the flower garden and pleasure grounds, so that on completion of the bedding everything in connection therewith will present a tidy and workman-like appearance. For however successfully the pleasure garden may be arranged, or however good the quality of the various subjects used, unless a pleasing finish follows, the enjoyment to a great extent will be marred. Such things as Heliotrope, Iresine, Verbena, Mesembryanthemum, and Alyssum should be neatly pegged down, and all necessary staking should at once be done in a neat and pleasing manner. The surface of the beds and borders should be pricked over with a small hand-fork, and on light porous soils a thin dressing of Cocoa-nut fibre will assist the growth of the plants materially, especially in the case of Begonias, both

tuberous and fibrous rooted. Early in the evening and each day during the dry weather the plants should be watered over head with a rose watering-can, avoiding the use of water that comes direct from the service-pipes.

Creepers of all kinds will require to have their growths regulated and to be tied in frequently, particularly such free-growing plants as Clematis, Loniceras, and Vitis of sorts. The Rose garden will shortly be a centre of attraction, and every inducement should be given to its occupants to produce not only a wealth of blossom but blooms of the highest quality. The beds should be liberally mulched with half-decayed manure if the best results are to follow, especially so with those newly planted, and copious supplies of water applied both to the roots and overhead. Dryness at the root is most favourable to the spread of mildew. Syringe the plants frequently with some approved insecticide to hinder the growth of aphids. The style of planting one variety only in a bed now so frequently adopted has much to commend it, for not only is the effect produced much more pleasing, but the old way of mixed beds is generally most unsatisfactory, owing to the different habits of the various varieties employed.

Pillar Roses deserve to be planted in much larger quantities than is usual, for when planted about the shrubberies they are most charming. I have found nothing so suitable as ordinary Larch poles, which will last for years, allowing from 12 feet to 15 feet above ground-level; these when well clothed are objects of much interest, and except tying in the shoots, syringing the foliage with insecticide three or four times in early summer and mulching with good manure, they give but little trouble. Many indeed are the varieties which lend themselves to this treatment. The whole of the fragrant Penzance Sweet Briars are admirably suited for this purpose, if liberally treated; in fact, I know of no way so suitable for them. The well-known Turner's Crimson Rambler and Paul's Carmine Pillar are also excellent, and large masses of these when in full flower standing out among the shrubs present a sight not easily forgotten. I mention these few only as they are certainly among the best we have for this treatment, but there are many others of equal value suited for the purpose, and very many of our hardy creepers are also admirably adapted for the same use. Among these are the more hardy kinds of Clematis, and especially the Jackmanii varieties, the new hybrid forms of cœcinea, Duchess of York, Duchess of Albany, and Countess of Onslow, also montana and Flammula, Akebia quinata, large Dutch Honey-suckle, Aristobelia Siphio, and many others. Among annual creepers the charming *Mina lobata*, very fine when treated in this way, *Humulus japonicus* and *Ipomeas* of sorts all make delightful pillars, and in small gardens where space is limited the most of it can be made in this way. Also in large grounds about the shrubberies, &c., are these equally well adapted, and by their use many of our gardens might be made more pleasing and attractive.

H. BECKETT.

Albion House Gardens, Elstree, Herts.

ORCHIDS.

THE most critical season of the year in the successful culture of *Miltonia vexillaria* is that which immediately follows the flowering. There are scores of plants that have been carefully nursed and grown into specimens which have been practically destroyed from want of due regard to their requirements immediately after flowering. They do not rest for a prolonged period, but there is a short time between the period of flowering when the plants may be regarded as practically at rest, and to successfully grow this species the plants must be kept in a fairly dry condition at the roots. We keep our plants in practically a dry state at the roots for some weeks, until the new growth is about 3 inches or 4 inches long, as we find the moisture from damping the floors and staging is sufficient to retain the plants in good condition. The house is also freely ventilated night and day, and every precaution is taken to guard against excessive moisture and the dreaded

damp, which causes the plants to decay at the base. Many of these cases I have known to occur in a single day following that in which the plants have been watered. Care must also be taken to remove the flower spikes sufficiently low down that there is no possibility of the part remaining conveying moisture in its decay to the base of the growth. Leaves also, or the portions of them that have not been removed, in their decay are instrumental in conveying moisture to the base, and should have every attention. In the warmer division of the East Indian house the *Aerides* are commencing to expand their flower racemes; one of the first is the lovely *A. Fieldingi*. These will be quickly followed by the more delicately treated *A. Lobbi* and the *A. Macalotone* section. If the plants of these sections are removed to cooler conditions they retain their flowers in perfection for a much longer period. The dwarf-growing characteristics of these species renders them suitable subjects for basket culture; they may thus be suspended, and their flowers are displayed to better advantage. The larger growing section of *Aerides* are also producing their flower spikes, and where they have become unduly heavy and need support a neat green painted stick should be attached to each before the flowers commence to expand or the graceful characters of the racemes will be removed. Another species in this division which is just expanding its flowers is *Vanda Paresii*, with its greenish yellow and brown flowers, and the variety *V. P. Marroctana* with its rich purple and rose tinted racemes. This species is not sufficiently grown. The plants succeed best grown in baskets and suspended near the roof glass. They should not be allowed to suffer from want of moisture at the root at any season of the year. The shaking of this division must be carefully attended to, and during bright weather, especially when drying winds prevail, frequent damping of the floors, syringing between the plants, and a highly humid and growing condition should be maintained during the coming summer months. With dull conditions, due consideration must be given to the cool night temperature, and the moisture should be reduced accordingly.

H. J. CHAPMAN.

CHAMÆROPS FORTUNEI IN FRUIT.

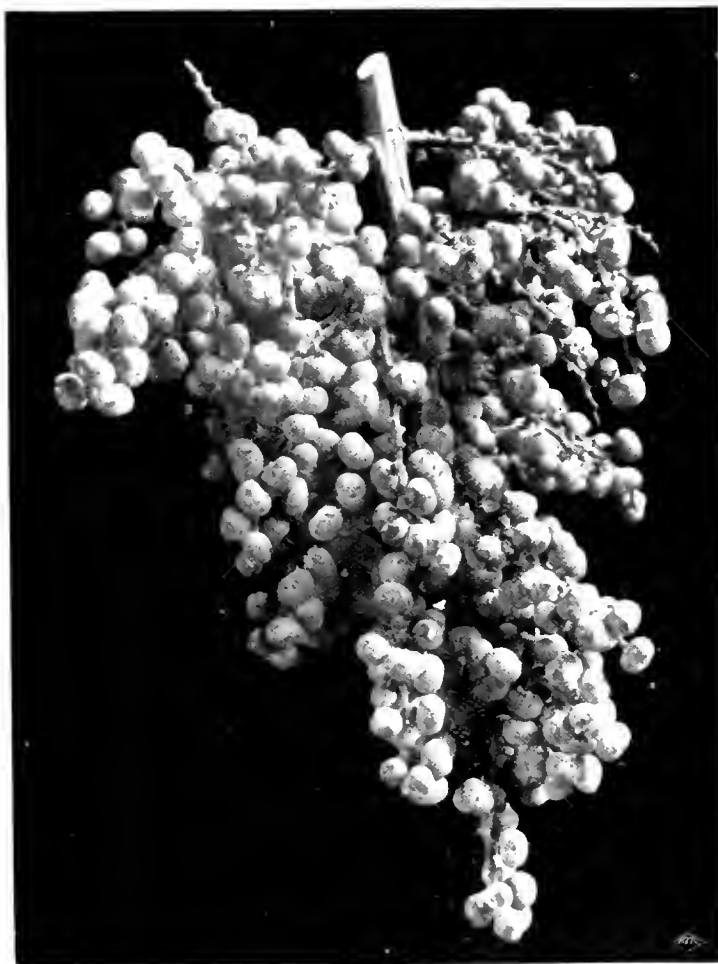
IN Mount Usher Garden, Co. Wicklow, there are several large old plants of this Palm in vigorous health in the open air which have annually produced flower spikes for many years. Last summer the gardener observed that some bore male and some female spadices. The latter were accordingly fertilised, with the result of an enormous crop of fruit, resembling small Grapes with a hard central core. The annexed illustration represents a small fragment

of a bunch brought to the writer by Mr. Walpole, who informed him that it was not more than one-sixth of the entire panicle.

GREENWOOD PIM.

A LETTER FROM HONG KONG.

MANY flowers and vegetables which are grown at home during the summer may be grown with equal success in Hong Kong during the cold season, which is from October to March. As soon as there is no danger from typhoons, which is, generally speaking, about the end of the first week in October, seeds of both flowers and vegetables may be sown. Ants are a great nuisance, and unless precautions are taken to keep them away from the seeds the gardener's



FRUIT OF CHAMÆROPS FORTUNEI.

labour is in vain. In the vegetable garden a good plan is to get a small stream of water to run round the beds, taking care to see that all ants are first removed from them. If, however, a stream is not to be found in the neighbourhood, some narrow strips of wood, with their lower edges inserted in the ground and their upper ones tarred, placed around the seed beds will answer the same purpose. Jeyes' fluid is also a good thing to use for keeping these pests away. Seeds sown in pots, pans, or boxes are much more easily dealt with. One simply needs to fix up a temporary or permanent table with its legs standing in water and place the article the seeds are sown in on it. By not attending to these things many amateur horticulturists get very disappointing results. They

watch day by day and week by week expecting to see the seedlings appear, whereas, as a matter of fact, there are no seeds to germinate, the ants having made a meal of them soon after they were sown.

Another reason for failure in the tropics is that the seeds are often hard when they are sown. In a tropical climate extreme care has to be taken with seeds to keep them free from moisture until the time of sowing, otherwise premature germination sets in and they lose their vitality. In ordering seeds from Europe it is advisable to have them specially dried and packed in air-tight cases. On their arrival in the tropics the cases should not be opened until the day the seeds are to be sown. When the seeds have germinated great care has to be exercised to prevent the seedlings damping off. This is on account of the high temperature in which they are grown compared with that to which the same varieties are generally accustomed. As the temperature lowers the seedlings become stronger, and with careful attention the cultivator is able to produce as good a show of flowers and vegetables as anyone could wish to see.

The Chinaman makes a very successful vegetable gardener as a rule—but his methods are open to criticism from a sanitary point of view—if left to himself. The secret of his success is night-soil, but I am afraid that if the Europeans saw the manner in which he often applies it they would never relish their salads again. The night-soil is put into a tub and water added to it. After it has stood for a week or two it is ready for use. John then fills his cans and proceeds to water his vegetables. This he does by watering everything overhead: Cabbage, Lettuce, Watercress, and, in fact, all other vegetables and salads are watered in this way. The wealth and prosperity of a Chinese market gardener may be estimated from the number and size of his night soil tubs or tanks. In preparing vegetables for market, too, the Chinese are not at all particular as to the kind of water they use for washing their produce. I have seen one man washing his vegetables, another washing his clothes, and yet another bathing, all in one pool of water. Of course, if a garden is under the supervision of a European everything is very different, and no one need have any hesitation in eating salads from such a garden.

FLOWER GARDENS IN HONG KONG.

are very scarce, and those who have them have to be content with very small ones, as land is too valuable for such luxuries. Nearly everyone, however, who has a verandah tries his best to grow a few pot plants, and in many cases the results are highly creditable.

Of flowers grown I might mention Verbenas and Phlox Drummondii, both of which make grand masses of bloom when grown in quantity. Dianthus Heddelegii, a rival of the two preceding, African and French Marigolds, Calendulas, Nicotiana glauca, Antirrhinums, Sunflowers, Tropaeolums, Mignonette, Coreopsis, and many others generally do remarkably well.

Amongst vegetables, besides those previously mentioned, Brussels Sprouts, Carrots, Beetroot, Parsnips, Tomatoes, Prickly Spinach, and Vegetable Marrows may be named as a few which give satisfactory returns to the cultivator. Mustard and Cress, Watercress, and Tomatoes may be had all the year round, but they do much better through the cold season than through the summer. As the winter season is the dry time of the year great attention has to be paid to watering, and although the Chinaman when growing for himself manages this very satisfactorily, he will not do it when

employed by a European, unless well looked after. This is one of his characteristic features. He will work like a nigger for himself, but he will do as little as possible when working for anyone else. Supposing one has a piece of work to be done and offers a Chinaman 30 cents a day to do it, he will grumble and say it is not enough. Tell him, then, that you will give him so much to do the job and he is quite satisfied. You know perfectly well that he cannot make more than 20 cents a day out of it, and that he will have to work pretty hard to make that. As I said before, he is satisfied, and, of course, you are. That is only one of his peculiar ways. There are innumerable others, but I will reserve making mention of them until a future occasion. W. J. TUTCHER.

Botanic Gardens, Hong Kong.

LATE FLOWERING GARDEN TULIPS.

ONCE upon a time the florist's Tulip was carefully grown and dug and stored in neatly-made pigeon-holed boxes under numbers until Lord Mayor's Day or November 9 every year, when they were duly restored to the deep-dug beds prepared for them, where they were later on covered with canvas awnings under which they bloomed the succeeding spring.

Beautiful indeed they were, and one could well understand the florist of the old school who loved and almost worshipped them when in the full tide of their beauty. But all things of beauty in the plant world have a knack of habit of flowing over, from the gardens of the florist or of the rich amateur into those of their poorer neighbours, and so the florist's Tulips appeared in the cottage gardens, where, although not named or numbered or dug and stored annually, they thrived apace and formed large colonies and appeared year after year. To the cottager it did not matter if a variety "ran out" or became splashed or streaked at the base, or otherwise different to the acknowledged standard of colour and markings. They came up and bloomed in April or May every year, and that was enough; the cottager and his wife were proud of them, and felt a glow of pleasure when visitors leaned over the blue-green palings and admired them. In some parts of England you may see them to-day coming up in all sorts of places, as the bulbs get shuffled about unconsciously in the summer time when a few bedding plants are put in.

Mr. Peter Barr and myself were in the Isle of Wight together a year or two ago, and in a small garden almost under the shadow of Carisbrook Castle we came on a glowing little garden full of these old late Tulips in flower. There were all sorts mixed up together and of nearly all colours, selfs, striped, flaked, splashed, and the sturdy old self purples shot with chocolate, and some pure browns with yellow edges, which I have heard called "treacle Tulips" by village dunes, and all were good to see. So Barr and I leaned over the low palings and admired, until their owner came out in a brilled sun bonnet and invited us to take a closer view. She fetched a spade and said she would give us "some roots," but we explained that we were on a journey and could not well take them with us, at which I am sure the good old soul was greatly disappointed.

The garden Tulips of years ago were very often the overflow or wastrels from the florists' garden, but to-day a large number of wild species and varieties are grown, and very attractive they are. From January till June you may have Tulips in flower of one kind or another. The variety in size and colour is wonderful. *T. oculis solis* is one of the earliest, its plump buds reminding one of ripe Apricots; while *T. Griegi* flashes wide open in the early sunshine of March like an orange single Peony. *T. gesneriana*, *T. fulgens*, and *T. elegans* with their forms and phases enliven the garden with vivid splashes of colour during May, just before the *Prœmies* and *Irises* appear. *T. haitolia* with its vivid crimson red flowers and snake-like green leaves wriggling along the ground is a gen-

amongst Tulips, and so are *T. turkestanica* and the exquisite little ivory or Apricot-tinted forms of *T. Batalini*. *T. gesneriana* as a Tulip is not only tall and strong and brilliant in its wild or native phases, but varies in the garden into all sorts and sizes and colours, being the original source from which the florists' Tulips took their rise. *T. fulgens* also varies, but perhaps not so much as does *T. elegans*, from which we get such elegant kinds as "Mrs. Moon" (*T. elegans lutea*) and the pure golden yellow *T. elegans maxima lutea*, otherwise known as Princess Eva in Irish gardens. The flowers are larger even than those of Mrs. Moon, not having so much waist or restriction in the middle of the newly opened flower, and its filaments are tipped with a brownish-red dot, those of Mrs. Moon being self yellow. One of the most distinct of all the old Tulips is *T. ixioides*, an egg-shaped soft clear greenish-yellow, having a dark base and chocolate-red anthers. Some growers think it is a form of *T. elegans*, while others place it along with the multiform phases of *T. gesneriana*.

The Belgian race of self mother Tulips, or Breeders, sent out some years ago as "Darwin Tulips" contains some beautiful forms. Dark kinds, such as Sultan, Herschell, Alphonse Daudet, &c., are most striking as seen side by side with vivid yellows, such as Buttercup (Bouton d'or) or Mrs. Moon. A dark treacle-brown is Nigrette, while Henner is a rich crimson-red, and Arizona a vivid chocolate-crimson. As to the "broken" or "rectified" Darwin Tulips, lately sent out as Rembrandt Tulips, they closely resemble the splashed and flaked old florists' kinds, and so, to my mind, are not so rich and distinct as the self-coloured Tulips from which they sprang.

The old gardens throughout the south and east of Ireland have long been happy hunting-grounds for those who admire these old-fashioned bulbs, and many are the rare and distinct forms met with therein, but nowadays in Ireland we have Tulip farms established, in which thousands of bulbs, healthy and sound, are grown for sale, or out bloom for exhibition. One of the recognised holiday outings for bicyclists and others from Dublin is to visit the bulb farms of Messrs. Hogg and Robertson on the flat and sandy plain of Rush when the separate plots glow with colour during the early part of the year; in fact, the Tulip gardens at Rush now vie in attractiveness with the far-famed Rhododendrons nestling under the grey rocks at Howth. So also in the sunny south, where at Ard Cairn, near Cork, Mr. W. B. Hartland has beautiful displays of the choicest Tulips, Narcissi, and other bulbous flowers. F. W. BRANDBER.

NOTES FROM NURSERY GARDENS.

HARDY AZALEAS AND RHODODENDRONS AT KNAPHILL.

ONE of the most beautiful nurseries in the world, beautiful for its situation and its trees and shrubs, is Knaphill, where Mr. Waterer has raised those hardy Azaleas and Rhododendrons which have glorified so many English and foreign gardens and parks. We spent a cloudless June day there recently, when the Azaleas made splashes of colour here and there and the great Rhododendron bushes were laden with blossom; but something more than mere colour display is to be seen. The keen lover of shrubs will find a series of hardy Azaleas, whose splendour no pen can adequately describe, and witness a triumph of hybridisation, creating from small beginnings a race of shrubs without rival for effect when boldly grouped. It is puzzling to know why such a race is not in greater evidence in English gardens. There is need for them in many of those places given over to a selection rigidly confined to a few of the commoner conifers or trees and often the

hungry Privet and monotonous stretches of Laurel or *Rhododendron ponticum*. Knaphill on that June day seemed enveloped in colour. One walked through lanes of *Rhododendron* bushes, some a few feet in height, others, the veterans of the place, towering to 20 feet and 25 feet—living walls of flowers, which poured into the air their sweet fragrance.

Hardy Azaleas perhaps need more attention than the *Rhododendron*, as they are less frequently seen in the woodland, to which they impart such masses of colour, from brilliant crimson through salmon shades to intense golden orange.

Mr. Waterer has raised, at Knaphill, a race to which he has rightfully given the distinctive name of Knaphill Azaleas, and it was interesting to see the beautiful hybrid, Nancy Waterer, raised some forty years ago, still in the collection, and unlikely to be removed from it. Bushes of it were loaded with flowers, which individually are broad, firm, and rich orange, looking one, so to say, straight in the face, and compelling admiration for their abundance of glorious colour, like a cut Apricot. But we believe few kinds are named nowadays. It became a hopeless task to christen every beautiful hybrid born here, and in looking through the collection numerous kinds could be selected

which one would think more entitled to individual distinction than even such hybrids as those seen occasionally at the meetings of the Royal Horticultural Society.

It is impossible in these few notes to convey a true impression of the masses of hardy Azaleas at Knaphill. There are groups of one colour, a series of crimson shades, then yellow, and so forth, with an occasional mass of some tender-hued kind, and of the late flowered hybrids which carry the time of Azalea blossom far into the summer. There is no standing still in the interesting and important work of hybridisation, getting new groups that are distinct from, or an improvement upon, those already in cultivation, with hard by, maybe, shrubs of considerable height, each representing the beginning of the present splendid race. In one instance, a shrub some 12 feet or more in height, of a glowing crimson scarlet, was in flower against a purplish *Rhododendron*, a daring contrast, but quite happy, and serving to show the great value of the Azalea for enriching the park and garden in the early summer. The Azalea is not a shrub for this season only; it is picturesque in growth, tiers of shoots one upon another, and spreading out luxuriantly, whilst in the autumn the foliage changes to colours less subdued, but

scarcely less enjoyable than the flower hues of June. The old *Azalea coccinea major* was a mass of colour, and not a few of the first of the race are retained for their brilliancy, but with regard to the form of the flower they are far outdistanced by the hybrids of recent years, and the novelties that occur each season.

Mr. Waterer spares neither labour nor expense in testing the value of the vast array of hybrids in the beds at Knaphill, and each year flowers appear finer in form, with their broad, even petals, than anything that has gone before them; and how great is the range of colouring. Some are of purest white, spotless save for a suffusion and spotting perhaps of orange on the upper segments; others delicate salmon, peach, rose, crimson, scarlet, orange, apricot yellow, vermilion, and shades of all these colours. The shrubs are perfectly hardy, and require protection of a near wood or shrubbery, simply to prevent the flowers suffering from the late frosts which sometimes trouble plants of all kinds in early June. Much the same conditions that suit the *Rhododendron* agree with the Azalea, a peaty soil or loam free from limestone, and the shrubs are produced not by grafting, but by layers, which is a point of importance, and will receive more attention on a future occasion.



A RHODODENDRON WALK IN JUNE, IN MR. ANTHONY WATERER'S NURSERY AT KNAPHILL.

An Azalea garden or merely groups of the shrubs in the woodland in early summer provide a feast of colour and saturate the air with their spicy fragrance. A flash of colour, a tongue of flame, seems to shoot from the leafy backgrounds, so vivid are the crimson flowers thickly clustered on the spreading shoots. The whole place seems a garden of colour, where hybrids in variety are planted, and this is the way to derive full enjoyment from the family.

THE RHODODENDRONS

were magnificent. We walked to the summit of an upland meadow facing the nursery, and in the foreground to the landscape were the Rhododendrons making banks of colour, splashes here and there of purple, lavender, crimson, and a host of shades, as rich in their variety almost as that of the Azaleas.

One sees here many of the original shrubs, or trees we may truthfully call them, as the fine Cawtawbiense, Sappho, the beautiful lavender-flowered Lady Grey Egerton, album elegans, Everestianum, the Queen, Kate Waterer, Old Port, Mrs. John Clutton, and a host of others. But to give a list of names merely would, we are afraid, prove wearisome.

We were much interested, however, in the seedlings, of which there are as many, and perhaps more, than of the hardy Azaleas. The aim is to obtain varieties with a good leaf, of vigorous growth, and a truss of flowers that stands well up without becoming loose and bedraggled with rain. Hence the finer kinds produce great effects, and if those who plant Rhododendrons would think as much, or more, of constitution, leaf, and truss, as of the actual colour there would be fewer failures to record. If every Rhododendron had the same wonderful foliage, sweeping to the ground, as *R. cawtawbiense* we should rest satisfied, but this is unfortunately not characteristic of every variety, or even the majority of them.

We noticed a very interesting group of quite dwarf Rhododendrons, which are as yet new, but in the future should be seen in many gardens. The plants hide the soil with their dense spreading growth, relieved with flowers of various shades, some white, others pink, and colours as pure and tender. The shrubs would form good marginal groups leading up to taller things in the background. Of recent kinds comparatively, Mrs. Samuel Simpson is of note with its noble truss of pink tinted flowers, and a brilliant variety is Mrs. Charles Sargent, for which we predict a great future. Groups of this presented a solid mass of bloom. The shrub is very leafy and the flowers brilliant pink, held together in a high solid truss. Maxwell T. Masters, rose-carmine, Doncaster, intense crimson, we also noticed, and many hybrids, evidently from *R. Aucklandi*, possessing the same character as Pink Pearl, recently exhibited by Sir Trevor Lawrence, but, unfortunately, there is no question that these are tender, and therefore unsuitable for climates which favour the ordinary race.

Our illustration shows a view in the Knap-hill nursery in the time of the Rhododendron and Azalea. There are walks and by-ways lined with trees of blossom, and at this sunny leafy time a few hours spent amongst the flowers are not quickly forgotten.

A Noble Taxodium. The Hon. C. Ellis exhibited photographs at a recent meeting of the Luncheon Society of a *Taxodium distichum*, growing at Oaxaca, in Mexico, and of another gigantic tree, a native of Cambodia. The circumference of the former, at a height of 3 feet from the ground, was stated to be 443 feet, while the height was estimated to be not more than 100 feet. The native name for this tree is *Sabino*.

CORRESPONDENCE.

LILIUM GIGANTEUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I have read with much interest the communication regarding this great Lily which your correspondent "S. W. F." has contributed to pages 405 and 406 of THE GARDEN. Doubtless purchased bulbs, if they do not flower the first year, will produce through such instinctively wise procrastination much finer results, for the obvious reason that the longer they delay the more strongly will they become established, which in the case of all Lilies—and especially, I think, in that of the giant Lily of the Himalayas—is a matter of vast importance so far as regards its ultimate effect. Any bulbs of this Lily not grown in my own garden which I have hitherto cultivated flowered the first season after being planted, with the comparatively insignificant results which in a previous article I have described. The finest *Lilium giganteum* I have ever possessed was the result of four years' steady growth from an exceptionally good offset. Its offspring, I anticipate, will take an equally long period to attain to its dimensions. I am gratified to think that what I have previously written on this fascinating subject has created some interest among the readers of THE GARDEN, and I have read with much pleasure the contributions regarding the nature and attributes of *Lilium giganteum* which have come from Mr. S. Arnott, of Carsethorn, and the Rev. C. Wolley Dod. Last week I had the gratification of receiving a letter from a gentleman in Bronxville, North America, a Mr. Lloyd Ferris (quite a stranger to me, but manifestly an enthusiastic amateur horticulturist), asking for further information regarding the culture of the king of oriental Lilies; wondering if it was likely to succeed in America, where the frost during the winter months is often crucially severe on every form of vegetation; asking, also, if I knew of any book on the subject of Lilies, treating in a special manner of *Lilium giganteum*. He might possibly gain some valuable information from the late Dr. Wallace's "Notes on Lilies," which, though I read it over for the first time ten years ago, has not yet lost its freshness or attractiveness for me. He might also find instructive the elaborate article on the same subject which the great Colechester cultivator contributed some years before his death to the "English Flower Garden."

DAVID R. WILLIAMSON.

Kirkcaldie Mansie, Wigtownshire, N.B.

VINES DESTROYED BY WEEVILS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Can any of the readers of THE GARDEN inform me how to prevent weevils eating the roots of young Vines? My Vines are being completely spoiled by them.

HORTUS.

[We sympathise with you fully in the trouble you are experiencing with weevils attacking your Vine roots, as we are aware what destruction they cause, and how difficult it is to eradicate them after having gained a foothold in the vineery. Indeed, it is almost impossible to do so, and to bear out our anything but encouraging statement, we will quote the following from Mr. A. Barron's book on "Vines and Vine Culture":

"The Vine Weevil (*Cureulo vitis*), otherwise *Otiorynchus sulcatus*, otherwise *Otiorynchus vastator*, and his smaller and less common congener *Otiorynchus picipes*. The former is of a dull black colour, hard, round bodied, granulated, wingless, having six legs, a blunt proboscis, and two antennae. Its length is about three eighths of an inch, and its habits are nocturnal. The larvae are of a dull white colour, legless, curved, and of maggoty appearance, and seem to have a gregarious tendency. The pupa is soft, of a dirty white tone, and more sensitive than pupae are in general. In the larval state, living wholly underground for a period not yet ascertained, this creature feeds upon the Vine roots, and gnaws them almost to a stump, enjoying especially the

outpush of young fibres, and following every tender growth. This is the most destructive stage. Then, after about a fortnight passed in the pupal state, the weevil issues from the soil, and for several weeks perhaps feeds upon the foliage by night, and lurks about the neighbourhood by day. To strong and well established Vines this pest may do much injury; to newly planted canes and those in pots it is often fatal. There seems to be no remedy (for who can remove and burn the soil, as is lightly recommended, without destroying the Vine roots too?) except to catch the marauder in his nightly raid, and check the breed. This is done by laying white cloths or papers under the Vine stems, and throwing a bright light on them. Any weevils which do not drop, as some will do at the surprise, may generally be brought down by a sharp shake of the trellis. By frequent care of this throughout the spring and early summer, the plague may be stayed, though nothing will entirely quell it when once set up. Above all, permit no pot plants such as Ferns, &c., of tufty nature to stand near the Vines in spring time. In these the weevils harbour and pursue their evil courses, and then the female descends the pot, and the Vine roots support her issue."

Should they affect the health of your Vines seriously, and seeing the almost hopeless task it is to stamp them out, we should say it would be better to do away with the Vines, take out the border, and make a fresh start with young canes and new compost from a distance.—Eds.]

ANDROMEDA JAPONICA.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—The illustration of this charming *Andromeda* and Mr. Wilson's instructive note thereon (p. 399) should help to popularise this, one of the most delightful evergreen shrubs that we have, and one that for bringing prominently forward we are deeply indebted to THE GARDEN in the days gone by, as when it was comparatively unknown—now nearly twenty-three years ago—a coloured plate of it was issued in the journal. Between the propagation of this and its near ally the North American *A. floribunda*, I have found a very wide difference, for, whereas the last named is difficult to strike, *A. japonica* can be readily increased by cuttings. I have been very successful with cuttings taken from plants that had flowered under glass, selecting the current season's shoots when they were in a half ripened state, and inserting them very firmly into well-drained pots of sandy peat, placing them afterwards in a close propagating case in an intermediate house temperature, giving them, in fact, just the same treatment that had proved so successful in the case of greenhouse Rhododendrons. After rooting they were quickly hardened off, potted in singly into small pots, and planted outside in the following spring. Cuttings of medium vigour taken from plants out of doors will also root in an ordinary garden frame that is kept close and shaded, but of course they take a good deal longer. In its native country *A. japonica* attains to quite tree-like dimensions, for Professor Sargent in the "Forest Flora of Japan" speaks of specimens at least 30 feet in height, with stout well-formed trunks.

P.

CARNATIONS DYING OFF.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I am writing to ask if you could tell me why Border Carnations are so liable to collapse at this time of the year. Would you kindly allow me to give you my mode of culture? Towards the end of July and the beginning of August I have them layered, and every autumn I have a first-rate lot of layers (rooted). As soon as they are fit I have them detached from the parent plant, and plant them out on a piece of ground that has been well dug, with a fair dressing of well-decayed manure and a good sprinkling of lime, and as a rule these go on very nicely until the spring; and this is when the trouble begins. They keep going off, and plants remaining look very sickly. I ought, perhaps, to have said that the piece of ground they are planted in is an old Strawberry bed. If you could kindly assist me

through the pages of THE GARDEN I shall be much obliged to you, and esteem it a great favour. Since I have been here I grew a very good lot indeed for three years, but the last two years they do not seem to grow away with vigour. It is a great disappointment when I have followed the same mode of culture as I did when I had good results.

JOHN H. GEALL.

[This frequently occurs when the plants are in full growth; and it happens to plants grown in flower-pots as well as to those in the open garden. I had a sad experience with it a few years ago. The man who had charge of my Carnations had a liking for artificial manure, and applied it freely, so that the growth of some Malmaisons was extraordinary. This vigorous growth was greatly admired up to the time the growths were nearly ready to be layered, when to our infinite chagrin plant after plant died off; some died even after layering and before the layers were rooted. From that time I dropped the use of artificial manure for my Carnations; I get better layers and very few deaths—perhaps one plant in a hundred may go off. It happens the same to Carnations planted in the open garden if artificial manure is used, or if farmyard manure comes into immediate contact with the roots of the plants. Carnations like good rich soil to grow in, for it is certain good flowers are not produced from plants cultivated in poor soil. I advise trenching the ground for Carnations to the depth of say 18 inches or 2 feet. A layer of manure is placed in the bottom of the trench, and another layer 6 inches to 9 inches below the surface. The roots will soon reach the first layer, even at 9 inches, and it is not injurious at this distance. Mr. John H. Geall complains that his plants die off after being planted on a piece of ground that has been well dug, after being dressed with well-decayed manure. Now, if the ground has merely been dug the manure will be in immediate contact with the roots at the time of planting; if the plants were put out immediately after digging that would not be so well as if the ground had been exposed to the atmosphere for a month or six weeks. I also think it is a mistake to give a good sprinkling of lime with the manure. Mortar rubbish is excellent if dug into heavy soils. I advise double digging or trenching the ground so as the manure may be put at least 6 inches below the surface. This should be done some time before planting to expose the ground well to the action of the atmosphere. Omit the lime; moreover, exchange of stock is necessary; if the same stock is grown year after year in the garden the plants will degenerate. Try a change of stock, and note the difference in growth. — J. DOUGLAS.]

MARECHAL NIEL ROSES OF POOR COLOUR.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—I have a Marechal Niel Rose growing and blooming freely in a cool greenhouse; the flowers are of a pale straw colour instead of a deep rich yellow. Will you be so good as to tell me the reason and the mode of treatment to remedy this defect—if I may call it such?

J.

[This is an interesting question, and we do not think anyone has determined the reason why some flowers should be richer or paler than others. Perhaps it may be due to mere variety, as varieties differ greatly in shade, even when the plants may be growing under the same conditions. Soil and climate certainly influence colour, and we have frequently noticed how rich in colour are the flowers upon plants near the sea. From our experience pure loam gives the best results, and the most satisfactory plants are those budded upon standard Briars. We may also attribute poor colouring to indifferent cultivation and selection of shoots for propagating. There are two very common errors in the cultivation of this Rose. One is placing the trellis so close to the glass that the shoots cannot develop properly, and another is not assisting the plants with liquid manure. Let the wires for training the Roses upon be quite 15 inches from the glass, and thin out the shoots judiciously to prevent a thicket of wood. We

hope your Rose is not cankered in any way, a deadly foe to this variety in particular. —EDS.]

ANEMONE RANUNCULOIDES.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—Mr. W. A. Bilney is indeed fortunate in his successful cultivation of the above plant, which not a few readers of THE GARDEN would be glad to imitate if this were possible. The most interesting feature in this particular instance is the almost absolute indifference of the plant to any given position or soil. It is difficult to know to what to attribute this exceptional success, for we are not directly informed in the note on page 428. The only thing I can think of is the elevation, which must certainly be most congenial to its welfare; otherwise in sun or shade, or what not, it would not thrive and flower so well. Having seen it in good condition high up on chalky hills and in comparative depressions, under which a lias clay is found, and having known it to fail very often in peat, makes it a very difficult matter to select any soil as really suitable. Its unqualified success, too, at Weybridge is unusually interesting from the facts as recorded of it. These experiences alone should tempt Mr. Bilney to make much of this spring plant and to increase it by all possible means. At times fungi at its roots (rhizomes) are troublesome.

E. J.

IBERIS PRUITI.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—The plant described under this heading on page 416 is *I. tenoreana*, not *I. Pruiti*. The two species are very similar in habit, and both very useful and pretty in May, but *I. tenoreana* is the more persistent of the two in reappearing year after year by seedlings where once established. The distinctions between the species are defined in Nicholson's "Dictionary of Gardening," and more anciently in De Candolle's "Prodromus," vol. i. page 161. *I. Pruiti* (Tineo) flowers always pure white, leaves smooth-edged. *I. tenoreana* flowers generally more or less suffused with blush, leaves ciliated at the edge. Both are natives of Sicily or Southern Italy.

C. W. D.

Edge Hall, Malpas.

LITHOSPERMUM PROSTRATUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—In THE GARDEN, page 432, in answer to "W. E. Harrison," your correspondent is informed that partial shade is essential to the welfare of *Lithospermum prostratum*. It has thriven in my garden for many years in full sunshine, growing in an ordinary border, and at the present moment there are many square feet in full bloom. Your correspondent may be interested in knowing this.

T. A. S.

ANEMONE RANUNCULOIDES IN SCOTLAND.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—I was much interested in your note on *Anemone ranunculoides* in the issue of May 26. I have to record a small success with it. I bought a dozen tubers five years or so ago, and planted them in a grassy bank sloping to the south-east, but shaded and protected from wind by trees, with a wall beyond; it did not show much vigour until this year, as the usual number of blooms was from three to four, but I was charmed this spring to see about twenty-four blooms open at one time, and, judging from the foliage, all the twelve plants I put in are living. The best plant I had was very like your illustration. The situation is a dry one, the bank being composed of sandy loam thrown out of the walks on either side of it and planted thinly with trees and bushes; the subsoil is gravel. In the same situation *A. apennina* (blue and white) were open about the same time, and *A. fulgens* was holding its own. The grass in which all these things are planted is only cut two or three times a year. Delicate plants suffer more from dry south-east and east winds in spring than from frost, and my *Anemones* are sheltered from both wind and

excessive sunshine. The plant is a charming one, and if it would grow here as described by "F. A. S." would make up for many disappointments.

WILLIAM LOW.

Tighnamuirn, Monifeth, N.B.

SOIL ABOUT BEECH TREES.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—I have some very fine specimens of Beech trees growing at the bottom of a gentle slope leading from my tennis lawn. This spring, when digging out the beds for a formal garden, I had the soil (a stiffish clay) put round their roots, which were above the surface, to the depth of about 1 foot. Since doing this I have been told it will be detrimental to the trees. I shall be very grateful for an expression of your opinion.

F. W. SAUNDERS.

[You have done quite right with the Beeches if the soil put over their roots is not a pure stiff clay, and provided it is not heaped up against the trunks of the trees, but spread widely over the roots, and is sown or turfed over. The Beech roots near the surface are much benefited by top-dressings, where the fallen leaves are not allowed to lie and rot, but a dressing that will subside to about 6 inches is enough at one time; light compost and lime scraps should be added to clay. — EDS.]

TRADE NOTES.

A CAPITAL SYRINGE.

WE have received from Messrs. E. A. White, Limited, Paddock Wood, Kent, one of their "Abol" syringes to use with the excellent insecticide that goes by this distinctive name. The syringe is one of the most useful things we have seen of recent years, and the parts are all inter-changeable, the nozzle on the syringe being especially adapted for the economical distribution of insecticides, whilst the extra nozzle has a special plug with larger holes for distributing quickly considerable quantities of liquids for the general garden and in the greenhouse. There is also a bend so as to enable the operator to reach easily the undersides of the leaves where insects as a rule thicken cluster. It is very interesting to handle this syringe, for the spray may be varied from the finest dew-like drops to a very coarse or even to a plain jet. The syringe is very light, works easily, and is in every way a success. The "Abol" insecticide has now become established in our gardens, and is a valuable preparation.

THE ERIN SPRAY MACHINE.

THIS is another useful machine for the distribution of insecticides. It is made throughout of polished copper, and the handle forms a pump. To charge it the operator stands the machine in the vessel containing the liquid, and works the pump until the insecticide has been forced into the sprayer. When this has been accomplished, the air which was in the machine has been compressed into the dome at the top, and it is this air expanding which expels the liquid through the jet. There is another good distributor called the "Erinette Greenhouse Sprayer," a simple clever contrivance for distributing insecticides. We understand that these articles are in use in the Royal Gardens, Kew, the Royal Botanic Gardens, Glasnevin, Trinity College Botanic Gardens, &c., and may be obtained from the Erin Spray Machine Syndicate, Limited, 10, Lower Baggot Street, Dublin.

A NEW STRAWBERRY.

WE had few new Strawberries last season, with the exception of the Perpetual varieties or alpine; but this year, as early as June 5, we have a new fruit from the Messrs. Laxton Brothers, Bedford. It is a late variety, promises to prove of great value, and one that will follow the well-known Royal Sovereign. The last-named variety is one of the best of the Messrs. Laxton seedlings, crops splendidly, and will for many years hold its own, and the raisers

think just as highly of the new one, the Trafalgar, the variety illustrated. The plants staged at the last meeting of the Royal Horticultural Society were interesting. On forced plants there were over a dozen large fruits, and the plants were of much vigour. But as many readers of THE GARDEN will be more concerned as regards the quality of the new Trafalgar, I may mention that it closely approaches that excellent variety, the old British Queen, having its rich flavour so much desired. This new seedling would doubtless have received the highest possible award had the fruits staged been grown in the open, not forced, as being raised from two somewhat later kinds it is necessary to note its habits and fruiting qualities from plants grown in the open ground, as no test in this way can be obtained from forced plants. On the other hand, all Strawberry growers, and especially those who force, will know that any new variety that possesses such good flavour in a forced or unnatural condition should be superior in the open, and doubtless fruit from the open ground will be sent later on. The fruits grown thus will probably be firmer and more highly coloured. Trafalgar is the result of crossing Latest of All with Frogmore Late Pine, and no one can object to the parentage. Latest of All is none too vigorous, and, like many of the Pine family, all the fruits are not of such good shape as one may wish, and the points of the fruits do not always ripen up. I failed to detect this failing in the new variety; indeed, the fruits were of much better shape, and in every way excellent. Though Latest of All is not of very strong growth, it is of excellent flavour, and this is retained in the new Trafalgar, and with more vigour. This should become a standard variety, and

certainly should be a late fruiter, as the other parent, the Frogmore Late Pine, is one of the latest of the Pine family. Latest of All is not happily named by any means, as there are others much later. With me the Frogmore is the most valuable for late use, and grown under a north wall it gives fine fruit, but does not crop in our light soil any too freely. This defect, as I have previously noted, is certainly not apparent in the new variety, as the plants were cropping grandly, and if we can retain the good Pine-like quality in the new fruit there can be no question as to its usefulness. As is well known, the growth of Strawberries differs greatly in diverse soils. I have seen the Frogmore more at home in a good holding soil, and giving large, well-coloured, and shapely fruit. Both parents being noted for their splendid flavour, we should get an acquisition in the new Trafalgar. I have referred above to the excellence of the Royal Sovereign, as even in the poorest soils this is a success, and the Messrs. Laxton, in obtaining new seedlings, have studied habit, and state that the new Trafalgar is an exceptionally good grower. This will be a gain; the foliage is large and abundant, and the fruits are more inclined to wedge-shaped than conical.

G. WYTHES

REFORM IN PLEASURE GROUNDS.

IT WOULD be well to say there are many that will agree with me that much reform is needed in pleasure grounds, especially in large private gardens in the country. In many of these gardens there is little beauty in the material that adorns them, unless one is content with large masses of the commonest kinds of shrubs and trees, with many acres of grass. There is often but little change during the year, the shrub and tree life in many instances consisting of Yew, common Laurels, Box, &c., with evergreen trees. I know several places where Thorns, Laburnums, Lilacs, and things of this kind are conspicuous by their absence.

In such gardens the cutting and clipping of Yew, Laurels, &c., is a burden on those who have to keep the place in order, and in not a few places it would pay the owners to root them out, and plant the space with subjects that did not need this endless labour. I can speak feelingly on this point, knowing as I do the work that attends the keeping in bounds (without clipping) of these common shrubs. Every year I am reducing the quantity by allowing the better things to have the room. It is a pity so many of these things are planted, compared with the better kinds in new gardens. Certainly Lilacs, Laburnums, Thorns, and many other things far more beautiful are as cheap, and do not need nearly so much keeping in order. It is not necessary to obtain expensive plants to produce a good effect.

Many places may be made very attractive by allowing Rambling Roses, Honeysuckles, and things of this sort to grow over old trees, fences, &c. Few things are more lovely than large masses of white Lilac standing on the outside of

shrubberies; and the same may be said of many other things, such as Weigelas, the red flowering Currant, Scabrothias, Rosa rugosa, the large flowered Mock Orange, to say nothing of peat-loving plants or the Barberries, Olearia Haasti, and a host of other things, all cheap, and costing very little to keep. Then there are many coloured leaved shrubs, the purple Nut, the variegated leaved Acers, Cupressus, &c.

Another type of ornament is furnished by plants growing under deciduous shrubs. In many cases Snowdrops would look charming if rising out of a bed of some carpeting plant to cover the ground, and save the blooms from being splashed with the dirt. Clumps of Daffodils thrive well in open spaces at the margins of borders and beds. In our grounds we have some that do well, and our custom is to replant them every three or four years. During the last thirty years I have often thought, as I have visited many gardens, how these could be beautified by naturalising bulbs, &c., under trees, and in such positions where the grass need not be mown very early. It is seldom one sees much of this type of ornamentation in large gardens.

I am aware the same kinds will not thrive in every garden, but all observing people must see that there are but few districts in which some kinds may not be made to thrive. I know a garden in Norfolk where the winter Aconite and Snowdrop thrive wonderfully; and to see a big mass of these growing under some Lime trees on the margin of an ornamental lake is a sight to be remembered. In our own grounds in spring, some of our prettiest sights are supplied by large masses of Snowdrops, Crocuses in different colours, Daffodils, London Pride, Saxifraga granulata, Scillas, Dogtooth Violets, and common Prim roses.

J. CROOK.

AMERICAN NOTES.

CARNATION MRS. POTTER PALMER.

SOME great things have come out of the West, and it is no more than fitting that the Carnation which so good a judge as James Hartshorne considers to outclass all the varieties now highest in popular esteem should be named after the leading lady of Chicago and the West, and the representative of her sex upon the United States commission to the Paris Exposition, Mrs. Potter Palmer. This bright scarlet newcomer is a seedling, the result of a cross between Jubilee and Chicago, or Red Mrs. Geo. M. Bradt. Mr. Hartshorne raised it in the private greenhouses of H. N. Higginbotham at Joliet, Ill., in the winter of 1897-98. In speaking of it he says: "It is ideal in form, colour, stem, and freedom of bloom, and I do not know of any Carnation that can be compared with it in all its points with the exception of size, although all the flowers measure over 3 inches." It has already been certified by the Chicago Florists' Club, and that after having been exposed to frost, which put the blooms at a disadvantage as to point-scoring. The variety is said to be an extraordinary keeper. *American Florist*.

JAPANESE MAPLES.

At the close of May there are no more attractive shrubs on the lawn than the Japanese Maples, and especially is this true of two of them, the old blood-leaved *Acer polymorphum atropurpureum*, and the cut-leaved purple, *A. polymorphum dissectum atropurpureum*. These are both "blood-leaved," and make a grand display for several weeks, after which there is less depth of colour, but still enough the whole season through to make them worthy of their name.

Looking at some of these plants I was reminded of how long it takes for many plants to become appreciated. These Maples are but fairly well known, yet, to my knowledge, they have been in at least one nursery in this country for over thirty-five years. About Philadelphia they are well distributed, and they are much prized, as they present a mass of colour on the lawn when but little else is obtainable in the same line. Rhodo-



THE NEW STRAWBERRY, TRAFALGAR.

(Shown by the exhibitors, Messrs. Laxton Bros., at the recent meeting of the Royal Horticultural Society.)

dendrons flower about the time the Maples are in good display, but there are few of them of the same rich red colour.

The two sorts named above are the best for dark red foliage. The green-leaved variety will be required in a collection, as its leaves are finer than the fern-leaved beech. The leaves of *A. japonicum aureum* are divided but little. The colour is greenish yellow at first, deepening as the season advances until finally of a rich golden hue. *A. reticulatum* is green and white, not an attractive sort when by itself, but having a place when a group of different sorts is being formed. *A. ampelopsilobum* and *A. cristatum* are of a deep bronze green, and are very handsome either by themselves or planted with others.

There are various other sorts all having some merit, but the one for the nurseryman and the florist to look to for the best result is the common blood-leaved variety. It took a good while for nurserymen to get up a good stock of this sort, but by layering and grafting it is now increased more rapidly, bringing the possession of them within the means of all that own a garden.

These Maples are not difficult to transplant, even after having pushed into growth in spring. But it will be found to pay those who have them to sell to pot a few in the autumn or early spring, autumn preferably, to fill late orders for them. To many persons they are unknown, and it is only after the plants are full of fresh foliage that they are seen and desired, and then it is that the pot plant sells. A moderately shaded place on the lawn suits these plants, though they do very well in the full sun, especially if the roots are kept cool by being in grass or by being mulched. JOSEPH MEEHAN in *American Florist*.

BLUE-EYED GRASS (SISYRINCHIDUM BERMUDANUM).

Seeing large patches of this very attractive little plant growing wild last year, I was very much impressed with its beauty, so early in January I made a journey to its native habitat and transferred some to the garden, planted as a double row bordering a large Rose bed. It has well repaid me for the trouble. Even before it flowered its little tufts of grass-like foliage were very neat, and for the past month from about nine in the morning until three in the afternoon it is one mass of exceedingly pretty little flowers of a very pleasing shade of blue, and it gives promise of continuing for some time to come; but it has one drawback, it closes so early in the afternoon, and on cool, cloudy days it does not open at all. The flowers must also be enjoyed upon the plant, as soon after being plucked they close up, even if placed in water, never to open again. — GEORGE THOMAS, *New Orleans, La.*

Mr. Thomas does well to call attention to this very pretty member of the Iris family. Its habit of opening and closing at various periods of the day and under varying conditions gives it an additional interest in the eyes of those who love to note how plants behave. Another interesting member of the family is *Sisyrinchium grandiflorum*, a rose-coloured flower discovered by Douglas on the north-west coast half a century ago, but only recently brought into cultivation. *Mechan's Monthly*.

THE FRUIT HARVEST.

A DAILY paper has gleaned the following particulars from one of the leading Covent Garden salesmen respecting the fruit prospects:—

"Fruit will be exceptionally plentiful this season. Indeed, I expect it to be the biggest known for many years. That applies to all varieties with the single exception of Black Currants, which will not, I fancy, come in in very large quantities.

"But of Strawberries, Cherries, Gooseberries, Red and White Currants, Raspberries, Plums, Damsons, and Greengages we shall unless something goes wrong with the weather—have rare crops. We shall, in fact, have full crops instead of the half crops of recent years.

"You see," he added, "the fact that the trees and bushes have been bearing only half crops

of late years has set up a saving process which has rendered the trees stronger and better able to resist the vagaries of the weather. And then the spring has been kind, and the warm rains will make the Strawberries grow almost visibly.

"Of all fruits Plums will perhaps be the most plentiful, but Pears are shaping splendidly, and the early consignments of Kentish and Southampton Strawberries promise a great time for the lover of these fruits.

"But, of course," he continued, "there will be the labour difficulty to be met. Pickers may be scarce, and then the crops will suffer; but if men are few, the women and children can, at a pinch, pick well enough for all purposes.

"Yes; fruit will be both plentiful and cheap, and now all we want is the public to create an adequate demand.

"Let me tell you," said the salesman, "a curious thing about vegetables and the public. One day there will be a rush for Spinach, and next day Spinach will be dead while Cabbage will be in feverish demand.

"And, mind you, that queer change of popularity affects the whole of London. To-day it is Carrots, to-morrow it is Turnip-tops, and so on. I've wrestled with the problem for years, and I'm just as far from a solution as ever."

SOCIETIES.

ROYAL BOTANICAL AND HORTICULTURAL SOCIETY OF MANCHESTER.

THE annual Whitsuntide show of this society was opened in its gardens at Old Trafford on June 2, and remained open till June 7. The exhibits, as a whole, were an improvement on those of last year.

In the class for amateurs for a group of Orchids in flower, Mr. E. Ashworth (gardener, Mr. Holbrook), Winslow, was first with an excellent group. Mr. T. Statter, Whitfield, was second. In a similar class for nurserymen, Mr. J. Cypher, Cheltenham, was in the first place, his group being most effective. The second and third places were taken by Mr. J. Robson, Altrincham, and Messrs. J. Heath and Sons, Cheltenham, respectively. In the class for collections of Lelias and Cattleyas the first prize was awarded to Mr. J. Cypher, and the second to Messrs. J. Heath and Sons. Mr. Cypher was again well ahead in a class for ten specimen Orchids, his collection including *Lelia purpurata*, *Dendrobium nobile*, *Miltonia vexillaria*, and others. Messrs. J. Heath and Sons again took the second place.

Certificates were awarded as follows: First-class certificates to Messrs. Charlesworth and Co. for *Odontoglossum crispum* Imperator, O. c. Lady Princeps, *Cypripedium Vipontii*, and C. Chapman var. *Hatchense*; to Messrs. J. Cowan and Co. for *Cologyne pandurata* and *Cypripedium Lawrenceanum* hymenium; to Mr. J. Robson for *Cattleya Mossie* var. *Lord Roberts*; and to Mr. E. Ashworth for *Odontoglossum crispum* var. *Arthur Ashworth*, and O. *Auriana* var. *Ernest Ashworth*. Awards of merit to Messrs. B. Low and Co. for *Odontoglossum Andersonianum*; to Messrs. Stanley, Aston and Co. for O. *crispum* *Ada*; to Mr. E. Ashworth for *Cattleya Skinneri* and *Cypripedium Rothschildianum*, *Barefield* var.; to Mr. J. Cypher for *Cattleya Mossie* *Distinction* and *Lelia purpurata* *Queen Victoria*; to Mr. John Robson for *Cattleya Mossie fimbriata*; and to Messrs. J. Cowan and Co. for *Cattleya Mossie* *Beauty of Lidsmith*, C. M. *magnifica*, and C. *Mendeli* *Psyche*.

In the nurserymen's class for ten best and greenhouse plants the first prize was awarded to Mr. Cypher, who showed well-grown plants of *E. ventricosa* *magnifica*, *E. cavendishiana*, *E. affinis*, *Pimelea Hendersoni* *shetzerianum*, *A. s. Wardi*, *Bougainvillea Cypheri*, *Bedarona tulipifera* and *Azalea indica*. The first prize for six foliage plants was won by Mrs. Pease, Woodside, Burlington. Mr. James Brown was first in a class for collections of Roses and Ferns. Mr. F. W. Travers (gardener, Mr. Lee), Altrincham, was first for eight table plants, Mrs. Pease being second. Mr. Thomas Barker (gardener, Mr. Mulloy) had the best twelve *Gloxinias*. For twelve *Cinerarias*, Baron von Kroop was first, while Mr. J. Brown had the best twelve *Calceolarias*.

A fine group of *Caladiums*, exhibited by Messrs. J. Peed and Sons, obtained a gold medal. Mrs. Pease obtained first prize for a single foliage plant, and also for a specimen plant. Baron von Kroop had the best six *Adiantums*.

For thirty or more hardy herbaceous and alpine plants Mr. J. Lamb (gardener, Mr. Vickers), Bowden, took the first prize, while the second place was taken by Mr. E. Donner, Fallowfield. Mr. W. D. Thorley had the best dozen plants of the same kind. In the class for six hardy Ferns, Mr. James Lamb was first. The best collection of Pansies and Violas in pots was exhibited by Mr. T. Barker.

Mr. J. Kirk, Heaton, took the first place in classes for three hand bouquets and a bridal bouquet, and the best single hand bouquet came from Mr. J. Wilson, Didsbury.

Gold medals were awarded to Messrs. Sutton and Sons for a group of *Gloxinias*; to Messrs. Cutbush and Sons, Highgate, for Roses, *Carnations*, *Heaths*, &c.; to Messrs. Kelway and Son, Langport, for a fine collection of *Ponies*; to Messrs. Waterer and Sons, Bagshot, for *Rhododendrons*; and to Messrs. Charlesworth, Bradford, for a grand exhibit of Orchids.

For a group of 300 superficial feet Mrs. Pease was a good

first, while the Earl of Ellesmere was second. Mr. G. B. Blair was first with a group of 100 feet. In a class for groups of 200 feet for nurserymen, Messrs. R. P. Ker and Son were first with a pretty arrangement of *Liliums*, *Rhododendrons*, *Palms*, *Crotons*, &c.

ROYAL HORTICULTURAL SOCIETY. SCIENTIFIC COMMITTEE.

PRESENT: Dr. M. T. Masters (in the chair), Mr. Veitch, Rev. W. Wilks, and Rev. G. Henslow, hon. sec.

Tulipa gesneriana diseased.—Some roots received from Mr. Mann, Penhllow, Cliffe, Cardiff, were forwarded to Dr. Smith for examination and report.

Iris with diseased roots.—Mr. Wilks brought some plants showing premature decay in the foliage. He observed that he had received reports from all parts of England of a similar condition among *Iris*es of all sorts. The roots appeared to rot close to the rhizome. They were also sent to Dr. Smith.

Odontoglossum synanthic.—A flower from a spray on a plant of O. *triumphans* (?), sent by Mr. Pitt, illustrated the twin condition of two coherent flowers; the columns, however, were free from each other above the combined ovaries, as well as the two labellums.

Fendlera cupidea.—Mr. Gumbleton exhibited a flowering branch of this unique tree, there being but one species to the genus. It is a native of Texas and New Mexico, and a near ally of *Philadelphus* or *Syringa*, as popularly known; but while the ovary is inferior in the latter genus, it is superior in *Fendlera*.

NATIONAL ROSE SOCIETY.

THIS society held a special general meeting on Tuesday, June 5, in the Horticultural Club-room, at the Hotel Windsor, Westminster. The purpose of the meeting was to elect an honorary treasurer in place of the late Mr. T. B. Haywood. The chair was taken by Dr. M. T. Masters. Mr. Edward Mawley (the hon. secretary), after referring to the loss of their late treasurer, stated that his son, Mr. Charles B. Haywood, had consented to fill the position until the close of the year. He was duly elected as treasurer for that period.

LINNEAN SOCIETY OF LONDON.

THE evening meeting will be held on Thursday, June 21, at 8 p.m., when the following papers will be read: "On Some Scandinavian Crustacea," by Dr. A. G. Ohlin; "The Subterranean Amphipoda of the British Islands," by Mr. Chas. Chilton, M.A., F.L.S.; "On Certain Glands of Australian Earthworms," by Miss Sweet; "Notes on *Najas*," by Dr. A. B. Rendle, M.A., F.L.S., &c.

EXHIBIT IN FLOWERS AT THE BATH AND WEST OF ENGLAND SHOW.

WE are sorry that Mr. Godfrey's exhibit did not receive full justice at this recent show. He had sixteen baskets, each containing five to nine well-grown plants of new Pelargoniums, a large collection of Lilies (fourteen varieties), new *Mahonia* *Caroliniana* in two good groups, new *Bougainvilleas*, a large quantity of single *Pyrethrum* flowers, new *Ponies*, herbaceous plants, Japanese Maples, &c., altogether a most interesting and varied display.

THE YORK FLORAL FETE.

AS THE GARDEN goes to press on Wednesday, we cannot give a report of this important show this week, but it will be fully dealt with in our next issue. The show opened on Wednesday last.

RECENT PLANT PORTRAITS.

THE number of the *Botanical Magazine* for June contains portraits of the following plants:—

Conoclelus macrostegius, also known as *C. occidentalis*, a native of Lower California. This is one of the finest specimens of the genus with large white flowers, which are produced for many weeks continuously. The plant is quite hardy.

Macillaria vivipara, also known as *M. arizonica*, *M. missouriensis*, and *Cactus viviparus* is a native of the Rocky Mountains; a very pretty species with bright rosy-purple flowers. It is almost hardy, having flowered in the open air at Kew between the buttresses of the Palm House after having been exposed to the winter of 1898-99.

Cryptocoryna Griffithi, a native of the Malayan peninsula.—This is a small-flowered tropical aquatic plant of merely botanical interest.

Diplazium cecina, a native of Brazil, is a beautiful stove trailer with medium-sized deep rose-coloured flowers.

Helianthus tenuiflorus, a native of the Eastern United States of America. This is a member of the family whose English name is Sneezewort, and is reported to be poisonous to men and cattle, and to give a bitter taste to milk. It has been long grown at Kew, where its profuse golden flowers render it very conspicuous in autumn.

The *Rosa Horticola* for May 16 contains a portrait of *Coccinia Dinteri*, a native of South Africa. This is an interesting and highly ornamental trailing cucurbitaceous plant, which produces large numbers of pendant oblong fruits of a bright scarlet colour. Planted at the base of an old Olive tree in a garden at Nice it scrambled

through the whole tree and produced its showy fruit in great abundance, and it remained in beauty up to the end of December.

The number of the same periodical for June 1 has a group of four varieties of the delicately beautiful *Iris stylosa*, well known to most of the readers of THE GARDEN, and so eminently useful for providing a profusion of its beautiful and sweet-scented flowers in the depth of winter where the climate is mild enough to enable it to thrive out of doors.

W. E. GUMBLETON.

To secretaries of societies.—We should be much obliged if secretaries of horticultural societies would kindly send us a note as to the date of their forthcoming exhibitions and meetings, and reports of their shows at which we are unable to be present. There is at this season a rush of exhibitions, and the kindly co-operation of secretaries would help us greatly.

LECTURES AT CHISWICK.

THE Rev. Professor Henslow, M.A., V.M.H., has kindly consented to deliver a series of four lectures in June and July to the students at Chiswick, and to any of the Fellows who like to be present. The lectures will be given in the Great Vinery at 8 p.m.:

- June 20.—Protoplasm: What it is, and how it maintains Plant-life.
- June 27.—Protoplasm, the Instrument of Evolution among Plants.
- July 4.—The Phenomena of Germination.
- July 26.—The Uses of Leaves.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers. *The Editors intend to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITORS OF THE GARDEN, 20, Tavistock Street, Covent Garden, London. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.*

Names of plants. *Subscriber, Cork.* We believe the variety to be *Rosa cinnamomea* H. pl., but kindly send more of the growth if requiring the names of any other old Roses, as it is so difficult to tell what they are otherwise.

Sherborne. The Rose is Burgundy, a variety of the miniature Provence. *B. R. R. D.* 1 and 2 are forms of *Pyrus Malus*, No. 2 in all probability being the variety *Paradisa*, but the flowers being quite withered on arrival, it is not easy to be quite certain; 3, *Staphylea trifolia*, or *Bladder Nut*; 4, *Xanthoxeris sorbifolia*; 5, *Veronica meana*, a very pretty plant; 6, *Achillea santolinoides*; 7, *Viola canadensis*. *H. Chapman.* The Poison Oak (*Rhus Toxicodendron*). A dangerous plant to be trained against a dwelling-house, as if roughly handled or cut the sap will often cause a kind of eczema.

Cauliflowers (S. E.). It is too late to sow seeds of the large autumn Cauliflowers, of which Mammoth and Autumn Giant are the best. But no doubt you can obtain strong plants from some local gardeners or florists, and getting these planted out at once, in rows 2 feet apart, you should have plenty of good heads to cut in the autumn and early winter with ordinary culture. You can also obtain seed of some early variety, such as Early Forcing or Snow-bell, sowing it in a shallow box or in pans filled with fine soil, and placing these in a frame until the seeds have made good growth. The plants need to be dibbled out 3 inches apart in good soil until quite strong, then transplanted with balls of soil into the open frame in rows 20 inches apart. If the weather be dry, water the plants freely to encourage quick rooting, and there should be from such a batch a good quantity of small, solid white heads to cut in September and October.

Horizontal trained Tomatoes (W. M.). We have seldom seen Tomato plants trained horizontally, such as you enquire for, outdoors, although a common practice in frames and houses. It is late to plant, but if your plants are very strong we advise you to put them out on to a sunny border 15 inches apart and 4 feet from the edge of the path next the border. If the border be 8 feet broad, you can plant two rows of plants, one halfway along it, the other at the back. They set long bean-roots, and fix these to stout stakes driven into the ground for the purpose, so that these bean-roots tied to them securely will be about 15 inches from the soil. Each row should thus enable two plants to be trained or tied to it, the leaders or tops of the stems

being towards the path and sun. As the plants grow strong, the side shoots are hard pinched out, and fruit is produced. Some long straw litter should be laid down beneath the plants to protect the fruits from being splashed with dirt, and we have no doubt a great crop would result.

Roses attacked by white fly (W. E. HARRISON).—Your only remedy for this pest is to at once obtain some carbolic soft soap (Calvert's), dissolve in warm rain water and employ at the rate of 2 ozs. per gallon. Spray freely with this on alternate evenings, taking care to reach all possible parts of the plant. If the plants attacked are in pots, get someone to hold a plant over a pail while syringing is being done. In this way the under portions of the plant are reached. If at all possible avoid syringing till 7.30 or 8 p.m., as at this time the fly, which during the daytime is exceedingly active, is comparatively restful. Indeed, it is this restlessness that renders it so difficult to combat. We would remind you that the ordinary soft soaps are useless, the one named being, so far as we know, the only effectual one for the purpose.

Climbing Roses (CEDAR).—Do not think of cutting away the strong sucker-like shoots that are breaking from near the ground on your *Crimson Rambler*. These should be allowed to make all the growth they will, and be nailed in to the wall, not too tightly, to ripen, and they will carry great quantities of flowers next year. If you find your plant seems too dense, cut away some of the old branches after they have flowered to make room for the new ones. There are cases in which strong suckers break up from the root-stock, if it be *Manetti* or *Briar*, but when it is seen that the leafage is so different from that of the Rose proper they should be cut away as they are only robbers. Still, suckers of that kind do not grow much when the Roses are making strong growth. In the case of climbing Roses, always encourage the production of these strong shoots.

The White Lily (W. J. S.). We are sorry to learn that your *Lilium candidum* is affected with the fungus which has so long injured these beautiful garden plants. Remedies seem to be more easily advised than used effectively. You can at least now make some Bordeaux mixture by dissolving 1 lb. each of sulphate of copper and lime in separate tins, the former in a wooden tub, then adding the lime solution, and with that ten gallons of water, and with this gently syringing the plants at once, and again some ten days later, and that may check the spread of the fungus. It is also advised as soon as the stems have died down to cut and burn them, then to remove the bulbs from the soil, give a gentle spraying with the mixture, and replace over them fresh soil.

Pernettyas (C.)

The spray illustrated will show you what the *Pernettya* is like. It is a shrub that enjoys a peaty soil and somewhat mild climate, hence its luxuriance in the Sister Isle. It is very ornamental, as it produces a wealth of berries, and there are numerous varieties, some with white berries, others crimson, pink, and so forth.

Water Lilies

(BERT) The term Lily as applied to these water plants is merely nominal. The plants are not lilies at all, but are really Nymphaeas. They belong to the same family as our common Water Lily, *Nymphaea alba*, but are rather less strong and hardy. There is now a great variety in these aquatic plants, although yet, because propagated slowly, most of them are somewhat dear. The tuberos roots are usually purchased in a resting state in the winter, as then the leaves die down. They should be planted in April in tubs or baskets, or on mounds of good turfy loam and decayed manure made for them in the water. This should be of a depth of from 18 inches to 24 inches, and the ponds in which planted not too large, or if large the flow of water should be slow that a little motion should be constant. Certain strong growers should be planted towards the centre, and less strong growers near the margin. Each year the plants increase in size, and they bloom then not only beautifully, but for a long season. Inquire of some leading nurseryman for price and varieties.

Pot Gooseberries (LEARNER). You seem to assume that you inform us as to Gooseberries in pots must be joking. We can assure you that such is not the case. What we do at ordinary purposes call bushes are in pots grown as single stem cordons, quite erect, the side shoots being kept hard pinched, so that the buds at their bases produce fruits in clusters in abundance the following season. When well grown these cordon Gooseberries are very attractive if in full fruit. We have had recently seen a lot of bushes in pots grown in tubular form, each one being in 11-inch pots, and each bush having six upright stems tied up to stakes about 3 feet in height. The varieties so grown are of the best flavoured for dessert purposes. They are very prolific, the fruits being fine, clear, and well ripened. So soon as the fruits are gathered they go outdoors, the pots generally being plunged in ashes or cocoa-fibre refuse. In the summer, of course, water must be liberally given, and whilst fruiting some manure water also



PERNETTYA MICROCARPA.

Brompton Stocks (S. T. G.).—We have no doubt but that if you make application to some leading seed firm you will be able to obtain seed of the true old Brompton Stock. It should be sown at once in a shallow box or pan, in a frame, as it is now rather late to sow it outdoors, except under a hand light. Unless plants are strong to put out in September, they rarely produce those fine spikes which we so much like to see, but, now, unfortunately, so seldom seen in gardens. Some years ago Brompton Stocks were universally grown, now they are seldom seen. To what this is to be attributed we do not know, but certainly there have been many cases in which good double Stocks have in time become all single, whilst in other cases the hard weather of a severe winter has killed the plants. True Bromptons, both scarlet and white flowered, and up strong erect spikes of flowers. Many of what are sold as Bromptons are not such, but Cape Stocks, carrying clusters of spikes that are small.

Hardy Perennials (JEPSON).—You may correct the tall habits of many of your hardy perennials, such as *Asters*, *Sundewers*, *Chrysanthemums*, and similar things if you will now pinch out the points of some of the stems, leaving others to grow on. In that way, whilst the tall ones will bloom early, the pinched stems will throw outside shoots, and these will flower profusely later. We have very successfully rooted in pots tips of Stocks taken off now as cuttings, and these shifted into 6-inch pots later have bloomed finally at from 20 inches to 24 inches in height. That fine late flowering perennial *Chrysanthemum uliginosum* well repays this form of treatment, so do some of the *Michaelmas Daisies* and tall *Heleniums*. We have layered shoots into pots, and thus rooted them also with marked success. Where plants are old, having a dense mass of shoots, it is also wise to cut out some of the weaker and inner ones, as that enables the others to flower more freely.

Pot Tropaeolums (LINA).—We do not think you will find the Flame Flower (*Tropaeolum speciosum*) do well in pots. It seems to want ample root room, reproducing itself freely where it thrives, by sending out long stolon-like roots from the joints or joints of which new growths spring. We have seen this climber giving a good deal of trouble in such cases to keep it well within bounds. Still, it does not do well in all soils, although in deep loamy or sandy ones it soon makes itself at home. It will also in diverse places do best—in warm and in cool shady places. The prettier *Tropaeolums* for pots no doubt are the tuberous-rooted species *tricolorum* and *Jaratti*, both of which trained round wire globes or a few small sticks set round the pots, especially if of a branching nature are well grown, and singularly beautiful. These are herbaceous, the growths dying down in the autumn. The tubers as a rule are best left in the soil, the pots being placed on a shelf in the greenhouse till February, where being repotted, they soon push new growths.

QUESTION.

Kowhai. Can any one give the name of a New Zealand plant, the Kowhai? I am told that in its own country it is a large bush or small tree, and I believe it bears bright yellow flowers. It has a curious zigzag habit of growth, and an extremely pretty small pinnate leaf of a light bright green. A friend from New Zealand gave me some seed in the autumn of 1898, and last summer the plants were planted out. They were about 12 inches to 15 inches high last autumn, and have come safely through the winter, though five out of the six have been heavily cut back by the cold. The sixth is hardly touched. They are now coming into leaf.—A. M., *Andlesole*.

GARDENING APPOINTMENTS.

MR. ROBERT ANDERSON, for the past fourteen years head gardener and manager on the estate of Captain the Hon. A. E. Harris-Temple, Waterston, Athlone, and previously foreman in the gardens of His Grace the Duke of Buccleuch at Dalkeith Palace, and Right Hon. the Earl of Rosburgh at Mentmore, has been selected from upwards of 200 candidates to fill the responsible position of bailiff of the Phoenix Park, Dublin, in succession to Mr. Wm. Dick, who retires after twenty-three years' service.

MR. JAMES TRAINOR, lately head gardener to Colonel Cosby, D.L., Stradbally Hall, Queen's County, as head gardener to Captain the Hon. A. E. Harris-Temple, Waterston, Athlone.

CATALOGUES RECEIVED.

- Hardy, Herbaceous, Alpine, and Bulbous Plants, *-Cuthush and Son, Highgate Nurseries.*
- Hardy Plants, *This S. Warr, Ltd., Hale Farm Nurseries, Feltham, Middlesex.*
- Dahlias and Begonias, *This S. Warr, Ltd., Hale Farm Nurseries, Feltham, Middlesex.*
- Horticultural Sundries, *Abbott, Miles and Co., Warner Road, Chamberwell Park, London.*
- Horticultural Sundries, *Wm. Darlington and Sons, Glaskin Road, Huelway, London.*

FORTHCOMING EVENTS.

- June 19. Royal Horticultural Society's show, Drill Hall, Westminster.
- .. 27. Royal Horticultural Society, in conjunction with Richmond Horticultural Society, Show at Richmond (two days).
- .. 27. Royal Horticultural Society of Southampton, Summer show (two days).
- .. 27. Salisbury, National Rose Society's show.
- .. 28. Canterbury, Colchester, and Isle of Wight (Ryde).
- .. 30. Maidstone and Windsor.

Index and Editorial Notices will be found amongst the advertisements.

THE GARDEN.

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[JUNE 23, 1900.

LILIES IN THE BRITISH ISLES.

A FEW weeks ago we made known our intention of endeavouring to obtain from all parts of the Kingdom information about Lilies most suitable for special soils and places, with a view to putting together the facts obtained in such a way as to be a helpful guide for amateurs. We feel sure that many who would wish to grow Lilies are deterred from buying them because such knowledge is not available in a form easy to refer to, and that the want of such a handy list is one which is very generally felt.

We therefore sent out lately a certain number of circulars containing questions, as quoted below, to all classes of horticulturists. Nearly all have sent useful answers, and some of them answers that are copious and of much value. Those who received and have kindly filled up the forms are a small number only among those eminent in horticulture, but we hope that the publication of the list of questions may induce many more of those who are best acquainted with the culture of Lilies to give our readers the benefit of their knowledge and experience.

We also publish, as examples of the answers we are glad to receive, five of the communications that came as the filling up of the form, having chosen them from districts widely apart. We should be glad to send the form, which has spaces left for answers, to anyone who would be good enough to apply for it, unless they would note the questions as here printed, and head their answers with the numbers.

1. County.

2. Soil.

3. Any special condition of site, such as aspect, nearness to range of hills, shelter or exposure, harmful winds, nearness to sea, influence of warm sea currents, general climate, &c.

4. Kinds that do thoroughly well and may be considered as trustworthy garden plants, making natural and sufficient increase, unharmed by disease.

5. Kinds that succeed best in large towns.

6. The time to plant: any difference in any kinds as to this matter.

7. Remarks.

The following are a choice from the answers received:—

From Mr. F. W. Burbidge, Trinity College Botanical Gardens, Dublin:—

1. County.—Dublin; on shores of the bay, within smoke radius of city, near to sea level.

2. Soil.—Alluvial, deep and light, drying rapidly during hot weather.

3. Special conditions.—Site of garden sheltered from harmful winds, half a mile or so from the sea, general climate, &c., mild and genial.

4. Kinds that do well.—*L. testaceum* (= *L. Isabellium* = *L. excelsum*) is decidedly our best Lily here, growing 6 feet to 7 feet high, with five to twelve flowers on a stem. *L. colchicum* also does well. *L. candidum* is very unequal, often doing well in hot seasons, and but poorly during wet ones. *L. bulbiferum* and *L. tigrinum* grow and flower freely. *L. Browni* and *L. longiflorum* do fairly well, as do the bog Lilies of North America, *L. superbum*, and *L. pardalinum*, in moist places. All the forms of *L. elegans* (*L. thunbergianum*) flower freely, as also do the Martagon varieties, *L. Martagon album*, *L. Martagon Catani*, &c.

5. Kinds best near towns.—*L. testaceum*, *L. elegans*, *L. Martagon vars.*, *L. candidum*. *L. auratum* has grown and flowered well for the last five or six years in an area at No. 5, Clare Street, Dublin.

6. When to plant.—The best time to plant, as a rule, is immediately after the leaves fade. *L. candidum* is one of the earliest to grow, and it is best moved immediately after flowering, and often thrives best planted alongside a wall or clipped hedge.

7. Remarks.—Imported Lily bulbs, and none more so than *L. auratum*, often fail through being bruised, infected by fungus, or otherwise out of health when received. Sawdust as a packing material is one of the worst possible. Even bulbs encased in clay are often damp and fungus-infected. *L. auratum* is most capricious, doing best in deep peaty soils, Rhododendron beds, &c., in half shade. *L. speciosum* varieties are quite hardy in mild districts, and also do well in Rhododendron beds. *L. chalcedonicum* vars. and *L. candidum* are two of the most effective of all Lilies where they thrive well. Of *L. candidum* there are two distinct forms—*L. candidum*, with three of its petals nearly twice as wide as the others, and a purer white narrow-petalled form with paler yellow anthers, formerly called *L. byzantinum*. The most stately and largest-leaved of all the Lilies is *L. giganteum*, a noble plant for a half-shady peat bed.

From Mr. Fielder, lately in charge of St. James's Gardens, West Malvern, Worcestershire:—

1. County.—Worcestershire.

2. Soil.—Higher part of garden disintegrated

syenite, remainder strong loam, resting on Ludlow shale.

3. Special conditions.—Garden situated on slope of Malvern Hills, altitude varying from 650 feet to 800 feet above sea-level; aspect S.W. to N.W. Garden exposed to full force of S.W., W., and N.W. winds, but quite sheltered from N. and E. by hills. Climate mild.

4. Kinds that do well.—*L. auratum* platyphyllum, *L. pardalinum*, *L. pyrenaicum*, *L. testaceum*, *L. Martagon vars.*, *L. croceum*, *L. davuricum*, *L. Humboldti*, all speciosum and tigrinum vars., and *L. chalcedonicum*.

6. When to plant.—Would prefer to plant the above kinds in autumn as soon as the bulbs were procurable, with the exception of *L. auratum*, which I plant in January or February.

7. Remarks. *L. auratum* platyphyllum, *L. pardalinum*, *L. chalcedonicum*, and *L. testaceum* flourish among the Rhododendrons in strong loam, with a little peat and leaf-soil added. *L. testaceum* also succeeded well in medium loam with no peat. *L. auratum* platyphyllum, planted in gritty loam (disintegrated syenite) on a sharp slope facing west, succeeded well. *L. candidum* was the only kind that suffered from disease.

From Mr. Mitchell, Wolsingham, Durham:—

1. County.—Durham.

2. Soil.—Sandy loam, with gravel subsoil.

3. Special conditions.—Sheltered garden, open to south, situated in the Wear Valley; hills rising about 400 feet to north and south about a mile distant. Rainfall average from my own gauge for thirty-two years 36.5 inches; distance from east coast about 30 miles.

4. Kinds that do well.—*L. Martagon*, *pyrenaicum*, *L. tigrinum Fortunei*, *L. Martagon album*, *L. chalcedonicum*, *L. excelsum*, *L. Hansonii* (*L. Henryi* I think will do), *L. szovitzianum*, and *L. pardalinum*. I have tried many others, but cannot say I have been successful with them.

6. When to plant. I think the best time to move Lilies is just before the foliage begins to die down, or else in the spring when just starting, but the less time they are out of the soil the better.

7. Remarks.—I have reared and sold many hundreds of white Martagon bulbs from scales, and also chalcedonicum, the strong and vigorous kind, I think the same as described in Wallace's notes on Lilies. It is rather different from the ordinary chalcedonicum in having two or three slight rectangular markings at the base of each petal; but its great difference lies in its tall

and vigorous habit with large heads of bloom. It is my favourite. It requires some determination to break up good and valuable bulbs to get the scales in the first instance to propagate from, but I think it pays in the end in the better constitution and subsequent well-doing of bulbs propagated in that manner.

From Mr. T. E. Horton, Penmaenmawr, North Wales:—

I have great pleasure in replying to your circular on cultivation of Lilies. Your scheme is an excellent one and likely to be of much benefit.

1. County.—Carmarvon.

2. Soil.—Heavy loam mingled with stones and boulders of granite, in some places overlying black tough ironstone rubbish at a depth of 12 inches, which is very deleterious, and requires removal.

3. Special conditions. Aspect west, sloping and facing sea. Backed but not protected by hills of considerable size (900 feet to 1,500 feet). Much exposed to winds and gales from south and south-west, which cause serious losses at times and entail careful staking; 300 feet above and close to sea, climate otherwise very genial and favourable, and undoubtedly affected by warm sea currents, which, however, do not prevent occasional frosts (5 to 12°) in winter. Some winters are, however, exceptionally mild.

4. Kinds that do well. *L. auratum* platyphyllum, *L. giganteum*, *L. speciosum* Kraetzleri and *Melpomene*, *L. Martagon*, *M. album* and *M. dalmaticum*, *L. pyrenaicum*, *L. Hansonii*, *L. pardalinum* (especially *L. p. Bourgeoi*), *L. surperbum*, *L. croceum*, *L. davuricum*, and *L. testaceum*.

6. When to plant. I think all Lilies should be planted or replanted in autumn as soon as the bulbs are ripe; *L. candidum* and *testaceum* as soon as the stems have changed colour; *L. Hansonii* and the *Martagons* in September; and the *speciosums* the latter half of October, if home bulbs can be obtained. *L. testaceum* and *Martagons* especially seem to resent disturbance after September, but with most Lilies we have to plant when we can get them, and the great bulk of ours have been imported bulbs.

7. Remarks. Of the *speciosum* family *Kraetzleri* and *Melpomene* do grandly, flowering freely. They increase very rapidly and are perfectly hardy. *Roseum* is uncertain, and *punctatum* does not live long. *Rubrum* did well for some years, but resented removal. *Tigrinum*s do fairly, but do not increase. *Henryi* flowers well but grows very tall; it increases very slowly, and the last year or two has shown signs of some disease-like sunstroke. This, however, is not fatal, and I have confident hopes it will do better in a shadier aspect. *L. nepalense* has been out five or six years, and some of the plants flower well in autumn. It is grand out of doors, short and sturdy, and with flowers of great substance, utterly unlike those grown under glass. I believe this means to stay. The bulbs when bought were small and in bad condition. *Lilium giganteum* does splendidly, but the heavy winds are a difficulty. It was 10 feet high with fifteen flowers in one instance last year. It is difficult to keep up a

stock of flowering bulbs. *L. szovitzianum* is a great favourite, height 5 feet to 6 feet, flowering abundantly. It is not quite reliable, and sometimes vanishes, but now bulbs are so cheap it well repays planting, even if it blooms only two or three years. Of all the *Martagons* *album* is very good and increases freely; *dalmaticum*, also good, but increases rather slower; both quite hardy and free from disease. *L. pyrenaicum* grows and seeds like a weed, its foliage and flowers are handsome, but the smell abominable; *testaceum* is much to be recommended, height 6 feet or 7 feet and flowers abundant, but it does not like disturbance, and should be moved early in September. The last time I replanted I found bulbs 22 inches in circumference. *L. auratum* platyphyllum is a great feature, and was magnificent last season, 10 feet to 12 feet high, flowers of full size; it increases fairly fast, and is altogether most satisfactory, while *auratum* does not increase, but takes two or three years to die. *Hansonii*, *Humboldtii*, and *H. magnificum* never fail to flower, but the two last do not increase. *Hansonii* does well. I should be glad of a hint about *washingtonianum*; it flowers once or twice, but does no good afterwards, and goes back gradually; it is very beautiful when in flower—also of *L. Parryi*. *L. candidum* is most unreliable; very good some years, and subject to disease in others. It seems to require frequent transplanting in our soil, as it increases very rapidly. Though some years it fails just before flowering it seems to recover after removal. In a dry situation among roots it seems free from trouble and does not increase.

From Mr. D. Darroch, Torridon, Ross-shire:

1. County.—Ross and Cromarty.

2. Soil.—River sand and peat, trenched 3 feet deep; no lime in the soil, which is disintegrated Torridon red sandstone.

3. Special conditions.—Aspect facing east on bank of river 200 yards from sea, sheltered on west by bank, on other sides by half-inch wire netting 6 feet high.

4. Kinds that do well.—*Lilium auratum* does splendidly always; increases naturally; roots never taken up. *L. giganteum*, *elegans*, *speciosum rubrum* also do well, and most years *laucifolium* does very well. [*Laucifolium* probably means *speciosum*, which was formerly called *laucifolium*. True *laucifolium* is another Lily not much in cultivation.—Eds.]

6. Time to plant. I have always planted in March.

7. Remarks.—I have counted over 300 blooms on one plant of *auratum*, and have known the stems over 8 feet in height. [Some photographs that Mr. Darroch kindly sent showed the most vigorous and fully-flowered examples of *auratum* that we have ever seen.—Eds.]

EDITORS' TABLE.

PAULOWNIA IMPERIALIS.

A SPRAY of this beautiful flowering tree comes from Mrs. Edmund Evans at Ventnor, Isle of Wight, who writes of it thus: "In the garden of Cove Cottage there are three or four large Paulownia trees; it is a two-storied house, and the trees are several feet above the chimneys."

[It is a matter of regret that this grand garden tree should be so little known, for though it is not hardy in the north nor in the colder midlands, it has a fair success in the southern counties generally, and may be trusted in the Isle of Wight and the genial climate of Devon and Cornwall. Those who have never seen it may form some idea of it by imagining a Catalpa tree loaded with purple Gloxinia blooms.—Eds.]

HEMANTHUS KATHARINÆ.

THE Rev. F. D. Horner sends a bloom of the splendid *Hemanthus Katharinæ*. The flower is an almost spherical umbel of large size, being 9 inches in horizontal diameter and 7 inches through in height. The individual flowers in this wonderful head are extremely numerous, probably as many as 150. The inch-long tube of pale red colour bears five narrow petals at right angles, giving the flower a diameter of 1½ inch, but the bright effect is caused by the conspicuous scarlet filaments which stand out another 1½ inch. The tinting thus diffused gives the whole head a lively colouring of bright but soft scarlet. It is a greenhouse plant, a native of Natal.

SWEET DOUBLE ROCKETS FROM IRELAND.

THE Rev. Denis Knox, Virginia Rectory, County Cavan, Ireland, sends a gathering of splendid double Rockets. We think that his collection comprises all the known kinds, in six distinct varieties, namely, French White, Purple, Pale Lilac, Old Lilac, Scotch White, and Old White. Mr. Knox says that he cannot grow them with such large spikes as formerly, but to those who live on poor soils and therefore cannot grow these grand old plants, and have vivid recollections of many efforts and an equal number of failures, think that these spikes 1 foot long and 3 inches through, closely set with blossoms individually measuring 1½ inch across, are as fine a show as can be expected. In any case it sets them sighing for the cool moist climate and rich loam of Mr. Knox's favoured garden.

We sometimes hear rumours of a crimson double Rocket, but believe we are right in stating that no such plant has as yet been evolved. The Purple is of a strong red-purple colour, reddest just when the flower is first opened; but to call this flower crimson can only be accounted for by the enthusiast's desire for an extension of the range of tint becoming so strong as to get the better of his fair judgment in calmer moments.

POSOQUERIA LONGIFLORA.

MR. JONES, of Ryecroft Nursery, Lewisham, sends us spikes of this uncommon stove flower, one of the good things which have in a large measure passed out of cultivation. The head of bloom is very large, and the individual flowers of ivory-white colour, reminding one of that of the *Stephanotis* somewhat, and with a nutty perfume.

SEEDLING PANSIES.

MR. JONES also sends a variety of Pansies raised from seeds. The colours are generally delightful, warm crimson, yellow, finely margined kinds, and one almost black. We have rarely received flowers so good and pure in colour.

CYPRIPEDIUM SPECTABILE AND C. CALIFORNICUM FROM IRELAND.

MR. F. BEDFORD sends from Straffan lovely flowers of this *Cypripedium*, and remarks that "this is the first year I have had spikes with three flowers;" also a small twin-flowered spike of the pretty *C. californicum*.

A NEW HYBRID RHODODENDRON.

We give an illustration of the beautiful hybrid Rhododendron Pink Pearl, shown by the president of the Royal Horticultural Society (Sir Trevor Lawrence, Bart.), before a recent meeting of the Floral Committee, and given a first-class certificate. The plant received sometime previously an award of merit, and was considered worthy of the higher recognition. The trusses shown were of extreme beauty—not too compact, but, as our illustration suggests, of considerable size, with individual flowers fully 4 inches across, and delightfully coloured with pure rose pink, which is paler in the older blooms. There are a few brownish spottings upon the upper segment. This Rhododendron has undoubtedly R. Auck-



HYBRID RHODODENDRON PINK PEARL. (Shown recently by Sir Trevor Lawrence, Bart.)

landi for one of its parents, but the plant has proved quite hardy at Burford, Dorking.

We are pleased to receive the following note from Messrs. John Waterer and Sons, Bagshot, Surrey, respecting it, and to know from them that it is not tender.

"In your issue of June 16, page 448, we note that in reference to our Rhododendron Pink Pearl you question the hardiness of this most beautiful variety. We have had this in our nurseries for some ten years or more, and we have never yet seen it injured in any way, and we have recently heard from several people in the north of England testifying to its hardiness and well doing amongst their other Rhododendrons."

[We were not aware that Messrs. Waterer raised this delightful flower or should have recorded the fact in our previous note. It is important to know that it is hardy.—Eds.]

NOTES OF THE WEEK.

Lectures at Chiswick.—In order not to clash with the Richmond show, Professor Henslow's lecture, announced for Wednesday, June 27, will be given on Tuesday, June 26, instead.

Botanical Exchange Club.—The report of this club for 1898, which concerns itself with the British Isles, has been published recently, Mr. James Groves being the editor. It is interesting to know that the occurrence of *Stachys alpina* in Gloucestershire is regarded as an undoubted addition to the native flora of Great Britain.

Bishop's Park, Fulham.—The additions recently made to what is known as the Bishop's Park, situated in close proximity to Fulham Palace, and overlooking the Thames, were opened lately. The land was secured by the vestry from the Ecclesiastical Commissioners, and has been

is required in protecting it during the winter months, nor in providing its blossoms with supports. Its pale lurid scarlet or intensely coloured orange blossoms are freely produced over a much longer season than any other Poppy I know. Like all other members of this family, the blooms should be cut while yet in bud, when they will last a long time in water, and are quite attractive while developing. E. M.

Aubrietia Hendersonii.—This, or as it is sometimes named, *A. Campbellii*, is quite the best of the deep violet-blue or purple flowered varieties of rock cress. For the rockery, or as an edging to a path, allowing it to ramble over stones, it is a valuable plant in the garden during April, May, and June. Now is a good time to increase the stock. Directly the flowers are past, cut the plants over within a few inches of the soil, take up the roots, pulling them into pieces and planting during showery weather a few inches apart. This is a ready method of obtaining a substantial and rapid increase in the number of the plants.—E. M.

The Boston show (Lincs.) will take place on July 4 and 5 next.

Inner Temple Gardens. By permission of the Benchers the Inner Temple Gardens were opened recently, and will be open each week-day during the summer months from 6 p.m. till dusk, for the benefit of the children in the district.

Anthericum algarense.—This is perhaps the best of the more starry flowered forms of the St. Bernard's Lily, the segments larger and of greater substance than in *A. Lilago*, and a superior plant to this in general aspect. Unfortunately for so good a plant, it is not frequent in gardens, and it is hoped this note may bring it into the greater prominence its merits justify.—E. J.

Pæonia Cream Perfection.—In the tree section of Pæonias this is quite a new break, not merely for colour but in the picturesque way in which the petals are cut, giving the appearance of fringed segments rather than otherwise. In this way, and not less in the full cream tone pervading the flowers as a whole, the variety is novel and distinct.—E. J.

Aquilegia Stuarti.—Among hardy and good rock-garden plants I should place this in the front line, and there is only one way in which it is at all possible to improve it; and this is in its constitution. In all other respects the plant is a gem. The wondrous colour combination and the comparative purity of the colours involved, viz., blue and white, render it conspicuous even in a multitude of choice plants.—E. J.

Work in the Trinidad Botanic Gardens.—The annual report of the Royal Botanic Gardens, Trinidad, for the year 1899, by the superintendent, M. J. H. Hart, gives evidence of work done in the gardens in connection with the acclimatisation of foreign economical plants and the study of diseases of fruits and other crops, with the assistance of the Kew establishment. The *Bulletin of Miscellaneous Information*, from the same gardens, for April, contains, in addition to some natural history notes, a continuation of the descriptive list of West Indian and Guiana ferns. *Natura*.

The old Orange Lily and shrubs.—We lately saw masses of the old Orange Lily (*Lilium croceum*) planted amongst bushes of the variety of *Spiræa Bumalda* called Anthony Waterer, that deep crimson kind which originated as a sport in Mr. Waterer's nursery at Knaphill, Woking. Few Lilies are more vigorous than this old favourite, so rich in colour and strong in growth. This association of Lily and shrub is very charming, and in the present case, when the Lily is over, the *Spiræa* bushes, now bristling with buds, will burst into beauty.

The Gum Cistus.—Where a warm sunlit border runs by the house or near to it, the Gum Cistuses should be planted; we mean the larger kinds, such as *C. laurifolius* and *C. ladaniferus*, whose large white flowers appear above the fragrant leaves for many weeks. By an old house we lately noticed *C. ladaniferus* and the blotched variety *maculatus*, both spreading out even into the walk. But such a picturesque shrub may be allowed

converted by them into a delightful centre for promenade and recreation.

Anchusa Barreleri.—This is a good border plant, growing vigorously and flowering in profusion, its intensely blue, five petalled flowers being very showy in a mass, although individually they are less than $\frac{1}{2}$ inch in diameter. We have so few blue flowers in the hardy section that all we have should be encouraged fully.—E. M.

Antholyza coccinea. Planted in peaty soil at the foot of a south wall, this *Antholyza* makes a brave display in the early part of June. The foot long spikes of blossom are extremely showy, and the bright coral red stems, buds, and flowers especially bright; they lend themselves especially well for decoration in a cut state when associated with some form of light greenery, like Maiden Hair Fern for example.—E. M.

Papaver pilosum is quite one of the best of perennial Poppies for the border. No trouble

unrestricted freedom. They succeed on sunny banks of well-drained soil, and one may add the beautiful *C. flor-antinus*, *C. Clusi*, *C. salvifolius*, *C. Crispus*, and others, also the dwarf-growing Sun or Rock Roses (*Helianthemum*), which will clothe a dry bank with flowers of beautiful colouring. Sun Roses in very truth, and happy where the majority of plants fail.

Sweet Peas (autumn sown). Lady M. writes us from Hampshire: "I think it will interest you to know that we planted our Sweet Peas on your principle last year, and gathered the first bunch on Saturday, June 2. This is earlier than we have got them before." The way referred to is to sow in the second week of September in shallow trenches; the plants will stand 4 inches high through any moderate winter, or may be protected by Spruce boughs or other material. Last winter was a very trying one, and we heard of some failures, but the plan is so effective in general that it is well worthy of adoption.

Mr. Peter Barr. We are glad to hear news of our old friend Mr. Barr through some New Zealand newspapers. His long wanderings have now taken him to the Antipodes, where we hear of him at Christchurch, New Zealand, making criticisms and giving advice about the public gardens. Mr. Barr must have seen many wonderful things in his long wanderings of fourteen years, and his keen intellect must have seized upon many interesting groups of facts concerning men and things as well as flowers. We hope that he will write a book, and so give the world the benefit of a record of his observations.

A new open space for Southwark.

The Bishop of Rochester recently dedicated to the public use as an open space the churchyard and burial ground of Christ Church, Southwark, which stands on the west side of Blackfriars Road, and near the foot of the bridge. According to Stow, the historian, "the church was founded in 1627 in pursuance of the will of John Marshall, gentleman, of the borough of Southwark." The question of utilising it as a public garden was first raised in the vestry fifteen years ago, and it was not until June 21, 1899, that a formal written agreement between the various parties was entered into. The burial ground and certain portions of the churchyard have been vested in the St. Saviour's District Board of Works, who will maintain them, while the whole has been laid out by the Metropolitan Public Gardens Association. The Earl of Meath, chairman of the association, presided at the dedication. The chairman, in an interesting speech, said that that was the one hundred and first open space that his association had had out entirely at their own expense, but they had assisted towards the cost of laying out several others. Sir William Vincent announced that Mr. Passmore Edwards had intimated his intention of presenting a drinking fountain for the grounds at a cost of £100.

Epitrichium nanum. Those who did not mistake this lovely alpine gem for a Forget-me-not would imagine, after seeing it in at least three collections at the Temple show, that there was hope of securing good established plants of it at last. The lovely little flowers of blue are like jewels in a rich setting of green. No alpine succulents more readily and rapidly to our fogs and damp, to say nothing of the incessant change of atmosphere in lowland gardens, and no plant more surely misses the great snow covering it annually receives in its mountain home. In British gardens it may be kept alive by pot-culture for a while, or by tightly wedging it between two pieces of rock with a perpendicular tendency. In the latter case, however, it would be necessary to tightly fix it in a very narrow fissure, and where depth could also be afforded for its root fibres to descend. Then, by fixing a stone to form a projecting ledge for the winter, the tuft may be shielded from harm. Such a stone must overhang, and must come close down to the tufts to be of any use. Such a shelter would be infinitely safer than the piece of glass to throw off wet, so often recommended, but which I personally have but little faith in. E. J.

Arenaria balearica is certainly one of the prettiest of tiny plants for the rapid covering

of any spaces of cool stonework in the rock garden. Planted at the foot of stones it quickly spreads over them a close covering of its tiny leafage, while in May and early June its surface is almost hidden by the bright masses of white bloom. It goes on spreading outwards, but after its second year begins to die away in the middle of the sheets, the extreme closeness of growth needing the often renewal of its place. It is a pleasant task in October to walk about with a basketful of small patches and to place them in promising spots.

Flowering of Bamboos.—The *Westminster Gazette* and other papers have lately had a note on this subject, which is an official confirmation of the statements in Mr. Freeman-Mitford's "Bamboo Garden" as to the rare and simultaneous flowering of Bamboos, followed by their death. The following is the text of the note: "The British Consul at Pakhoi—Mr. Nevill Perkins—in his annual report to the Foreign Office, notes an interesting fact not often observed, viz., the flowering in 1898 and 1899 of the thorny Bamboo in various directions about Pakhoi. As is well known, most Bamboos flower once and die. This was the case at Pakhoi, but the Consul has been unable to determine satisfactorily what the ages were, apparently about thirty years in a good many cases. He has kept at least one specimen showing foliage and inflorescence."

The great Spearwort (*Ranunculus lingua*).—A noble water-side flower is this, but as rare in English gardens as the most expensive exotic. We have only seen its tall flower-stem in one garden, a beautiful flower garden in Sussex, where the lakesides are full of flowers interesting in their rich variety and luxuriance. How little the water-side flowers are thought of; yet here is a Buttercup more imposing than the Iris, its straight stem bearing very large, rich yellow flowers, like the Buttercup of the field magnified. Peering through the water-side vegetation, one can gain some conception of what is lost to the English garden when the beautiful moisture-loving plants are neglected. It is, indeed, difficult to tell why flints and concrete should form the margin to the lake when a world of flowers is at hand to fringe the water with beauty, not only of flower but of leaf too: the Gunneras, *Heraclium*, Iris, and a hundred things as precious.

Fabiana imbricata. This plant is particularly interesting from the fact that, though belonging to the same order as the Potato, it so closely mimics a Heath that to an ordinary observer it would at once be taken for one. It is a fairly quick growing shrub of a somewhat upright habit, clothed with small, crowded leaves, while the flowers are pure white, tubular in shape, and borne in great profusion. It is a native of Chili, and, like many subjects from that region, is only moderately hardy in this country; indeed, in many parts it needs the protection of a greenhouse. In the favoured maritime districts in the south and west of England, and in Ireland, it is just at home, and where sufficiently hardy few shrubs stand the salt spray better than this. With the protection of a wall it will often form a very ornamental feature where too tender for the open ground. H. P.

Flowers out of season. Of late years vast changes have taken place in the management of plants intended to flower at other than their normal season, for not so very long ago the only method attempted was employing additional heat to force the blooms to open earlier than would have otherwise been the case, but now many subjects are kept in refrigerators and compelled to remain absolutely dormant till long after their natural flowering period. A generation ago the Lily of the Valley, one of the most popular of all subjects as cut flowers, was obtainable in Covent Garden Market from early in December till the flowering period out of doors was over, and in order to obtain these earliest blossoms a considerable number of eyes or crowns were sacrificed, for they were potted as soon as well ripened. Berlin crowns could be obtained (which was usually in the first half of November), and plunged in a strong bottom heat. Many failed to grow, but the price obtained for good spikes was so remunerative as to fully com-

pensate for these failures. At that period a good crop of flowers at Christmas proved a veritable gold mine to the grower. Now all is changed, and by the freezing process Lily of the Valley may be had all the year round, though in my opinion the spikes of white flowers—say, in August—cannot for one moment compare in beauty with the charming bells nestling among their handsome foliage in all the freshness of early spring. Still, if the public continue to buy at a price remunerative to the producer, we shall doubtless see Lily of the Valley treated in this way till the whirligig of fashion brings other ideas. This refrigerator system is now considerably enlarged by some of the greatest producers who supply Covent Garden Market, and not only is the Lily of the Valley, but also *Lilium longiflorum*, *Lilium speciosum*, *Spiraea japonica*, and *Spiraea japonica compacta multiflora* similarly treated. The result will be to considerably prolong their flowering season, a questionable advantage, though I must admit being very much struck last Christmas with the freshness and beauty of some specimens of *Lilium speciosum*, album, and rubrum, which I afterwards learnt had been obtained more than three months after their normal period of blooming by retarding the bulbs in the manner above mentioned.—H. P.

Flowering Cacti.—In looking over a volume of the *Gardener's Magazine* for 1839 I was much struck with the description of a plant of *Cereus speciosissimus*, as showing that even more than sixty years ago there were in existence specimens that would create a furore at the present day. The plant was described as covering a trellis 25 feet by 8 feet, and during the flowering season it had often from thirty to fifty of its magnificent blossoms open at the same time. It was planted out in the stove of Mr. Thomas Holman, of Folkestone, and the stoves of those days, with their old-fashioned flues, would appear to be particularly adapted for the well-being of plants such as this. At the present time the flowering Cacti bids fair to regain some of the popularity that was once theirs, and towards the revival the delightful groups that Messrs. Veitch have for some years exhibited at the Temple show have doubtless contributed a good deal. The last exhibition for instance formed a grand object-lesson as to the possibilities of the Phyllocacti alone, and the numerous colours, shades, and tints that exist among them. The striking combination of metallic purple and dazzling vermilion, which appears to be of different tints according to the standpoint from which the flower is viewed, was well represented among the several varieties, and the various shades of pink were also charming. A few white or creamy white flowers added variety to the group. One particularly noticeable feature in these newer forms of Phyllocacti is the quantity of blossoms borne on comparatively dwarf plants, and though the individual flowers do not remain long in perfection a succession is kept up for some time. Their cultural requirements are not at all exacting, the principal consideration being, as the growth develops, to expose the plants to the full rays of the sun in order to ripen the wood and promote the formation of flower buds. A compost, principally consisting of good loam, lightened by some broken brick rubble and sand, will suit the Phyllocacti well. Amateurs with but a single greenhouse will find them a very satisfactory class of plants to deal with. Good drainage should be given, and at no time must they be over watered, this latter caution being particularly necessary during the winter months.—T.

Rhododendron Maddeni.—The numerous Himalayan *Rhododendrons* and their hybrids which require the protection of a greenhouse in most parts of the country are now over, except this species, which though less showy than some of the others, is noteworthy from its late flowering qualities. It forms rather a loose growing bush, with pointed leathery leaves about 6 inches long, while the flowers are pure white, tubular in shape, though in this respect they vary, and 3 inches or so across the expanded mouth. Kept in comparatively small pots it may be flowered when from 2 feet to 3 feet in height, though it grows much larger than this. It is readily raised from seeds, for even small plants will produce a

pod or two, from which a large quantity can be obtained. The nomenclature of this *Rhododendron* is in a very confused state, for beside the specific name of *Maddenii* it is at times met with as *R. calophyllum*, *R. virginale*, *R. tubulatum*, *R. Jenkinsii*, and *R. longiflorum*. By some authorities a few of these are classed as varieties, but this is at least questionable, as plants raised from one pod vary a good deal in leaf and flower. *R. Maddenii* is one of the tenderest of all the Himalayan kinds.—H. P.

Rhododendrons at Regent's Park.—The *Rhododendron* exhibition of Messrs. John Waterer and Sons, Limited, of the American Nurseries, Bagshot, Surrey, was opened on Monday last in the Botanic Gardens. The plants are of great excellence, and add greatly to the interest of the gardens.

Rose Hybrid Tea Irish Glory.—Mr. Crosley, of Broome Hurst, Dorking, sends the following interesting note about this Rose: "It is a single Rose, bred by Messrs. Alexander Dickson and Sons, the colour being a lovely marbled silver pink on the inside of the petals, gold anthers, and the petals at the back are flamed with crimson. It is perfumed, and the latest of Messrs. Dickson's productions, and although I should say very delicate, is a gem."

Erysimum Golden Gem.—This is a free-growing and free-seeding yellow-flowered biennial that should be largely used in the future in the spring flower garden. I saw it a few days since in Messrs. Veitch and Sons' Feltham Nursery, even then flowering from late shoots, although it had been in flower since last November. In the early spring it blooms profusely a few inches from the ground, and it seems to be very hardy. It is a native of Australia. The best time for seed sowing is in May. The plants need to be dibbled out so soon as strong enough, and then they form dense, compact clumps of growth like that of *Cheiranthus alpinum*, but the flowers in colour more nearly resemble those of *Cheiranthus Marshallii*, a beautiful early-flowering but very uncertain perennial. In the case of this new *Erysimum* seed should be got in to enable sowings to be made each May.—D.

Tufted Pansy Florizel.—This gem of Dr. Stuart's raising is one of the prettiest tufted Pansies in cultivation, and affords quite a new shade of colour with which to enhance the beauty of the hardy flower garden. It is rather difficult to accurately define its colour, but pale bluish-lilac seems as near as possible its correct description. The flowers in warm weather pale considerably, but they are always pretty. The form is oval and extremely neat, and the flowers are developed on short stout footstalks, which stand well above the beautiful tufted growth. Two year old plants are simply superb, being literally covered with a wonderfully profuse array of blossoms. The constitution is robust, and the plant may easily be pulled to pieces, each with plenty of roots adhering, for the purpose of increasing the stock.—D. B. C.

Tufted Pansy Jessie Cottee.—This is a novelty of last season's introduction, and may fairly lay claim to being a Tufted Pansy of more than ordinary merit. It is a seedling from the well-known and popular *Pembroke*, which is considered by many a plant of high quality. The flowers of this new sort are large, circular, and of good substance, the colour of the four upper petals being canary yellow, the lower petal, which is cup-shaped, is a rich deep yellow, almost an orange, and each blossom is produced on a long, stout footstalk. The habit is similar to that of the parent plant, fairly tufted, and the constitution robust. When massed the contrast of the two shades of colour produces a very striking effect. The flowers, too, are very fragrant.—C.

The great fruit exhibition at the Crystal Palace.—We have received the schedule of the Royal Horticultural Society's great fruit show at the Crystal Palace to take place on September 27 next and two following days. There is some danger of this most instructive and interesting exhibition ceasing to exist through lack of funds, but we are pleased to notice that support has been forthcoming, so that the "council are willing to repeat the show in 1901, if they again

receive similar support in their efforts to promote British fruit culture. The interest annually excited by the show is evidenced by the very large number of visitors, averaging 28,600 on the three days of the show. It cannot be too widely known amongst fruit growers that the Royal Horticultural Society is perfectly willing to undertake the work of such a show as the present and to bear some part of the expenditure, but the council cannot undertake the whole cost; the prospect, therefore, of an annual fruit shows in the future depends mainly on those interested in the matter uniting to raise a fund of £100 yearly to help with the prizes." There is a liberal prize list for nurserymen, gardeners, and amateurs.

The gardening charities.—We understand that the Welshpool Horticultural Society has been dissolved, and the surplus funds, some £200, divided amongst various charities. Through the kindly exertions of Mr. John Lambert, The Gardens, Powis Castle, the Gardeners' Royal Benevolent Institution has benefited to the extent of £20, and the Royal Gardeners' Orphan Fund to the amount of £10.

Bad news from the Plum districts.—Reports from some of the most important Plum districts in England, including Kent and Oxfordshire, as well as Evesham, now state that there has been an extensive loss of promised fruit as the result of frosts. The crop, therefore, will be a partial one. Cherries are said to have escaped injury, and we have seen many plantations in which the trees are thickly covered with young fruit. Early Pears were injured; but Apples at present promise to be abundant. In most districts Gooseberries and Currants show well, and for Strawberries the recent dry and cold weather has not been propitious, though there are great shows of bloom in some places. *Agricultural Gazette*.

Wisterias of many kinds are in flower now in the nursery of Mr. Anthony Waterer at Knaphill, and they are seen in various pretty ways. The much-abused double variety has clambered over a *Laburnum*, and is flowering delightfully. When seen thus we quite enjoy this rare kind. Its flowers are similar in colour to those of the type, but quite double, and rather more sparsely produced in the raceme. The white variety *alba* was full of flowers, and a sweet picture, its flower-clusters being so fine. Another *Wisteria* has clambered into a *Pinus ponderosa*, and one may imagine how beautiful were the flowers amongst the dark sombre fine foliage, whilst in another instance it was trying to smother the deciduous *Cypress*. It was quite a *Wisteria* day when we visited Knaphill, and we should like to see this shrubby climber more used for clambering over trees which the owners account of little worth, for, of course, a *Wisteria* is of no benefit to the tree over which it is permitted to throw its vigorous branches and shoots.

Syringa villosa.—This North China Lilac is worthy of cultivation, if only for its sweet scent, which is stronger and more fragrant than that of any other member of the genus. It is perfectly hardy in this country, and does not commence to grow so early in the season as do so many of the plants from *Mandschuria* and the northern parts of China. Under favourable conditions it forms a compact shrub about 9 feet or 10 feet high, with rather slender branches, which in May and June are covered with the sweet-scented flowers. These are borne in short panicles of pale rose-lilac coloured flowers, which are individually about one-half the size of those of the common Lilac. The tube of the flower is rather long in proportion to its size, being about half an inch in length. The leaves are ovate, about 2 inches long, deep green on the upper surface, and paler, approaching to glaucous, on the under-side, with the exception of the midrib, which is usually pubescent, but this is variable, being occasionally entirely absent, and when present is deciduous as the leaves grow old, a fact which makes the specific name of this plant

a rather misleading one. It was introduced in 1880 by Dr. Bretschneider, who sent seeds from Peking to the botanic garden at St. Petersburg, from whence they were distributed to various gardens throughout Europe and America. L.

A beautiful mixed border. One feature in my garden has been so successful that I wish others would try it. Between a Holly hedge and the drive a border about 4 feet wide is beautiful almost all the year round with very little trouble. It is planted with London Pride and white Pinks in irregular masses. Between them and the hedge is *Spiraea palmata*, interspersed with Poet's *Narcissus* and the similar earlier *Barbidgei*. The bulb leaves when fading are lost under the *Spiraeas*, but the flowers show well above. Another very flourishing interplanting of hardy things is a round bed on the lawn. In the centre a *Sumach* with long stem looks like a Palm tree; round it are yellow Crocus, as they fade hidden by *Narcissus* that just overtop the strong young growth of dark blue Larkspurs; these form a green background to the *Azalea mollis*, whose only fault is its being too full of flower. Between the *Azaleas* blue *Nemophilas* are planted, but make very little show yet, and a thick border of grey-leaved *Edelweiss* surrounds them all. I prefer the plan of putting early bulbs right back, often under trees, so that the large-growing perennials hide them when they are unsightly, but when the bulbs are beautiful the others are dormant or nearly so.—R. M. S.

SANGUINARIA CANADENSIS.

(CANADIAN BLOOD-ROOT.)

This plant is generally recognised as being one of the finest hardy gems in the garden for the time of year. It grows with us on a bit of low rockwork facing north, but contrives to receive a little of the afternoon sun, when the flowers open, the plant producing a dazzling white effect. It thrives in a rather dry sandy loam. The flowers shown in the photograph are, unfortunately, not fully expanded, being susceptible to strong sunshine only. An average bloom measures $1\frac{1}{2}$ inch across. The glaucous whitish leaves, too, are quite ornamental in the border or rock garden. The plant makes a good pot subject. J. H. WOOD.

Woodville, Kirkstall, Leeds.



THE CANADIAN BLOOD-ROOT (*SANGUINARIA CANADENSIS*).

THE ROSE GARDEN.

SOME EARLY ROSES.

HOW interesting the early-blooming Roses are, and what a difference shelter-hedges make to their precocity! We have that most charming single Rose in existence the

COPPER AUSTRIAN.

flowering profusely on long untrimmed growths, sheltered by a Beech hedge on the north and east. The cutting winds are robbed to a great extent of their prey, and here in this snug corner both the variety mentioned and other kinds of these valuable Austrian Briars are accelerated fully a week compared with bushes in a more exposed part of the garden.

In another sheltered corner we have

RAMBLER ROSE AGLAIA

flowering abundantly upon a 7-foot high Briar. I am sure this Rose will give satisfaction. It appears to be an excellent variety to grow on tall Briars; the growths, compelled as they are to bend over, induce a free-flowering propensity, which as a Rambler Rose it seems rather deficient of until perhaps well established. Its buds are suffused with a rosy-pink colour, a pretty contrast to the expanded yellowish-white blossoms. It may not be out of place to mention here that all who can spare the space for them should plant a few of the tall hedge Briars alluded to and bud them with Rambler Roses.

THE CRIMSON RAMBLER

will very shortly be a glorious mass of colour. I counted on one of the growths, which was about 5 feet long, thirty trusses of buds, and there are several other smaller growths on this one standard proportionately covered. The pretty

SCOTCH ROSES

cannot be praised too much. I do not know which I admire most, the lovely simple singles, of colours ranging from crimson to purple, pink, cream, and white, or the neat little flowers of the double kinds. The Double Yellow is beautiful, as is also the Double Snow-white. The various kinds should be well separated if one would keep the stock true, for all these Roses have the useful propensity of producing underground stolons, which will appear sometimes a yard or more away from the bush. For this reason they are delightful subjects for the wild garden; and under trees not too thickly planted they thrive remarkably well. Although seemingly they prefer a strong loamy soil, I have no doubt they would flourish equally well on a gravelly soil. The pretty little

MINIATURE PROVENCE ROSES

De Meaux, White De Meaux, and Spong are also now out. The first-named would surely make a useful market plant if struck from cuttings or layered and potted into 5-inch pots. They would make lovely little objects upon a dinner table or for the conservatory.

THREE PRETTY SINGLE ROSES

that always appear early (this year by the end of May) are ochroleuca, cinnamomea, and alpina. The first-named is very pale lemon in colour, the

buds prettily suffused with rosy magenta. Cinnamomea has rich pink, very round and smooth flowers, the wood in winter being a most attractive cinnamon colour. Alpina has very bright rose-coloured flowers. It is valuable for its long scarlet capsicum-like seed-pods in autumn, and also for its changing foliage. A most brilliant early single Rose is

CARMINE PILLAR, AND ROSA SINICA ANEMOSE is quite unique in its way. They are both delightful Roses for the short time they remain in flower.

THE DAWSON ROSE

is just now commencing to unfold its pretty rosy pink flowers that look so very attractive in the mass.

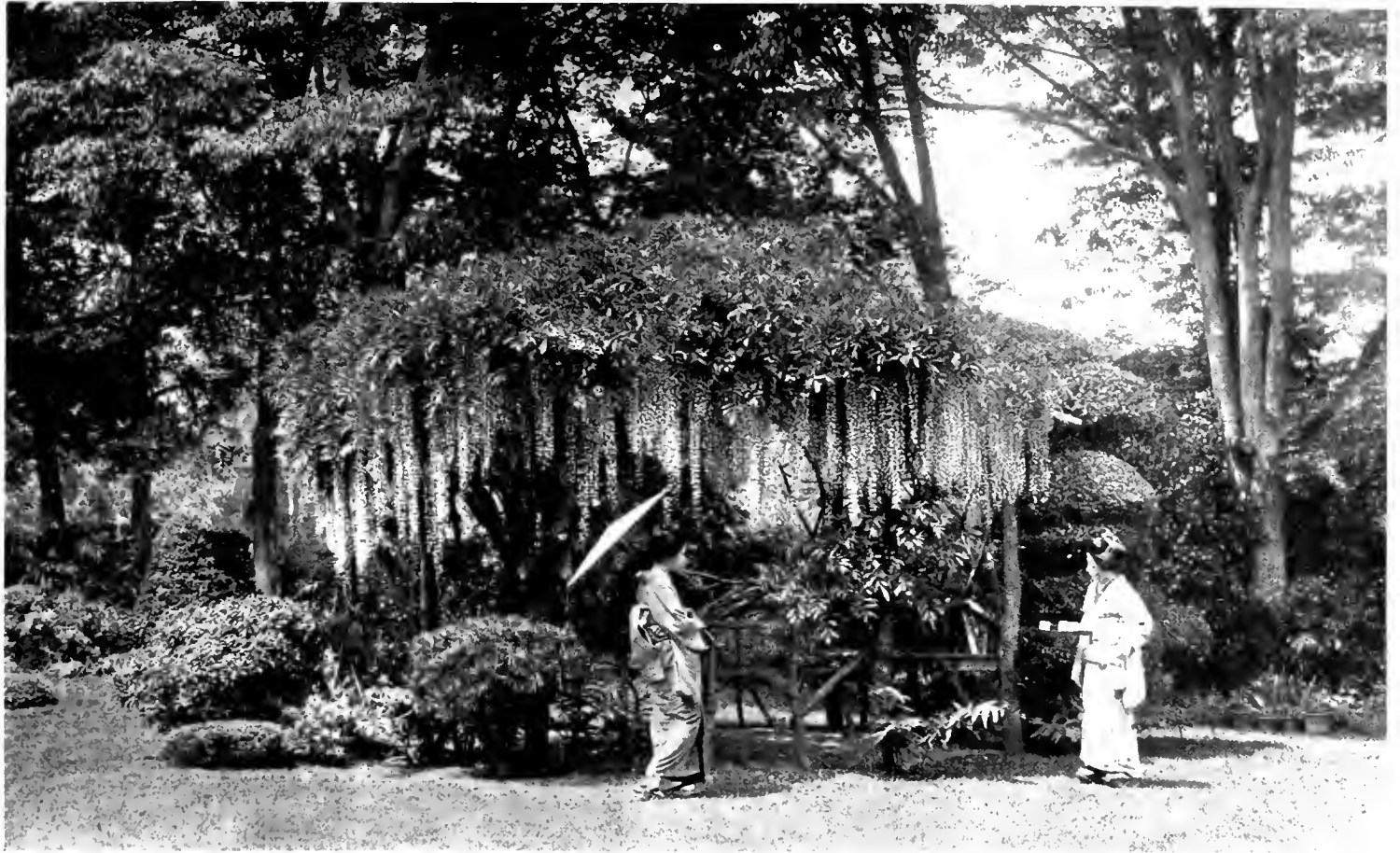
PHILOMEL.

THE WISTARIA IN JAPAN.

No climbing plant of early summer is more valuable in a garden where there is free rambling room than the Wistaria. Many a house front, trellis, arbour, and wide space of wall is made beautiful by its large and lavish bloom, and when it grows old the great grey snake-like stems twisting together in friendly contortions give it a character different from anything else in the garden. But much as it is liked and freely as it is used in England, it is still more appreciated in Japan, whose gardeners have taught us how to increase its display of flower by growing it as a standard. In this shape the illustration shows the extreme floriferousness as well as



STANDARD WISTARIA IN JAPAN, SHOWING THE LARGE SIZE OF FLOWER AND LARGE PROPORTION OF BLOOM WHEN GROWN IN THIS FORM.



WISTARIA TRAINED AS AN ARBOUR IN A JAPANESE GARDEN.

the great length of the individual raceme. Though it is not unknown in this shape in English gardens, such a way of growing it is not as often practised as it might be, and though one would not willingly give up its free-shaped clambering beauty, it is just as well to enrich our gardens with another beautiful form of an always good plant. It is an excellent thing to train up some tree of thin habit, such as an Acacia, bearing in mind that the fewer the stems that are allowed to grow the greater will be the amount of bloom.

GARDENING OF THE WEEK.

FLOWER GARDEN.

PANSIES (VIOLAS).

FEW things have been more improved upon during recent years than the Viola, and every good garden should contain a collection of these, and to see them at their best a border should be devoted to them, each variety planted in a block, arranging the colours so that they produce a pleasing effect. If a careful selection be made I venture to say few things will attract more attention during the summer months. If planted on rich and well-prepared ground they will continue to flower profusely during the whole of the summer and autumn. Water should be applied liberally during hot, dry weather, and on light, porous soils the plants will derive much benefit if a mulching of old spent mushroom bed manure or cocoanut fibre is given.

SWEET PEAS.

These, like the foregoing, are now among the most delightful of our summer-flowering plants,

and few things give better returns for the little labour spent on them. To see them in perfection, for not only are they decidedly showy and attractive when growing in the open, but for table decorations, and, indeed, used judiciously when cut for almost any purpose, they have few equals, as they are easily arranged, and the soft and pleasing colours render them highly desirable for this purpose. The coming exhibition, to be held at the Crystal Palace next month, should prove to be one of the most successful events of the year. Over-crowding is a mistake and far too often made, as the quality of the blooms is much impaired, and the flowering season, when this is allowed, will be a very short one, so that the plants should be thinned to a distance of not less than 4 inches apart when the best returns are expected, and they will well repay for a good mulching of half-decayed manure. Keep the plants well supplied with water at the roots and syringe the foliage in early evening up to the time of flowering, and the seed pods must be picked off as made.

PENTSTEMONS.

These will require to be neatly supported, and this is best done by placing a neat stake to each plant and looping up the growth loosely as it is made. These will succeed in almost any kind of soil, and are well worthy of the space they occupy and the little attention which they require. These are easily produced from seed or cuttings, but preference should certainly be given to the latter by making a selection of the best-named varieties. Cuttings will root readily in a sandy compost during the autumn and can be safely wintered in a cold frame.

SEED SOWING.

Several kinds of seeds should now be sown for flowering next spring and summer. Wallflowers are extremely valuable in any garden, particularly where spring bedding has to be carried out, but to see them at their best it is necessary that the

plants should be strong and well matured before finally planting in the autumn, consequently the seed should be sown not later than the middle of June in an open position thinly, either in beds broadcast or in drills 12 inches apart. When large enough the young plants should be transplanted in rows 1 foot apart and 9 inches from plant to plant on a well-prepared rich piece of ground. Hollyhocks and Pansies should also be sown, and Primroses of sorts in a fairly shady position, also Anemone St. Brigid. The seed of this popular strain should be sown immediately it is ripe, and, if possible, where it is intended to flower, when they will produce a wealth of bloom the following spring of almost every shade of colour, and are invaluable either for making a display in the borders or for cutting purposes. E. BECKETT.

Abraham House Gardens, Elster, Herts.

KITCHEN GARDEN.

ROUTINE WORK.

MUCH may be done at this date in assisting the summer crops by feeding and keeping the soil clean on the surface. Much labour may be saved in light soils resting on gravel if shallow-rooting crops are given a mulch of any decayed matter that retains moisture and assists the roots near the surface. I fear, owing to the late season, Asparagus beds will be cut over later than usual, and, to prevent loss of vigour, feeding will be beneficial, and where a system of irrigation can be carried out the plants delight in this treatment, and previous to applying the moisture a dressing of some good fertiliser or salt will be advantageous. If liquid manure from stables can be obtained, this is one of the best foods, and, given fortnightly, it will build up large crops for next season's growth. In this country of late years there has been a marked improvement in culture, and fortunately home-grown produce when well grown is superior to the continental.

Runner and Climbing French Beans will crop earlier and more freely if topped at 5 feet to 6 feet from the soil, and will set earlier if food can be given should the soil be dry. These plants soon feel the effects of drought, and timely supplies of moisture will pay for labour. Much the same remarks apply to Vegetable Marrow. These need liberal supplies of moisture and the points of strong shoots stopped to get a free set, and plants on the flat in light soils well repay for a mulch of spent manure.

TOMATOES.

Plants in houses will now be giving liberal supplies if due attention was paid to the setting earlier in the season. It was difficult to gather a full early crop owing to the dull cold weather, but with later plants there should be no difficulty, providing a free supply of air is given in the day, and some also at night, as by leaving the ventilators open a much better growth is secured. I am not an advocate of starving, as is at times advised, if the plants are in pots and intended to carry 10lb. to 12lb. of fruit. Of course feeding is not advisable till the fruit has set, and then applications of weak manures or surface dressings of fertilisers are beneficial. I always sow in June, and again late in August for late and early supplies; the June sowings provide fruit during the late autumn if the plants are raised as hardy as possible in cold frames, and, when potted on or planted out, grown as sturdy as possible. For sowing in August, such kinds as Conqueror and Improved Red are the best, but next season I intend giving the new Winter Beauty a trial. All planting in the open should be completed, and the plants should be securely tied, as winds do much mischief in twisting the stems all loose. Plants against walls should be nailed or tied, and too many growths should not be attempted either here or in the open.

CARDOONS.

There should be no delay in getting out the plants of this vegetable in their growing quarters, and to do them justice they need a rich root run, ample space, and plenty of moisture. There are more failures with Cardoons in light soils from lack of moisture than from other causes, and though the plants do well grown in trenches similar to Celery, they should not be far away from the water supply, as they are gross growers and run to seed, and are then useless if not given liberal culture. Some persons object to the huge stalks, and here this objection may be met, as seeds sown now in rich trenches 4 feet apart, 18 inches or 2 feet between the plants, will make excellent material by the winter, and these plants keep longer than those sown so much earlier in heat, grown on in pots, and planted out early this month.

G. WYTHS.

Syon House Gardens, Brentford.

FRUIT GARDEN.

STRAWBERRY BEDS.

THESE should be hand-weeded before putting on nets, so as to obviate the necessity of walking on them until the fruit is ripe, and in places where a good supply of water is at command, and particularly in light soil, a thorough watering should be given. Before the fruit begins to colour nets must be put over the plants. Immediately colouring begins blackbirds and thrushes are sure to give trouble if the fruit is not protected. Tanned netting of 1 inch mesh is suitable for the purpose; old repaired fishing nets, too, are cheap, and are sold by most garden smidmen. They are made mostly in widths of 4 yards and 8 yards, the latter being the more convenient for general purposes. Nets must be kept some distance from the plants, for if they are allowed to be on the plants birds can settle on them and peck the fruit. They may be supported about 5 feet from the ground on deal frames, with the edges pegged down, so that a person can walk underneath to gather the fruit.

CHERRIES.

too, must be protected in good time, as birds are more troublesome than with any other fruit. Before fixing the nets go over the trees to stop and tie or nail all shoots that require it, at the same time keeping a sharp look out for black fly; should this

be present cleanse with insecticide by syringing, and dipping the ends of the young shoots. If this pest is allowed to remain unchecked it will dirty the fruit to such an extent by the time it is ripe as to make it unfit for use. It must be borne in mind that while the fruit is colouring nothing can be done against insects. It is an advantage with Cherries that they will hang for some time when ripe, if free from black-fly and protected from birds. It is easy to fix nets over trees on walls by fastening them at the top and bottom, keeping them some distance from the foliage by means of forked sticks.

RASPBERRIES.

Where the above-named birds abound, and I think they do so in most places, these will also need protecting. Before putting on the netting cut off surplus suckers beyond those required to make canes for the coming year, either for bearing fruit or new plantations. Mulching, if not previously done, may still pay for doing, though it is late.

PLUM TREES.

Attend to tying or nailing the leading shoots and stopping for the formation of spurs, and again syringe with insecticide if fly is in evidence. Suckers are of common occurrence, and should be removed at the earliest opportunity.

PEACHES AND NECTARINES.

Defer no longer the final thinning of the fruit. Fasten in position growing shoots, and, if fly is to be seen, syringe with insecticides.

PEARS.

should be thinned on trees standing in the open, as well as those on walls, if they have more fruit set than can be ripened without weakening the trees. A fair crop of good quality is of greater value than a very large crop of inferior fruit, and is produced without enfeebling the trees for the next season. Now it can be seen which fruit are swelling. Those that are taking the lead should be left for the crop, the number being regulated according to the size the varieties attain when ripe.

G. NORMAN.

The Gardens, Hatfield House, Herts.

INDOOR GARDEN.

GLOXINIAS.

THE main batch of Gloxinias will now be flowering, or part coming into flower, and may be helped with weak manure water, which will improve the substance of the flowers and lengthen the flowering season. The great enemy of these plants is the tiny white thrip, which I have had occasion to allude to frequently in these notes, and which is one of the worst of pests. Vapourising with "N. All" will kill those which the fumes reach, and is the best thing I know of for their extermination; but there always appears to be a sufficient number to keep the stock alive which escape through some means of secreting themselves, and I have a theory that they are able to bury their heads in the leaves and stems of these very soft-stemmed plants and thus escape suffocation, so that one has always to be on the look out for successional attacks on plants of this nature.

The strains of Gloxinias have been so much improved of late years that one can depend on getting fine coloured forms of the best types from seeds, but now and then it may be advantageous to propagate a few of the very best by means of leaves, and this is the best time of the year for this form of propagation. Pans of peat and sand should be prepared, and well-matured leaves, cut off with a portion of the stem attached, should be inserted in the soil, so that the leaves lie flat on the surface. Score the leaves across some of the main ribs with a sharp knife, and then drop a little silver sand on the surface wherever these cuts have been made. If put in a nice warm house where there is not too much atmospheric moisture, young plants will soon form and produce combs of a size that will enable them to be wintered safely.

BEGONIA GLOIRE DE LORRAINE.

The earliest struck batch should now be in condition to transfer to the hanging baskets or pans, in which the early plants do best. I use 6 inch and 7 inch pans, draining them well, and a soil

about half loam, one quarter leaf-mould, and an eighth each of cow manure and sand. After being potted they should be grown on in a warm house, the atmosphere of which is always moist, and shade must be given whenever the sun is shining. It seems immaterial whether the plants be hung up or stood on the stages, provided the air is kept full of moisture. The worst of all possible places for them is an open lattice work stage over the hot-water pipes, and the best a bed of moist ashes.

BONVARDIAS.

The plants being grown on in pots must be freely syringed and shut up early in the afternoon, so that they may be kept growing freely for the next two months or so, when it will be necessary to harden the wood by greater exposure.

DRACÆNAS.

A few old plants may now be split up for insertion as eyes to produce small plants for winter work, and among the roots of the older ones will be found a few "eyes" that may be treated in the same way, these making, as a rule, especially good plants.

J. C. TALLACK.

Shipley Hall Gardens, Derby.

THE FLOWER GARDEN.

THE TREE MALLOW.

THE Mallows are of bold beauty when used effectively, as our illustration of a hedge of the clear bright-coloured *Lavatera trimestris* suggests. Unfortunately, we see little of them in gardens, but they are flowers worth care, creating effective pictures at the cost of sowing a few seeds in early spring. Only two kinds are really of much value in English gardens, although the Mallow family is a large one, the various species inhabiting Western Europe, Australia, and Central Asia. The two kinds we cherish are *L. trimestris* and *L. arborea*, of which the former is illustrated, and is an annual—that is, seeds sown in spring will produce plants that will flower gaily in the ensuing summer. It comes from the Mediterranean region, and was first introduced into this country in 1633. Few annual flowers are so showy and in a way graceful as this Mallow, which grows fully 3 feet in height in good soil, the flowers measuring about 3 inches across, and in the type or species bright rose, with a blotch of maroon in the centre of the petals, whilst those of the variety *alba* are pure white—a charming association of pleasing colours. They last from July until the following September. Not only is this wealth of bloom attractive in the garden, but the flowers remain fresh for many days when gathered, buds even expanding; hence we advise those who wish for as much variety as possible in the flowers for cutting to grow this Mallow in quantity for this purpose alone. Sow the seed early in April where the plants are to remain, thinning them out freely, as they make considerable growth in rich, well-manured soil. We enjoy the bold breaks of colouring that this Mallow gives to a border in the kitchen garden, or skirting some shrubbery, the flower colouring thrown into bold relief by the background of foliage, or even amongst dwarf shrubs, against which the bright sheaths of blossom rest gracefully, or as a hedge such as our illustration depicts. Of course, the *Lavatera* is not a hedge plant in the ordinary acceptance of the term, but it is very bright and pleasing when the seeds are sown against a railing or dividing line, as the growth is very quick, and the flowers are produced over a long season.

Lavatera arborea (the Sea or Tree Mallow) is not an annual, but a shrubby species of tender growth, and far less useful than the beautiful *L. trimestris*. It is a British plant,

A HEDGE OF TREE MALLOW (*LAVATERA TRIMESTRIS*.)

having been found wild in the south-west of Ireland and upon the Bass Rock in Scotland, but always near the coast; hence in the coast gardens of our southern counties the Tree Mallow is familiar. It must not be forgotten, however, that inland, especially in the northern counties, it rarely survives the winter. When grown in rich soil, the Tree Mallow reaches a height of nearly 10 feet, the leaves bold and handsome, and the flowers pale purple. Although almost as large as those of *L. trimestris*, they are scarcely so pleasing, because less clear and pure. Of *L. arborea* there is a variegated variety named *variegata*, which is not hardy, and must have, therefore, the protection of a greenhouse in winter. It is used sometimes in the summer garden, but we care little for its variegation, the large leaves being splashed with milky white. The Tree Mallow is best propagated by cuttings taken in spring, but seeds may be sown, the seedlings reproducing fairly well the character of the parent.

V. C. T.

SOME MAY-FLOWERING ALPINES.

We should hardly suspect the "still-rexed" Falkland Islands of producing much that is attractive in the way of flowers, but recently two excellent spring plants have been introduced from them, and I believe more are expected. The two are *Sisyrinchium filifolium* and *Oxalis enneaphylla*. The first is a great improvement on the white variety of *S. grandiflorum* which it resembles. The stalk is stouter and the flower larger and more open. The plant is perfectly hardy, having stood out through the last trying winter, and flowered this year early in May. The *Oxalis* has been grown at Kew for several years by the side of the steps which come in halfway down the rockery. The leaves are round, each being neatly crimped into about nine folds, whence

the name of nine-leaved. The flowers are large and pure white, and last for about two months from the middle of April. This is the third year I have flowered it, and though slow of increase it does not seem hard to please, as I have four plants in different situations all doing well. Two spring *Achilleas* may be especially recommended. *A. rupestris*, making abundant umbels of flowers of the purest white and of excellent habit, and *A. ageratifolia*, better known to gardeners by its old name of *Anthemis aizoon*. It is one of those neat plants which can never be out of place where it does well, but it must be grown on a dry spot of the rockery, where it can rest on stone, as it damps off in winter if in contact with wet soil.

First of the many alpine Pinks preparing to flower is one still sold as *D. glacialis*. It was a well-known speciality many years ago in the nurseries of Mr. Robert Parker, of Tooting, and after him the stock descended to Messrs. Backhouse, of York, but it is scarce in nurseries as well as in private collections. It begins to flower before the end of April, and though I have had several tufts flowering yearly and lasting ten years or more, I have never seen one as large as the palm of my hand, but in that space twenty or thirty flowers each 1 inch across, on stalks 2 inches high, are crowded together. It is not typical *D. glacialis*, and as it never ripens a seed it has been thought a hybrid between that species and *D. alpinum*. Increasing it by cuttings is not easy, as the tufts of leaves are seldom half an inch long.

Linum alpinum has pretty sky-blue flowers as large as those of *L. perenne*, and the plant has a prostrate habit, each stalk being 4 inches or 5 inches long. *Geranium argenteum* is flowering beautifully on a new stone heap I made last year, composed entirely of blocks of limestone and fine riddlings of Clee Hill granite, containing not more than one-fifth

of a deep gentian blue. Several other species are to follow, and all are excellent and true alpinists. The *Helianthemum* are beginning, but the smallest and neatest is nearly over, the native *H. cauum* which abounds on the Orme's Head at Llandudno. It is not difficult to propagate by cuttings or to raise from seed, but must be grown in the very driest stones, with hardly a suspicion of soil. It is so characteristic a rock plant that I never like to be without it. *Ethionemas* are all good. I am told I ought not to admire *E. grandiflorum* because it is too pink, but I always delight in it as the most ornamental and the brightest plant on the rockery. *E. pulchellum* and *E. coridifolium* are charming little gems, looking as if they could not stand the roughing of an English winter, yet they manage to survive it, and are now very happily in flower. Perennial *Candytufts* are most useful in May, both for the borders and the rockeries. *Iberis saxatilis* in several dwarf forms lasts from Christmas to April; then come many varieties of *I. sempervirens*, of which the most compact and useful for rockeries is one called Little Gem, which I got from Mr. Amos Perry's nursery, and can thoroughly recommend. But there is an excellent species coming into flower at the same time, called *I. tenoreana*. Though by nature perennial, it generally flowers itself to death in two years. It is very dwarf, and the flowers are large and full, either pure white or with a tint of lilac. It scatters its ripe seeds so as to come up abundantly, and the seedlings are easily cleared away when not wanted. If it is to be transplanted, it must be done when the plant is quite young, as the long, wiry roots do not easily establish themselves. *Coronilla minima* is a neat and harmless prostrate perennial continuing of small dimensions, producing freely yellow flowers not unlike those of the native *Lotus corniculatus* (Bird's-foot Trefoil).

part loam. I have got into the habit of putting less and less soil in every new rockery I make, and I am now starting another without any stone blocks, but a barrow-shaped heap of burnt clay, covered on the surface with 3 inches or 4 inches of the same Clee Hill fine gravel. I do not know yet how it will succeed, but if I could have the mountain conditions of air, saturated with moisture and no evaporation, I am sure alpinists would do well on it. A plant that requires wet frequently passing through it is the rare *Lithospermum Gastoni*, found only in the high Pyrenees in the neighbourhood of Eaux Bonnes and Argeles; but with regular watering I succeed admirably with it, having two or three clumps with about 100 flowering stems in each. The flower is bright blue, and the height about 4 inches. Its season lasts till May. Of the *Campanulas* belonging to the section *Edraianthus*, that is with sessile flowers, the only one fully out before the end of May is this year *E. serpyllifolius*, perhaps the prettiest of them all, the flowers are abundant and

Ranunculus Segneri and *R. rutefolius*, both of lowly and narrow growths and pretty white flowers, have the additional merit of very ornamental leaves. *R. amplexicaulis* is well known, but I have never seen it so fine as in my garden, where all are the descendants of some I selected fifteen years ago on the Pic d'Entecade, above Luchon. The seedlings of these—the original plants lived ten years—still maintain their superior size and bear flowers, many of which are larger than a crown piece. At the same time I brought from the same spot plants of *R. graminens*. These two when planted together in my garden have produced from seed a beautiful lemon-coloured hybrid, intermediate between the parents, and surpassing both in branching and floriferous habit. It is now flowering for the fourth season, and is sparingly fertile, but has not yet reproduced itself faithfully, though the pale yellow of the flowers is retained. I recommend this cross, which I believe may be easily produced artificially, to those who grow such plants. Both the species named above can easily be obtained from dealers. C. WOLLEY-DOD.

Edg. Hall, Malpas.

MAIZE.

In planting out Maize and others of the giant Grasses it should be remembered that, like many Lilies, it throws out a second set of roots a little way up the stem as soon as it begins to make vigorous growth. The plants should therefore be put in a cup-shaped depression, and as soon as the stem roots appear the hollow should be filled with some nourishing compost, such as half-and-half of good garden mould and old hotbed, so as just to cover the upper roots. During their rapid growth they will be grateful for rather frequent doses of weak manure water.

COSMOS BIPINNATUS.

This handsome but little known plant is as easy to raise from seed as any half-hardy annual, but under ordinary conditions it blooms very late, not till October. I am therefore trying this year to sow early and push on the seedlings as fast as possible and plant under a south wall in the hope of getting it to bloom in September. Its finely cut, almost fern-like, fresh green foliage and bold stature give it a distinct appearance among other vegetation, and the flowers when they do come are something like small, narrow-petalled Dahlias, and are so pretty that one feels rewarded for the long time of waiting. In colour they are either white, pale lilac, or reddish, but the white are the best.

Surrey. G. J.

SWEET PEAS IN POTS.

At the Temple show, and again at a more recent Drill Hall meeting of the Royal Horticultural Society, Messrs. Dobbie and Co. exhibited cut blooms from plants grown in pots, which well illustrated what valuable material these provide in a cut state. They were cut with the foliage and buds attached, and included a great variety of distinct shades of colour.

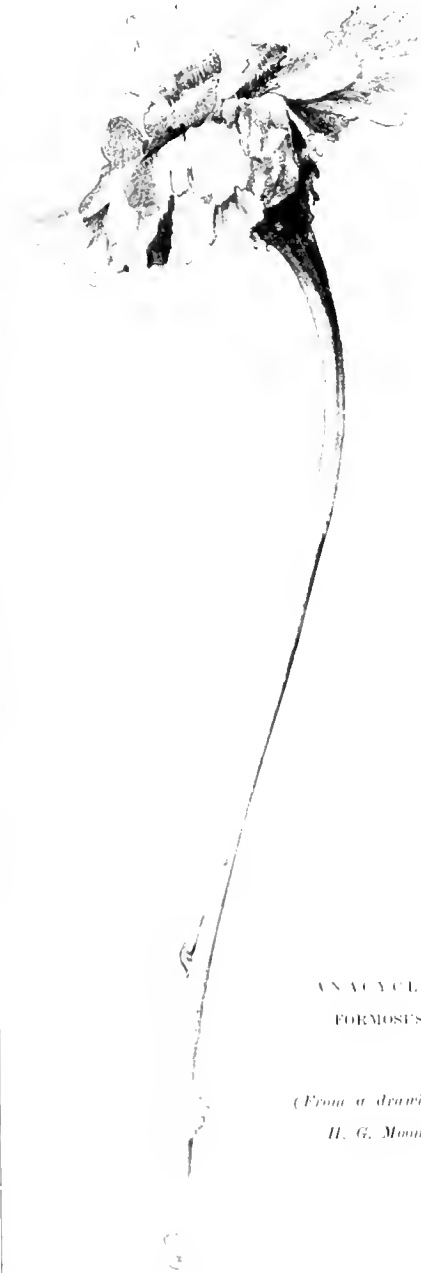
It may not be a new idea to grow them in pots, but within the last few years a good deal of attention has been given to Sweet Peas, and this has led to giving more attention to various methods of culture. I believe many of the dwarf varieties may be grown as pot plants, and would be very useful for the conservatory or other floral decorations.

At Mr. H. J. Jones's Nursery, at Lewisham, upwards of fifty varieties are being grown in pots, each variety being subject to different modes of treatment. The seeds were sown early in March, and one pot of each sort was potted on and grown without being disturbed or stopped; these are now in flower (the first blooms opened about June 3). The next batch, which was potted off three plants in a pot, and stopped once, will

not be far behind, some of the varieties having buds well advanced now. Others that have been stopped more seem likely to make bushy plants and flower before they get so tall as those grown without stopping. It is a little early to say which are the best varieties for pots, but it is quite evident that the dwarfier growing sorts are well worthy of pot culture.

I may add that a few of the new varieties have been propagated from cuttings, and these are growing vigorously and are comparatively dwarf.

To succeed well with Sweet Peas in pots, they



ANACYCLUS
FORMOSUS.

(From a drawing by
H. G. Moon.)

must be well exposed to the light and air, require care in watering, and should be potted in a good rich compost. A. HEMSLEY.

LARGE PANSIES.

During the early spring these favourite flowers may be seen in the shops of almost all vendors of flowering plants, usually with one flower open on each plant, and that of immense size, the form of the flowers and variety in colours being all that could be desired. I am led to refer to these from the

frequent remarks I have heard from purchasers expressing their disappointment at the succeeding flowers not coming so large and the failure to grow them successfully, and I have often been asked what is done to produce these large flowers. In the first place, the plants offered for sale are selected from the finest strains of large-flowered varieties, and they are grown in the soil and under conditions which produce the best results, and the first flowers open before they have been disturbed at the roots. Under any conditions the succeeding flowers would not be quite so large, but what I would most particularly refer to is the evil of "balling up," as it is called—that is, pressing the soil very firmly round the roots while the soil is wet, and binding some material round to keep it together. This keeps the plants in good condition for a longer period before replanting, but they never start so well afterwards, and sometimes it happens that they have been in this state for a long time and kept so wet that the roots have suffered considerably. I much prefer to plant Pansies that have not been subjected to this treatment, even though most of the soil may fall away from the roots and the plants may wither a little, but they will soon take hold of the new soil and revive. I think that the strain with medium-sized flowers proves more satisfactory than that with the very large flowers. A. H.

AN ARTIST'S NOTE BOOK.

ANACYCLUS FORMOSUS.

WE lately received from Mr. William Thompson, of Ipswich, specimens of the flower and leafy growths of this rare plant, with the name of *Leucocyclus formosus*, under which Boissier has it in his "Fl. orientalis," vol. 3, page 323. This botanist describes it as found on the dry slopes of Mount Taurus at 6,000 feet altitude. It is the only specimen of the genus. We have received this information from the Rev. C. Wolley-Dod, who has been good enough to make enquiries at Kew about this ornamental plant, which, if it would submit to cultivation, would be a great gain to gardens.

It appears in "The Kew Hand-List" under the older and therefore more correct name of *Anacyclus*. Mr. Dod has ascertained that it was raised in the Royal Gardens from Mr. Whittall's seed, but that it did not seed in 1899, and was lost during last winter.

We shall hope to hear more of this interesting plant, which for garden purposes may be described as somewhat resembling *Santolina Chamæcyparissus*, but with a much better flower; for whereas the bloom of *Santolina* has the yellow central disc only, that of *Anacyclus* has a treble row of clear white ray petals of good substance, boldly crenated at the outer edge.

Among the plants of which seeds have been so liberally distributed of late years by Mr. Whittall, of Smyrna, this pretty composite deserves prominent mention. It is a hardy perennial, with a *Santolina*-like aspect, growing in our light soil, from 12 inches to 18 inches high, with numerous erect stems clothed with hoary linear foliage, each stem bearing on a long peduncle a single flower-head about 1½ inch across, with broad ray florets of the purest white, the disc being yellow. Composites with pure white single flowers are by no means rare in gardens, but apart from those semi-double flowers which have resulted from horticultural patience and skill, we know of none which, like the *Anacyclus formosus*, are endowed with a triple series of ray florets.

This peculiarity gives the flowers a solidity, and at the same time a pretty frilled appearance, which strikes the eye at once. The foliage of this plant is not without its own interest, though perhaps more for the botanist than the gardener. Though described as linear, and apparently entire when viewed at a distance, the leaves are on close examination seen to be minutely lobed, the pointed lobes being so densely set in an imbricated manner that a lens is needed to bring out the details. As an early summer bloomer of the easiest culture this novelty may safely be recommended as an acquisition to our border plants. It was received under the name of *Leucocyclus formosus* (Boissier), but it is placed by Hooker and Bentham in the old Linnean genus *Anacyclus*, and is to be found in "The Kew Hand-List" under that head.

Ipswich. W. THOMPSON.

MEGASEA CORDIFOLIA
GRANDIFLORA.

MANY are the uses of the broad-leaved Saxifrages; indeed, they have a kind of special usefulness of their own that is shared only by the very few other garden plants that are leafy and well furnished throughout the year. In the flower border they are valuable as informal stretches of edging that run back here and there among other plants; their solid build makes them admirably suited for associating with step or wall or any kind of masonry. They will make a large and bold effect planted in the joints of a north or east dry wall and at its foot, and scarcely anything better can be found for filling shady outer spaces between shrubs. The variety represented in the accompanying sketch is unusually handsome in leaf and flower.

THE VICTORIA AND OTHER
TENDER WATER LILIES IN
THE OPEN AIR.

SUCCESSSES AND FAILURES.

As some of your readers may entertain great thoughts of growing the Victoria and other tender Nymphaeas in the open air, I send you a few notes of my experience, trusting that they may be useful, especially as the new Victoria Regia Trickeri is supposed to be nearly hardy.

Thirty years ago I cut off a corner of my pond about 4 yards to 5 yards across, and fitted it with lead pipes, 1 inch inside, a double row, twisting round all corners and attached to a conical galvanised iron boiler made in the village. I started with gas, but found that the cost would be so outrageous (the effect being practically *nil*) and the smell of the cooled fumes so odious that I soon stopped that. Then I fitted a grid to the bottom of the boiler and filled it with cinders of the house which cost nothing. By this I got plenty of heat, but the cinders burnt to a white heat and then slagged together and the fire went out in the night. So then I mixed equal broken coat and cinders and that was perfect, and with an airtight fire-box, except for one hole of half an inch (less) for air, and the poker, I had

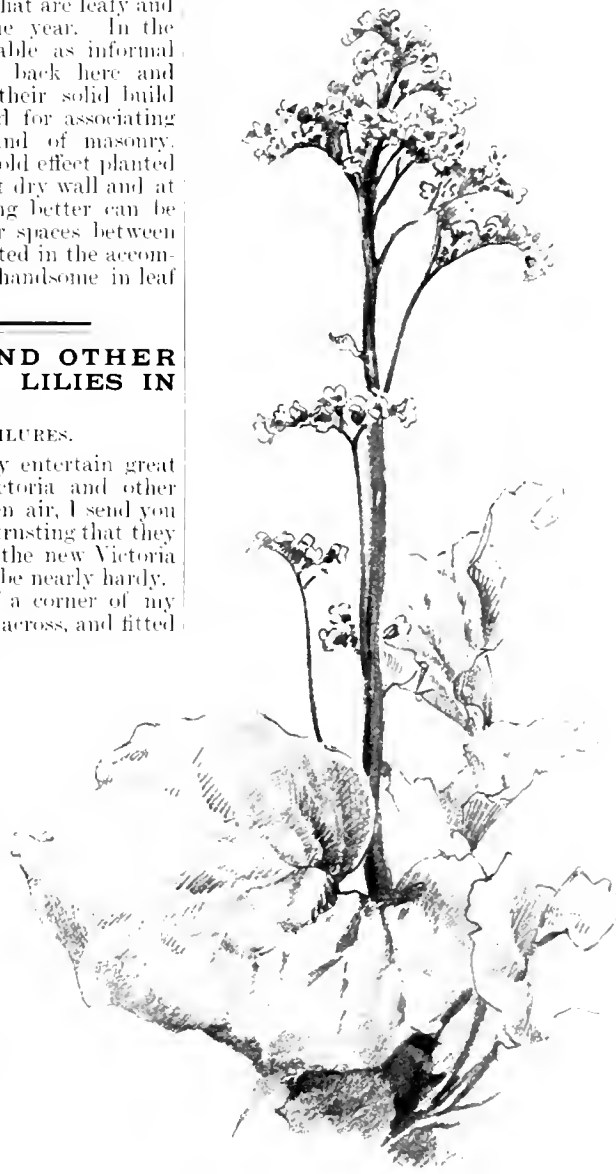
neither smoke nor slag. But the cinders were burnt taster than the house supplied, so I then got coake broken up smallish, and equal coal ditto, and there was peace. This was in March, and I covered the tank over with poles and matting, anything in fact, and left a hole covered by a small garden frame, and got a young Victoria Regia, by the kindness of Mr. Smith of Kew, and started the great work. Also I had tubers of Nymphaea from Mr. Smith, Mr. Taplin of Chatsworth, and Mr. Moore of Glasnevin.

Once in April there was a direful scene in the middle of the night. The weather was cold and black and windy, and I had covered the glass with mats, and the water was about 55° only, in spite of all efforts, for the slender pipes went out boiling and came back cold, so nothing more could be done. In miserable plight "I sought the pillow," and then the carnival began. The wind rose and howled and thundered, and the hail beat, and the snow blew drifts in great masses, and I lay reflecting upon "the vanity of human wishes," for I thought that surely all was over. At last I got up and faced the roaring blast "with lantern dimly burning." Gone the mats,

gone the lights, gone the frame, and a white snowy mass on one side probably contained the relics. Such a night! Frozen and half-dressed, I got some stakes and boughs and heaps of cut grass rubbish, and covered up and crept back, and mortal could do no more. I tell this to show that there is no need to be too anxious, for though the heat must have gone down to 50° below Zero nothing was one penny the worse. So all went well till May, when I took off the frame, and could see the tenderlings in plenty of space all sweetly growing, and the Victoria Regia, in the midst holding court in her own imperial way among her maids of honour, and keeping an eye upon Euryale ferox, a big lubberly boy, quite out of place in such company. For there were Lotus and Nymphaea dentata, gigantea and stellata, cyanea Devonensis, micrantha, rubra, and cœrulea, Nelumbium, Papyrus, Thalia, and everything. At this point I may mention that stellata is now in a muddle. It used to be a small Australian blue Lily, and nearly hardy. Now it is mixed up with cœrulea from the Cape, and which is which no man knoweth.

On page 397, June 2, of THE GARDEN I saw a splendid account of Nelumbium and how to grow it. The correspondent covered up the tubers (in Italy) in dryish bog in winter. I note the plan as an idea if ever I am weak enough to try it again. Others may know how to grow it; I can only pride myself on being very clever at not growing it. True, it is easy enough to get it to the top of the water, but then comes the difficulty. Suppose you take seeds and are in a great hurry. The seeds may not break their hard shell for months or even years, but if you file a hole through the shell and put them into water at 120° or more they will start and grow 4 inches in one night. In the early spring the seedlings at about 70° are difficult to keep unless you have a stove with stove heat *above* the water, for in a cool structure the air above the warm water being cold is saturated with steam, and this probably suffocates the leaves, as they break out with purple spots, which become holes, and the whole thing rots away. But in a warm summer out of doors the seedlings will grow (in heat of course), and as long as they float they are all right, but when they try to lift themselves out of the water they cannot unfold or spread and fall back upon the water, and the thing ends in perfect failure. Nelumbium luteum, which is supposed to be hardy, is worse in every way. I wonder how much that plant has cost me in attempts and money. Of course I speak of this most unfavourable locality of Westmoreland, but I believe the experience is the same everywhere.

To return to the Victoria Regia. It is too strong to suffer from caddis worms, the great enemy of young Nymphaea, and the earliest crisis is caused by a little wriggling worm which sits on the edges of the holes it makes and eats and eats and eats. It is a quarter of an inch long, with joints and a hard head and a hard face, and the only remedy is jack sharps. They or minnows soon make an end of it, but gold fish or any of those silly fish are useless. I saw it advised by M. Marliac to add a few drops of paraffin, and that may be a remedy, but I tried the native stickleback, and he did his work like a hero. Well, then came the time when the lady put on her frills, and the leaves were about 3 feet across. But before this time the trouble had been great from wind, and most of the leaves had a pattern of creases often broken, which was very annoying. The wind blowing from one side lifts one edge, then veering round it lifts another edge, and finally the piece floats off. But when the rims appeared things were intensified, and boards were no use,



MEGASEA CORDIFOLIA GRANDIFLORA.

(From a drawing by H. G. Munn.)

for the thing was too big, and besides, the boards were ugly and that could not be endured, so I devised a lot of upright floats of wood, 6 inches by 10 inches, and weighted with lead, so that they held the leaf down by main force, and provided with a wire slip which hooked over the rim, and each leaf wanted three of these—as they did not show, being painted the reddish colour of the under leaf, they settled this difficulty. Then things went on well till August, and it was very dry and the water began to run away, and I had no supply, and each day the pond got lower. Not knowing what the plant would bear I feared to fill up with cold water. Meanwhile the Victoria was going back, and the leaves, instead of larger were growing smaller, and all was very miserable, as the place was a crowded jumble of a mud hole, and the sky was like brass, and the rain would not come and all my work was lost. At last in desperation I set a man to bucket cold water out of the pond over the dam and keep it up each day. I took it for granted that everything would die, for we did not know so much in those days. Not a bit of it—the plants started again and grew and flowered, and Victoria picked up in water at from 65° to 70° or less (much less each morning), and all went well till September, by which time the largest leaf was 5 feet 4 inches across the flat, and a great bud was on the surface. But that bud never opened, for the excessive autumn rains of this locality checked the leaves and they were always wet, and then they began to rot and it was all over. So the first year, owing to the droughts, I did not succeed, but the next was a great success, and anyone can feel assured that if he starts early enough or with a large enough seedling (which is the same thing) there is certainty of success.

The cost in coke and coal was about 9s. No great heat is wanted, but I do not suppose it would grow at 65°—our natural pond heat—at the root. I should say that it *must* have the filip of fire heat, even in the height of summer. Soil—anything rich of any sort, except leaf-mould.

As for *Euryale ferox*, I never could get it to open its pretty purple flowers on the surface. It always ripened its seeds under water. I should like to know whether it does so in India. This habit spoils it as an ornamental plant, which is a great pity.

I do not know anything of the new *Victoria Regia* Triekeri, but I should be very doubtful of its doing much here without fire heat, whatever it may do in America. There is so much more sun over there, but we have our compensations, and need not despair. H. B.

Amble-side.

P.S. I also had *N. versicolor* and the curious *Damberryana* and the lovely *N. Blanda* from South America. This sweet cream flower, which opens only at night and shuts by day, makes with its colour, habit, and rich scent a special claim upon the imagination. I have not heard of it for years, but I hope it exists somewhere, being a true species.

NOTES FROM IRELAND.

“La variété c’est la vie.” *French Proverb.*

YES: we must have variety of the best and choicest things in our gardens, even although the object cannot be attained all at once, or in all places alike. Every garden, be it large or small, has its metier, and alas! also its limitations, so that the only true and safe plan is very often “to hasten slowly,” for in gardens, as in the wild, beautiful and successful effects are often accidental survivals of the plants and flowers best fitted to the particular soil and climate.

THE BEST GARDENERS

are those who have been through “the valley of humiliation,” and often “the slough of despond” as well. The young and enthusiastic are apt to plant too many things, however good in their way, indiscriminately, and too closely together. Even the landscape gardeners, so-called, are often tempted for several reasons to plant too much and too thickly so as to obtain immediate effects, and the result is eventually the darkened windows, the blocked-out view, the dotted lawn, or the “choke muddle” shrubby borders. In all good art it is not alone what is done, so often as that which is left undone or omitted, that eventually tells best in the effects gained. It is so easy in all decorative arrangements to keep sticking in things, to keep on planting, but the highest art is that of feeling or of knowing when to stop, or to leave well alone.

WHAT TO AVOID.

Well, as a principle, we must not expect “figs from thistles.” You will not succeed with *Rhododendrons* or other ericaceous plants on dry, hot, limestone soils, or where the water is charged with lime. Nor can you expect to grow good *Roses* or *Violets* within the radius of smoky manufacturing towns. Again, beware of the neat and attractive looking little trees and shrubs that are so often budded or grafted on common stocks, trees that grow, it may be for a year or two, and then as suddenly die off, or otherwise fail. Start fair with honest plants on their own roots. Do not be tempted by new *Rhododendrons* on stocks of the common *R. ponticum*, or choice new *Lilacs* on *Privet* roots, or *Tree Peonies*, *Clematis*, or even *Roses* on common stocks. Try to grow every plant on its own bottom before you venture on grafted stuff.

THE BEST NURSERYMEN

are nowadays alive to the dangers and disappointments “of worked stock,” and in many, even if not most, cases are growing “own root” plants whenever possible. Only recently I saw *Rubinia hispida* and *Prunus triloba*, and many other shrubs usually “worked,” being established on the own root plan; and nowadays not only Messrs. Waterer but many others are layering all the best of *Rhododendrons*, *Magnolias*, and other choice flowering shrubs and trees, and I hope that the time will come when one would as soon think of grafting a *Bamboo* as of grafting a *Clematis* or a *Lilac*.

A GOLDEN RULE

in planting is always to bear in mind the average size to which everything put in may ultimately attain. Again the colour of the plant in bloom or in leafage must always be present in the planter's eye, and this at all seasons of the year—spring, summer, autumn, and winter. Even the light and motion of things must be remembered, such as the glistening and quivering of *Bamboo* or *Cordylina* leaves, or the shaking of the *Aspen*, and the often depressing rainlike shiver of some of the common *Poplars*, which is quite enough to prevent many people from liking to have them planted near the house. Several of the *Poplars* are so rapid in their growth that they are too often used for sheltering belts in proximity to gardens, where their roots soon become the most remorseless robbers, and badly impoverish even the best of soils.

SELECTION IS DIFFICULT

for many reasons. If it is true that “what is meat to one is poison to another,” it is equally true that any particular tree or variety of fruit, which is good, or even the best in one particular garden or district, may be only a second or even fourth rate one if grown elsewhere under other conditions of soil and climate. This is one of the reasons why we shall never attain to any finality in the drawing up of select lists of flowers, fruits, or even vegetables. Our British gardens cover too vast an area for any one selection to be good all round. Soils, aspect, shelter, altitude above sea level, prevailing winds, moisture below, or rainfall above all, vary so widely in places even comparatively near to each other, that the factors of growth and success become too complicated for any limited selections

to be of wide service. No one kind of fruit is universally good and reliable; and even ordinary kinds are welcome when others fail.

THE BEST FRUIT GROWERS

are aware how necessary it is to have a regular supply, and they know also how widely even the best of fruits vary in the time of ripening, in flavour, or in their keeping qualities from year to year. This renders even the best selections fallacious now and then, and so the wise grower will have, if he can, his eggs in different baskets, or at least two strings to his bow. Of course I know that those who grow the best garden produce for market, select more or less rigidly the best kinds and grow these in quantity, but at the same time the finest of all fruit is grown in private gardens and never goes to market at all. Size, colour, and quantity suffice for market work, but quality and flavour are of even more importance in many, even if not most, private gardens, and are so likely long to remain.

THE BEST VARIETIES

are eagerly sought after by all good gardeners, but it is certainly half a truth only to say that certain varieties take the lead in all localities alike. Every variety is better in some localities than in others, since a change in soil or other surroundings will exercise its effects. Look at show classes arranged for the best garden varieties, and note the variations they present in size, colour, and flavour; and factors unseen at shows, such as quantity or certainty of cropping, &c., vary considerably also. Cox's Orange Apple, Muscat of Alexandria Grape, Maréchal Niel Rose, are all alike, different conditions mean variety of produce. Broadly speaking the best varieties may usually be better than second-rate kinds, but if, as now and then happens, the best selections fail, well then we find the occasional advantage of a more catholic taste.

DUBLIN TO NEWRY.

Railway rides are often dreary enough, but the other morning the three hours' ride as above passed pleasantly enough. There was good company to begin with, and charming fresh scenery—sea and plain, woodland and stream, bog and river, castle and cabin, orchard and gardens, here and there all the way. In places the railway banks were full of wild flowers, and Charlock and Rape formed golden yellow patches now and again among the young corn. It was an exquisitely fine morning, hot and sunny, the red cattle knee-deep in the bogs, or meadow pools among the yellow Iris flowers. Masses of bog cotton glistened like burnished silver, and the *Osmund Fern* shone out in the sunshine in masses of warm olive green hue. In shallow pools and streams the herons were fishing for their breakfast, and seemed otherwise quite oblivious as the train flashed past them.

THE GREAT ASPHODELS.

At Newry the other day I saw a large bed of the soft rosy and white-flowered *Eremuri*, and it would be difficult to imagine anything finer or more stately in the way of hardy flowers. The kinds were *E. robustus*, *E. Elwesianus*, and the white *E. himalaicus*, great spires of flowers on wand-like stems 6 feet to 8 feet high. As seen at their best these plants are most effective, but they demand good soils and good culture as well in order to see them in all their vigorous beauty. Still they are worth any amount of care and trouble, being, as they are, quite unique as garden flowers. To see *Eremuri* at Professor Foster's, at Kew, at Long Ditton, or at Newry in all their freshness and beauty is a sight never to be forgotten. Like other lovely flowers, however, they are often capricious, and difficult, or let us say slow, to propagate from seed, still to have them healthy and happy is worth a good deal.

THE TALL PERENNIAL LUPINES.

No new additions to our gardens can surpass *Lupinus polyphyllus* in all its white, blue, and purple variations as well grown in deep, well-worked soil. I saw beds of them at Newry the other day, beds of seedlings I think they were, with spires 2 feet long on stems 6 feet or so in height. For cutting they are very beautiful, and they endure fresh and fair for several days in plenty of fresh water. How is it the soft primrose yellow

and the white Tree Lupines are so rarely seen? They are now very showy, and will continue flowering up to October. There is now a very pretty purple blue addition to the Tree Lupines, viz., *L. arboreus purpureus*, for those who care for variety, though personally I prefer the older self-coloured yellow and the white.

THE BEST GLOBE FLOWERS.

Like most of the Buttercups, these stately flowers never do their best except on deep, rich, and moisture-holding soils. There are now some very large and superb varieties. I saw a big globose flower at Newry the other day not at all unlike a golden Peony, under the name of "Tom Smith." Another kind, superb in colour, has smaller but more numerous orange-yellow flowers that appear like lamps of light, the red stamens showing fire-like through the translucent petals. It grows 3 feet to 4 feet high in a rich damp situation, and is one of the most brilliant and satisfying of hardy flowers in June.

NARROWWATER CASTLE GARDENS.

Many readers of THE GARDEN must know these charming gardens that lie on a well-wooded slope, with Carlingford and Warrenpoint in the distance. It is one of the most picturesque places I know in the north of Ireland. The grounds are well planted with choice trees and shrubs, and the rock garden is quite unique and contains the largest specimen of *Gunnera manicata* in Ireland, its leaves attaining a breadth of 10 feet or even 11 feet, and standing 12 feet to 15 feet high. The rock garden and its pool contain choice alpine plants, shrubs, aquatic Ferns and Bamboos of many kinds.

The finest plant in Ireland of the Japanese *Vitis Coignetiae* grows here. It was originally planted on a sunny wall, but has rambled over a large Portugal Laurel as well. In autumn its leaves are of a gorgeous colour—all shades of yellow buff, orange red and crimson, the back of every leaf looking as if lined with new wash leather.

THE PONTIC RHODODENDRON.

As a stock for the newer seedlings no words can be too scathing as applied to this plant, but in certain places and positions on its own roots it can be, and often is, very beautiful. At Narrowwater recently, where it seeds freely and is now and then even too luxuriant, I was much struck by its healthy colour and the subtle and satisfying harmony it effected between the greenery of garden and woodland, and the more distant colour of the clouds and the deep blue mountains. Well planted in suitable soils and in mountainous districts, this old plant is really very valuable for its effect in the landscape. Even below the grey rocks at Howth it forms an excellent setting or foil for the more vividly coloured and newer seedling kinds of Rhododendron and Azalea now so beautiful there.

F. W. B.

TREES AND SHRUBS.

CHINESE GUELDER ROSE.

(*VIBURNUM PLICATUM*.)

SEVERAL of the *Viburnums* are of high ornamental value, but this is one of the very best, and in any selection of hardy flowering shrubs, however choice, it is entitled to a foremost place. Like the common Snowball tree, the showiest portion of the inflorescence consists of the comparatively large pure white sterile blossoms, which are borne in rounded clusters on short spur-like shoots, extending for a considerable distance along the preceding year's branches. So freely are these flowers produced that when at their best a thriving specimen is quite a mass of white. The prettily-plaited leaves and the spreading yet distinct style of growth are also prominent features of this *Viburnum*. Though so long and so generally known as *V. plicatum*, it is now regarded as a sterile variety of *V. tomentosum*, the correct designation being *V. tomentosum plicatum*, but it will be long before this name makes headway in gardens. It was introduced by Fortune half a century or so

ago, but for years it had the reputation of being rather tender, and was not generally planted. We owe a debt of gratitude to our American friends for constantly extolling the beauty of this *Viburnum*, and for proving that its reputed tenderness was based on a fallacy.

Apart from its value out of doors, it is one of the most useful shrubs that we have for forcing into bloom to embellish the greenhouse during the early spring months. For this purpose it is grown in considerable numbers, not only in this country but also in Holland, from whence vast quantities of such subjects as this *Viburnum*, *Deutzias*, *Lilaes*, hardy *Azaleas*, *Spiraea confusa*, *Guelder Rose*, *Staphylea colchica*, and *Hydrangea paniculata grandiflora* are sent here for flowering under glass, the plants being specially grown with this object in view.

SAMBUCUS RACEMOSA TENUIFOLIA.

Both the scarlet-berried Elder (*Sambucus racemosa*) and our own native species (*S. nigra*) are very variable in leafage, but this is the most widely removed from the type of any of the numerous forms that are in cultivation. In this variety the leaf segments are reduced to narrow strips not more than one-eighth of an inch in width, which are in their turn frequently cut and slashed. The whole aspect of the plant suggests one of the finely cut Japanese Maples, and to a superficial observer it is quite distinct from an Elder. Other well-marked varieties of *Sambucus racemosa* are *plumosa*, *laciniata*, and *serratifolia*, whose prominent characteristics are indicated by their respective names. A very pretty form is *S. racemosa plumosa aurea*, in which the fringed leaves are of a clear self yellow, which intensifies with exposure to the summer's sun in the same way as the golden form of the common Elder, which for poor hungry soils in a sunny spot still remains as one of the very best subjects that we have of this tint. H. P.

RHEUM RIBES.

I SEND you a photograph of *Rheum Ribes* as alluded to on page 356. The leaves are fully 3½ feet across; the flowers are greenish yellow, and the fruits become red as they ripen. It is figured in the *Botanical Magazine*. A space of the diameter of several feet is now covered by hundreds and hundreds of buds and flowers of *Campanula rupestris*, a native of the mountains of Greece. It is a very showy strange-looking species, with soft lilac flowers. *Baden-Baden*. MAX LETCHLIN.

Bye-laws of the Royal Horticultural Society.—A special general meeting of the Fellows will be held at the Drill Hall, on Tuesday, July 3, at 4 p.m., for the purpose of adopting with or without alteration or amendment the new bye-laws of the society.

AMERICAN NOTES.

PLANTING AQUATICS.

IT is very difficult for weather prophets to predict accurately a few days ahead, to say nothing of weeks in advance, the kind of weather we are likely to experience, and after the experiences of the past season it will be difficult to say just when certain horticultural operations should be performed, as the condition of the weather may be just the reverse of what may, in general, be anticipated. It will be prudent for all cultivators to note just what the most favourable conditions are for certain operations, and to seize the opportunity when it presents itself, rather than to follow any hard and fast rules for such matters. As experience is the best schoolmaster, many practical lessons may have been learned during the past season. There are always those who are ready to take risks, and if these planters are not overtaken by mishap they may repeat the experiment, and others may follow their example, but either may rue it.



RHEUM RIBES IN FLOWER.

A large number of hardy *Nymphaeas* may, as a rule, be planted in April, especially in the middle Atlantic states, but even here a number of varieties with soft rhizomes, of the odorata type, will suffer, and it is not infrequent that one hears complaints that such and such a plant never grew. Although these plants are hardy in a certain sense they are very liable to suffer if removed or transplanted when the conditions of the weather are such that they do not start into active growth at once. If they do not grow they will assuredly rot. The same state of affairs is even more pronounced in the case of *Nelumbiums* of all kinds, and it is not unusual for people to call for these just as early in the season as for hardy *Nymphaeas*, and with fatal

result. It is an unnatural desire to obtain, in the shortest period, a full grown and developed plant, but nature will not be forced, and we must learn patience.

Perhaps no better month than June can be selected for planting hardy Nymphaeas, as well as tender: also Nelumbiums and Victorias, especially the latter, where no artificial heat is applied. In the case of hardy Nymphaeas they take hold at once, and some varieties will give a good average of flowers, but if not, there is the assurance of an established plant, and an early start at the right time the following spring. The same holds good with Nelumbiums, and while it may be too late to procure tubers, pot-grown plants will do even better. In no case expect the same results from a newly-planted specimen as from an established one, be it the first or second season.

With the first spring-like temperature there is a general feeling that tender plants should be out, but if stock is moved, and we experience such sudden changes as befell us in April and May this year, we come to realise that tender Nymphaeas are very sensitive to such changes. The end of May or beginning of June is by no means late for planting these. Have the plants as well advanced as is practicable, and if the weather is settled, the temperature of the air and water at summer heat and climbing above it, the plants will grow at a tropical gait.

Victorias may be planted in May if artificial heat can be given, and the young plants protected overhead as well as by the desired water temperature, but where no heat is applied do not risk Victoria plants out of doors before the middle of June. One must be guided by the conditions of the weather and locality. In mountainous districts, high latitudes, and where cold nights are experienced in summer, it is risky to plant at all, even such a pronounced hardy variety as Victoria Trickeri.

During the past two or three years an insect pest has put in an appearance early in the season in different sections. This is a leaf miner. Its appearance is somewhat similar to a Rose-leaf slug, having a large head and diminishing to the other extremity. Its presence is easily detected by a fantastic scroll or etching on the leaf, and on examination it will be found that the larva has tunneled and consumed that part of the leaf. The leaves so affected soon become of little benefit to the plant, which is considerably weakened. This pest succumbs very readily to an application of weak kerosene emulsion with a spray pump. A sporadic disease sometimes attacks aquatic plants, and the leaves present symptoms similar to the violet spot. This also succumbs to an application of weak Bordeaux mixture, the old formula, or ammoniacal solution. This fungicide also destroys various forms of coniferoid growth, often seen in ponds, having an appearance of thready seam. A weak solution will have no ill effect on fish. Wm. TRICKER, in the *American Florist*.

"IN A SMALL WAY."

NOTES FROM AN ORLONG GARDEN. X.

I do not know whether anyone has ever written a book entirely about smells; if not, and it remains to be done, the author has a happy task before him, for nothing is pleasanter than to work with ample material, and when some plants own no less than four separate and distinct scents—and to a finer nose than mine may have more yet—the subject, as far as they at least are concerned, cannot be said to lack scope. Which reflections were suggested to me in the dividing of my Abyssinian Primroses a day or two ago; for their roots where I cut them had the strongest possible odour of Coriander, while their blooms, as everyone knows, recall Cowslips and Chloral in equal proportion.

Anyone who prefers his sensations in advance, like forced fruits, may crush Pansies, which must be of dark colour, in his hand, and then

thank me for a foretaste of the scent of ripe Mulberries. The two most potent odours—at opposite ends of the scale, now procurable in the oblong—are those of *Lilium rubellum* and of *Allium Moly luteum*, the former a mixture of ambergris and honey-sweetness, the latter of carrion with onions. I really defy anyone to find me a nastier smell than this last. I have sought a dead cat and found *Arum dracunculoides*, and have savoured *Stapelias*, likewise that fungus appropriately known in the vernacular as Stinkhorn; but I think the *Allium* taken at close quarters, and when even you are expecting its scent to please your nose, as its shiny heads of yolk-of-egg bloom do your eye, may claim precedence. By the way, this is my first trial of *Lilium rubellum*, and I recommend it to everyone who has not seen it, although, as I grew mine in a pot, I cannot answer for its out-of-door behaviour. It seemed very tractable, and made no objection to a soil composed chiefly of sandy leaf-mould with a little loam, which I thought suitable for it, considering its native habitat under Pines. It grows about 7 inches high, according to my experience, and the flower, a pink trumpet bloom 3 inches long, which slightly reflexes the tips of its petals as it grows older, after the manner of *L. auratum*, but not nearly so much, is very delightful both in colour—a soft rosy pink, nowhere near magenta—and fragrance. It would look sweetly pretty grown by the dozen in a pan, and I hope it will soon be cheaper, though even now it is not dear at the price I paid—9d. a bulb.

The oblong is now at its most delicious stage, as are most gardens in early June. The Apple and Pear blossom is over; alas! its snow and blushes were but evanescent, owing to a night's high wind; the Lilac, too, is gone, but the Laburnum holds on bravely, and has outstayed its presumable admirer, if imitation be the test, *Thermopsis montana*. This perennial, I think, a little overrated by several people who have praised it to me; its nice clear Laburnum-like standing yellow blooms are well enough, and its foliage is prettily cut, but its season of bloom seems very short. The white *Dietamnus Fraxinella* is in full tide; the pink or purple one is not yet out. I like the airy orchidaceous lightness of alba's blossoms on their spike, and it is certainly a plant to have, though I think it would not be interesting if too often repeated. The blue *Tradescantia* is very true and pure in colour, and the best of all the *Linarias*, *macedonica*, has colour on its horns and will soon be out. It has long spikes clothed with orange and yellow Snap-dragon-like flowers, the thin tails of which colour first.

The earliest Rose to open here was Gustave Regis, one of the climbers in the row supported on those lop-sided and twiggy Ash stakes about which I so often grumble. The stakes had a fine crop of buds and leaves, but I rubbed them all off. What a beauty Gustave is; but then one thinks each Rose as it comes the loveliest of its kind. It would be hard to beat him though for button-hole buds, and his great spread cream poppy like open blooms are showy enough. The Himalayan Briar with its large white flowers is very lovely now; so are the Rugosas, and a small dark red China Rose, absolutely perfect in bud. The *Pyrethrum* I grew from seed have done very well; they are fine large flowers—singles in every shade, from white through good pinks to a deep crimson without any magenta in it, which I am sure is uncommon, and which we are hugging to ourselves in the hope is *new*! What glory it would be for an oblong to produce something worth naming, though it is unwise to write about it, for "things one talks of never come true!" as we used to say in the nursery. I wonder if it ever

will! The fame one gets as a raiser of some lovely flower must be so very satisfying, better than that which accrues upon the painting of a beautiful picture, and akin to that of the writer of a successful book. Only one person can have your picture for his very own; thousands can possess and enjoy your book or your flower.

The curious change which good cultivation will often work in garden Peonies is exemplified by one I have, which last year, when growing in poor dry soil and unhelped by any attention, was of a papy texture of bloom and sickly pinkish-white in colour. Now, its ten blossoms in evidence are exactly the hue of a La France Rose, and it is very pretty. As I write, its beauty is menaced by the threatening fall of the Oblong Eden's Adam, insecurely poised upon a borrowed ladder, and occupied in oiling the American big on the large Apple tree overhead. This kind of work, which I consider is what garden boys are made for, he thinks infinitely preferable to the planting and watering I represent to him as enjoyable labour. So true is it that the natural instinct of man, as unredeemed from the primeval sporting type, tends towards the destruction of something as recreation—better to bag American blight than nothing! Let us depart from such materialism and turn to a dear little colour-picture presenting itself in a spread of pink *Helianthemum*, at the back of which rises a blue *Geranium*, infinitely superior cousin, or it may be sister, to the wild *Geranium*, which grows well to the Mendips, and of the same exquisite veiny satiny blue, with double the size and vigour. It is like a *Salpiglossis* when you look close into the bloom, as far as colour perfection goes.

I have had the *Fuchsias*—which occupy the bed on the shady side from which we have just removed the Tulips—put in their pots this year. I read somewhere that they flower better so, and I was also influenced by the strongly-expressed recommendations of Adam, who has painful recollections of the labour involved in last autumn's lifting and potting of some thirty plants which had made the best of their opportunities of root production.

I wish Clematises were not so secretive about their ailments, and would allow someone to discover why they suddenly depart this life after their known inconsiderate fashion. Other plants bear their injuries and lesions for the most part commendably open to observation, so that it is not more difficult to decide what ails them than in the case of prehistoric man, in whose absence of clothing and other affectations doctors must have had such delightful opportunities of easy diagnosis. Two of my best Clematis plants—supposed to be on their own roots too—have suddenly, utterly, and completely dissolved partnership with life; all over in the case of one, and halfway down as regards the other. One is on one side, and gets the morning sun, the other on the other, getting the ardent gentleman's attention in the afternoon; one was planted this spring and well mulched and watered, the other was put in last year, and has never had either office performed for it. I must own that the neglected party is that which has died altogether; but then it was only half the size of its travelling companion. This latter, which is *Patens hybrida*, has an enormous woolly bud in reserve, and I believe the conjunction of life and death, may possibly be answerable for the withdrawal of sap and stamina from the top part of the plant, which executed the manoeuvre of departure not gradually but in a single night; this is, however, pure conjecture. M. L. W.

Bathwick Hill, near Bath.

LONGFORD CASTLE AND ITS GARDENS.

THIS famous mansion and its gardens possess a melancholy interest just now owing to the recent death of the Earl of Radnor, and the illness of his son (the present Earl), fighting for his country in South Africa.

Few gardens in Wiltshire are more interesting than those of Longford. The surrounding country is generally flat, or merely undulating, but judicious planting has given relief. Nothing, moreover, has been done that could in any way mar the effect of the splendid mansion. The house and its garden cannot be dissociated. They are parts of a whole, and Longford is an example of judicious arrangement. Tall trees do not shut it in, and climbers are not allowed to hide the cool grey stone. Those which we see are there to add the needed touch of colour.

During recent years the gardens of Longford have been greatly beautified. There is one feature of particular interest to lovers of hardy flowers in the two mixed borders, each about 100 yards long, which present a most pleasing aspect almost throughout the year. These flowers are now gaining much of the favour and consideration they deserve, and certainly in many gardens opportunities exist for creating rich effects from spring until autumn, with very little help from exotic bedding plants. These hardy plants are also used to some extent in the principal flower garden at Longford, which is extremely formal, and certainly reminds us of like arrangements at Castle Ashby and elsewhere. It is composed of geometrical beds, in which are Pansies and many other old-fashioned flowers. There are quaint Yew hedges with their arches—a rare of unique feature—whilst other features comprise the mossy temple and figure, the classic busts, the charming vases and bells along the terraces and their grey-green walls, and the delightful landscape beyond, with its water and rustic

bridge. Water is, indeed, a beautiful feature in the garden design of Longford.

In wandering about the grounds we reach one very interesting spot. It is an old garden near the Rapids, where the waters of the Avon and Etele meet, and is protected by lofty trees, except on the north-east side. Greensward greets the eye, and Moss and other Roses bloom here more freely perhaps than in the formal parts of the gardens. Here, too, the fair white Lily and finely-coloured brises are found, while an old Judas tree (*Cercis siliquastrum*) will attract attention.

There are also hardy ferneries at Longford, to remind us how beautiful is the Fern when rightly used. Its rich green fronds are cool in colour, rich and beautiful alike in form and line throughout the summer. Landscape gardeners will sometimes forget that shady places become beautiful through the planting of shrubs, flowers, and Ferns that demand scarcely a filtering of sunshine for their encouragement. The visitor will notice, too, a particular summer-house on a greensward, without any sides, but with a Heather-thatched roof, supported by oaken pillars, around which Roses and Clematis are twined. Here a curious and probably unique device is adopted to add colour to the roof, the plan being to insert small pots of Crocus and Snowdrop bulbs below the rims, whereby pretty bits of spring colouring and effect are secured. Passing by beds of hardy flowers we reach another summer-house, built so long ago as the memorable year 1745, and still another, built of bricks, attracts attention. It has a handsome oaken table, and its tiled roof is overhung by a splendid Yew, which is conspicuous in the grounds—a sombre companion, some may say, in solitude, but always noble and picturesque.

Longford is rich also in houses filled with decorative and other choice plants, and it worthily maintains its position among the finest fruit gardens in England. Often in visiting the great flower and fruit exhibitions

are the splendid products of these gardens found making new triumphs. There are also Pines in much abundance under glass, in these days a somewhat uncommon feature, since the rapid transport of West Indian Pines now brings them in splendid condition and cheaply to our tables. Garden walls, to the length of about a mile, are covered with Peaches, Morello Cherries, and other fruits usually thus cultivated in Britain. The Figs, again, are remarkable. There are noble trees of the well-known Brown Turkey variety, and a specimen of the kind named the Brunswick covers a space of not less than 200 feet.

CORRESPONDENCE.

(The Editors are not responsible for the opinions expressed by their correspondents.)

SUCCESS AND FAILURE WITH FLOWERS.

[TO THE EDITOR OF "THE GARDEN,"]

SIR,—I am much interested in your correspondent W. A. Bilney's letter of this date (June 9), and my experience entirely endorses his. My successes and failures are identically the same. Here *Anemone robinsoniana* grows like a weed, and multiplies like Israel did in Egypt, while *Anemone fulgens* is invariably a failure. Again, for twenty years I have tried to bloom *Gentiana acaulis*, and have not yet succeeded. It grows and produces an abundance of small leaves, but no, or few, flowers. Nothing daunted I am trying again in two different aspects, and with new soil, this time a somewhat buttery loam, mixed with sand and a little leaf soil and cow manure. *It has got to bloom*; I do not mean to be beaten. It took me ten years to succeed with *Gentiana verna*. We have had an abominable spring here; gale succeeding gale and drought drought; and yet by dint of constant effort the garden has never been so beautiful, and the rock garden is still sheeted with lovely blossom.

It is this struggle with unwilling Nature that makes gardening so sweet a pain. There are, however, some things which I have deliberately given up as hopeless here, viz., Roses and Violets. I am often amused to hear friendly admirers of this garden remark: "Oh! but you know you are so beautifully sheltered." The fact is the garden is *Eolus's* playground, and we constantly watch our fairest flowers come out to find them reduced to tea leaves in a few hours by our westerly and north-westerly gales. I look forward to a windless garden some day with Horace's heartfelt sigh:

*"Tibur Argeo positum colono
Sic mee sedes utinam senectæ . . ."*

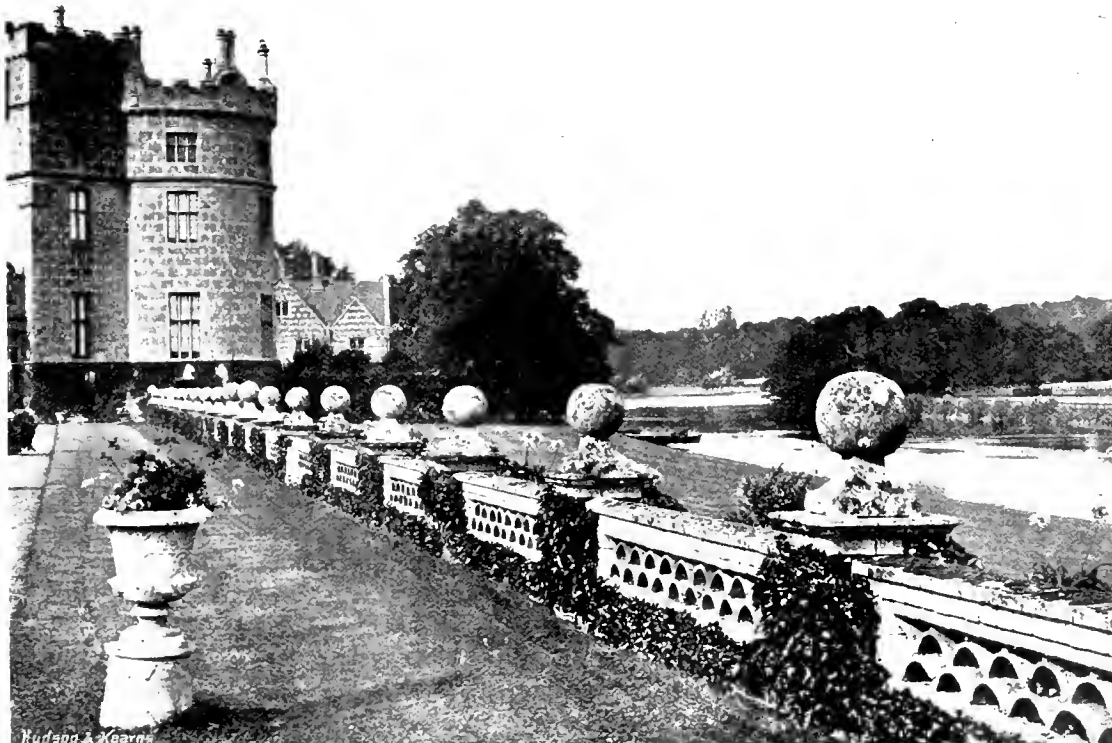
HERBERT MILLINGTON,
Bromsgrove, Worcestershire.

ASPARAGUS DESTROYER.

[TO THE EDITOR OF "THE GARDEN,"]

SIR, I grow Asparagus (*Argenteuil*, Comover's Colossal, and Columbian white) on a large scale for export, and my fields are this year infested with the asparagus fly and its maggots, destroying almost all summer growth, and I fear injury to next year's crop.

The culture is on the *Argenteuil* method, i.e., 1 yard to 1½ yards distance between the plants, the crowns being left uncovered during December, when they are heavily manured; early in January ex-



THE TERRACE, LONGFORD CASTLE.

posure to the cold is said to destroy the maggots, but I find only an increase during the last three years. Could any of the readers of your valuable paper suggest a surer remedy?

La Cirsucia, Ajaccio.

W. H. E.

[When you mention the asparagus fly, I presume you mean the beetle. I only say this that there may be no misunderstanding as to what insect the remedies recommended are intended to apply to. Dusting the plants with finely powdered lime, spraying them with Paraffin Emulsion or Paris Green are remedies that have been found very useful. Of course, the last two cannot be applied until cutting is finished, as they would render the shoots poisonous. To make the Paraffin Emulsion, dissolve 1 quart of soft soap in 2 quarts of boiling water; while the liquid is still boiling hot, add 8 pints of Paraffin Oil, and churn all together for ten minutes with a syringe. When the oil is thoroughly incorporated with the soap and water, which it should then be, add 8 gallons or 9 gallons of water, stir all well together and the solution is ready for use. Paris Green should be obtained if possible in a paste, use ½ lb. to every 100 gallons of water; do not forget to add ½ lb. of fresh lime to the mixture before using it. Paris Green is very heavy, so that the mixture must be kept well stirred, or some of it will be used too strong and some not strong enough. These mixtures are best applied with one of the Knapsack sprayers. To cut down and burn all the plants would be the most effectual way of destroying the insect, but it would of course weaken the plants. Some of the shoots that are very badly attacked, and can be of little or no use to the plants, should be removed and destroyed, taking care that the insects do not drop off while the operation is being carried out. Some of the insects might be beaten off the "Grass" with a stick and trampled on. There are probably two or perhaps three generations of this insect during the year, as eggs, beetles, and fully grown grubs may be found on the plants at the same time. G. S. S.]

GENTIANA ACAULIS.

[TO THE EDITOR OF "THE GARDEN."]

SIR, In THE GARDEN of June 9 W. A. Binney repeats a complaint, often made by others, that *Gentiana acaulis* refuses to bloom. I never experienced a difficulty myself, although I have grown plants in different soils and different counties; but as I once stated in THE GARDEN, the most brilliant display I ever had was in Northumberland, in a wide border with thousands of blooms. The plants were grown in pure sand from the surface of a sandstone quarry (millstone grit). If material is to be had this treatment might be worth a trial.

T. H. ARCHER HEND.

Coombefishburn, South Down.

RUBUS DELICIOSUS IN YORKSHIRE.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Mr. J. Wood's note on *Rubus deliciosus* in his garden at Kirkstall was all the more interesting to me through having seen the bush to which he referred only a few days before his note appeared. Not many would expect to see this do so well in the neighbourhood of Leeds, one of our busiest and smokiest towns, and one, too, which is in a county whose climate is not usually accounted one of the mildest in these isles. I had also an opportunity of seeing it elsewhere in the same county. There was a fine bush in the garden of the Misses Reynolds at Cliff Lodge, which is just on the verge of Leeds, and which secures a full share of the smoke field's doings, though at a considerable elevation above the various chimneys of the works which are gradually creeping nearer. It says much for this *Rubus* that its blooms were so large and fine—larger even than others I had sent me from a district where there is little smoke. I also saw a magnificent specimen of this Bramble in a border of the main walk of the home nursery of Messrs. Backhouse and Son, Limited, York. It was of much larger dimensions than the others, and was correspondingly beautiful, with its vast numbers of pure white

flowers of the same size as those I saw elsewhere in the county. It presented a powerful argument for the needed plea for greater variety in our gardens in the way of flowering shrubs. One could have lingered over these fine plants and have found much to admire in the habit of the bushes with their lovely white flowers. By the way, one may mention that "The Dictionary of Gardening" says the flowers of *R. deliciosus* are purple. S.

STREPTOSOLEN JAMESONI.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—The note by "E. M." on this plant in THE GARDEN of June 9 recalls to me how well it is grown in the garden of Mrs. Burrowes, at Dornden, Dublin, where, it may be remembered is the lovely Iris walk recently figured in these pages. In a greenhouse at Dornden, the *Streptosolen* was grown as a climber when I last visited the garden, and one could not fail to admire its beauty and the health it showed in such a position. Mr. Carroll, the gardener at Dornden, is most enthusiastic over the plants in his charge, and none do him more credit than this *Streptosolen*. S. A.

ROMNEYA COULTERI IN YORKSHIRE.

[TO THE EDITOR OF "THE GARDEN."]

SIR, In going through the fine rock garden which the late Mr. J. Hawthorn Kitson had made at Elmet Hall, Leeds, I was surprised to observe a healthy plant of *Romneya Coulteri*. Mr. Tindall, the gardener, told me that it had been there for several years, and that it proved quite hardy. It was his practice, however, to leave the old stems on the plant until growth had started in spring. In this way the plant received some protection from the severe winters. The exposure seemed almost due south, and it had also the advantage of the protection afforded by the rockwork behind. This *Romneya* blooms annually, and gives a fair quantity of flowers each season. It is encouraging to know of its success in the climate of Yorkshire, and so comparatively near a large town as it is. There were many other interesting things in this fine rock garden, but none could be finer in its season than this Tree Poppy with its noble yet fragile flowers. S. ARNOTT.

STRAWBERRIES FOR FORCING.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I read the excellent note by "H. H. T." on page 395 with great interest, as, being a large lover of this fruit, I was better able to follow the conclusions arrived at. I have for some years carried out trials with most of the varieties named, and the last season I have reduced all the forcing kinds to one variety—Royal Sovereign. Ten years ago I gave up British Queen for early work, though it is excellent for the last supplies; if not given much heat or grown in a cold frame it has no equal as regards quality, and is not a bad cropper. One variety "H. H. T." does not name I found one of the very best as regards earliness. This was Vicomtesse H. de Thury; it was the earliest, and there was a much smaller percentage of blind plants than with any others when forced so hard; indeed, I would prefer this for hard forcing to all others, but of course the weight of fruit is not nearly so great as in the case of Royal Sovereign. I have never forced Waterloo for early supplies, but should expect it to turn out as described. In future years I would ask "H. H. T." to give Lord Sulfield a trial of a dark, large-fruited Strawberry is wished for. This with me forced splendidly, and, though longer in coming to maturity than some others, it set well and finished grandly.

My object in sending this note, however, was not merely to add to the varieties noticed, but to state that I have reduced my forcing varieties to a very small number; indeed, last year I only grew three, and this year one, and I see no reason whatever to regret doing so. Unfortunately, I cannot study quality altogether. Last year my three varieties were La Grosse Sucrée, President, and Royal Sovereign, some thousands of each variety being forced, and I found that the last-

named gave much better fruit and in greater quantity, so that there could be no question whatever which was the best, and my verdict was just the same as that of "H. H. T." concerning President. I am not alone in my conclusions as regards the value of Royal Sovereign, for it holds the field in the market against all others; at least, such is the opinion of many large growers who for years were adverse to it, as they thought Sir C. Napier the best, and the latter even now cannot be beaten for sending long distances. A very large grower who exhibits Strawberries better than anyone I know told me recently that he had come to the conclusion that he must in future only grow one variety, and that would be Royal Sovereign, and he grows some thousands of plants for forcing from December to June. I am aware some of your readers may not agree with my conclusions, but they will admit that size even in Strawberries goes a long way, and when we cannot get the high-flavoured kinds to force so as to be profitable, those we do force need to be such as produce freely. GROWER.

ERITRICHIMUM NANUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—On my return home after a few days' absence in Yorkshire I found awaiting me THE GARDEN of June 9, with its interesting article above the well-known initials of "H. H. D." Among other plants your correspondent speaks of *Eritrichium nanum* and of the large sum spent by the late Mr. James Backhouse in trying to introduce it. Rather singularly, just two days before I had been enjoying a visit to the York Nurseries, still carried on by the Backhouses as James Backhouse and Son, Limited, and there I had the great pleasure of seeing a fine lot of plants of *Eritrichium nanum* in small pots. They were on a shelf in a low house, and were really a delightful sight with their exquisitely-coloured little flowers. They are of a rarely beautiful blue, and it is unfortunate that this gem of the Alps is so difficult to retain in our gardens. I do not much care for growing alpine flowers in pots, and prefer those which will grow when planted out in the rock garden. Yet for all this one could see that such beautiful little things as the *Eritrichium* are well worth such care. One thing I was told by Mr. W. Clark, who has charge of the department, may help those who think of growing *Eritrichium nanum*: this is, that the plants ought not to be watered overhead, but by dipping the pots in which they are grown in water, so that the latter should reach the surface of the soil without wetting the plants. Does not this convey a hint as to the possibility of growing the plant out of doors by placing it where it can always have a sufficiency of moisture at the root without any touching of the stem or leaves? By using a piece of glass overhead rain might be thrown off. One would do much to be successful with a gem like this. A.

OVER-RATED PLANTS.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—I am very much in sympathy with "M. L. W." (page 422) in the remarks upon "Over-rated Plants," though we find the *Gypsophila paniculata* useful for some decorative purposes, and shall continue to grow it for that work. There is a fashion in these things which, whether we agree with it or not, must be studied. The Cow Parsnip is only fit for the wilderness. A group of the different varieties is curious and quaint, and something that attracts attention, but lovers of the beautiful would not plant it. *Bocconia cordata* is another plant that I have cleared out from the borders, and shall put with the Giant Parsnips and the Giant Knotweed, *Polygonum cuspidatum*, which are well enough in their way when rightly placed; but there is not room for them in a small or in even a moderate-sized garden. And then nowadays we all want flowers that may be cut for the vases, and the majority of ladies want light, graceful flowers for the table, though on special occasions, for large functions, Peonies and even Dahlias are used; in fact, the Cactus

Dahlias towards the end of the season are very useful for many decorative purposes, especially the whites and scarlets. There are many plants not absolutely over-rated which have lost caste. Take the double Potentillas as a case in point. They were introduced with a great flourish of trumpets, but they are not often met with now. The old-fashioned sorts, *atrosanguinea*, *fruticosa*, and others with single flowers that we had many years ago, are lovely, but the double flowers are, I think, hideous. Mistakes are often made in selecting plants for particular spots. Some time ago a correspondent complained about the pretty dwarf *Linaria pallida* running all over his rockery and becoming a nuisance. For this reason I have taken it from the rockery and planted it along the front of a border where it can be kept within bounds. The white Foxglove, the Evening Primrose, which seeds so freely and comes up all over the place, and *Honesty* (*Lunaria biennis*) are charming in their proper positions, in large clumps, naturally, but are not exactly suitable for small borders, although often planted there. As stated by "M. L. W.," these glowing advertisements misled the inexperienced, but experience is often a dear school, and I expect most of us have suffered in that way. Many of the new Roses and other florists' flowers have been and are over-rated, and yet in order to get what are really good we are constrained to buy those which are not worth growing and will ultimately be cast aside. The same thing is taking place now with the *Chrysanthemum*. Many of the new, much-puffed varieties are inferior to the old sorts, and will soon disappear, but those who want to be in the front rank buy some of them in order not to miss the good ones. As we grow older, even the most enthusiastic among us take these glowing descriptions in advertisements and catalogues with a large grain of salt.

E. HOBDAV.

TREES NOT SUCCESSFUL.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—Although I have not a large garden, I have in it about seventeen kinds of the various trees and shrubs given in THE GARDEN, June 9, but they do not all flower well. The ground is a cold clay, and is within eight miles of Manchester. Very little digging is done, but forking and mulching with peat litter from stables, leaf-mould, wood ashes, &c. The single-flowering Almond, after doing well for three years, was almost without flowers this spring. The double Cherry has a few scattered ones, but no mass of white. *Pyrus japonica* grows splendidly and looks healthy, one bush being about 3 yards or 4 yards in diameter, but the flowers are thinly scattered. The Snowy Mespilus has about a dozen heads of flower. Single and double Hawthorns flower abundantly; so do *Philadelphus*, *Lilacs*, *Brooms*, *Dogwood*, *Spindle Tree*, *Ribes*, *Rhododendrons*, and *Azaleas*, but *Weigela* keeps poor-looking and has many dead ends to the branches. The double *Kerria japonica* has long bare ends to its flowering twigs, but a pretty good show of flowers. I should be glad if you could help me to overcome these difficulties.

R. M. S.

Stockport.

[It is quite impossible to tell the cause of failure from information given. The successes seem to prove that nothing is radically wrong with the situation. The failures appear to be the earlier-flowering things, and it is possible your garden is situated so as to be particularly liable to spring frosts. We can only recommend that the trees should be planted in well-trenched, well-drained friable soil, and that they should not be shaded by other trees. The double *Kerria japonica* is of a rather sappy growth, and the branches are very frequently killed back during winter. *Pyrus japonica* frequently fails to flower. You might try pruning it back to spurs, treating it, in fact, like a dwarf or wall Pear tree. This is often very successful. Almonds do not like a cold, heavy soil, and if you plant them again it would be well to thoroughly trench the ground, keeping the top spit on the surface, and mixing wood ashes and mortar rubbish with it. This would also suit the Cherry and Mespilus.—Eds.]

LARGE NECTARINES.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Your correspondent "A. D." (page 436) is not quite correct in his surmise as to how the fruits of Cardinal and Early Rivers, exhibited by us at the Drill Hall on June 5, were produced. They were picked from pot trees, similar to those of Cardinal shown at the Temple show, and carrying good crops of fruit this year as usual; trees which have been forced consecutively for eight years. Naturally, all the fruits are not the size of those exhibited, which were selected for placing before the fruit committee.

If "A. D." cares to visit Sawbridgeworth we are always pleased to show our trees with the fruit on to anyone interested, and he will then be able to correct his fallacious idea that such fruit can be produced on two year old trees. The committee of the Royal Horticultural Society are no doubt quite aware of how these fruits are grown, and the fact of their awarding them a silver-gilt Knightian medal speaks for itself.

THOMAS RIVERS AND SON.

Sawbridgeworth, Herts.

LILIUM GIGANTEUM DAMAGED BY FROST.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I herewith enclose the remains of a *Lilium giganteum*, the bulb of which was planted last autumn in a hole 2 feet deep and 4 feet in circumference, filled with good leaf-mould, manure, and vegetable matter. It is planted in a small border of a plantation and well protected. The stem, however, cracked about a week ago on one side, which gradually spread all round till the whole stock fell over. Others I see are affected in the same way. Please inform me as to the cause of it, and propose any remedy you can suggest.

J. JOCEY.

[The Lily had a hole about 1 inch square low in the flower stem, the edges of the opening showing decay in further progress. We consulted Mr. G. F. Wilson, who, with the answer quoted below, sent a stem of *L. auratum* suffering from the same injury, but on a still more extensive scale. "We have had a post-mortem at Wisley, and the verdict was injury caused by late frost. To guard against this it is well to cover with a few Fir boughs. I send a *L. auratum* which had no protection and suffered in the same way. Several of our *L. giganteum* show late frost touches, but not enough to seriously injure the growth."—GEORGE F. WILSON, *Heathcote, Weybridge Heath.*]

KOWHAI.

[TO THE EDITOR OF "THE GARDEN."]

SIR, In reply to "A. M.," Ambleside, this well-known member of the natural order Leguminosae is called *Sophora tetraptera*, and may perhaps be recognised under the more familiar name of *Edwardsia grandiflora*. It is abundant throughout the islands of New Zealand, and is a smallish growing evergreen tree, attaining a height of about 20 feet, and bearing large pendulous yellow flowers in some profusion. The wood is very durable, and therefore much used for bridge piles, wharves, &c., while its handsome red colour adapts it for cabinet work. In this country this tree can only be considered hardy in the more favoured and sheltered districts of the south coast. It has twice been figured in the *Botanical Magazine*, tables 167 and 3735.

M.

[TO THE EDITOR OF "THE GARDEN."]

SIR, In answer to a question by "A. M.," Ambleside, as to the name of the New Zealand plant called Kowhai, I think from the description given that it is *Sophora tetraptera*, a plant possessing medicinal properties, bearing yellow flowers.

J. HIGGS.

The Gardens, Hare Hall, Romford, Essex.

CARNATIONS DYING OFF.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I see that Mr. Douglas has replied to Mr. Geall's questions in your issue of the 16th

inst. as to the cause of Carnations going off in the open border. I have had this year a melancholy experience of the same sort at Hayes, a large number of my plants in the open border having died since the spring or made such poor growth as to be valueless for flowering purposes. As in Mr. Geall's case, my layers were thoroughly well rooted when planted out last autumn, and my beds were well trenched and manured and the manure placed well below the roots and nowhere in contact with them. Some of the stronger varieties, selfs and others, have done well enough, but the majority of them, especially the yellow grounds, are pitiable, and I am ashamed to look at them. I have not myself a shadow of doubt as to the cause of this failure, and it is that the soil has by previous crops of Carnations been deprived of some subtle element essential to their vigorous growth. My remedy will be to take the soil out of these beds in the autumn and to replace it with fresh loam. I have not the smallest anxiety as to what the result will be next summer. I believe it to be waste of time endeavouring to grow Carnations for more than two consecutive years in the same soil. What element they take from it I do not know, and so far, have not been able to learn. I cannot quite agree with Mr. Douglas as to the necessity for a change of stock. I would alter the concluding words of his note and say "Try a change of soil and note the difference of growth."

MARTIN R. SMITH.

Warren House, Hayes, Kent.

SOCIETIES.

YORK FLORAL FETE AND GALA.

This great floral fête, recently held at York, was a great success, and the past exhibition was the forty-second of its kind. It is a centre of attraction to the southern growers, and we must not forget that large sums of money have been sent through its agency to the local charities. The groups were very fine, but the Pelargoniums were conspicuous. It will interest our readers to know that the flower show tents were six in number, the largest 180 feet by 60 feet, which was occupied by the groups and the Orchids. No less than £750 was offered in prizes, £300 of this going to Orchids and indoor flowers. The weather was, unfortunately, not very propitious, and those responsible for the management of the fête have been sorely tried on more than one occasion. We must congratulate the chairman of the committee (Sir Christopher Milward Knight, J.P.), the secretary (Mr. Simmons), and the committee upon the excellent results accomplished.

GROUPS OF PLANTS.

A leading class was that for groups arranged for effect, not exceeding 300 square feet. The three best exhibits were excellent. Mr. W. Townsend, gardener to Mr. E. E. Faber, J.P., Harrogate, was first, his group containing *Palms*, *Crotons*, *Oleotoglossums*, and other plants tastefully arranged. The second place was taken by Mr. W. Vaise, of Leamington, with a fine arrangement of *Palms*, *Bamboos*, &c. Mr. W. Curtis, gardener to Mr. J. Blacker, was placed third, his arrangement consisting largely of such plants as *Anthuriums*, *Crotons*, *Liliums*, and *Caladiums*. Mrs. Gurney Pease, Harlington, and Messrs. R. Simpson and Sons, Selby, also staged handsome groups.

SPECIMEN PLANTS.

In the class for a dozen stove and greenhouse plants in bloom the first prize was won by Mr. J. Cypher, Cheltenham, with splendid plants of *Abelais macrantha rosea*, *Phenacoma prolifera* Barnesii, *Erica ventricosa* albo-tincta, *E. v. grandiflora*, *E. v. magnifica*, *E. Cavendishi*, *Clerodendron Balfourii*, *Bougainvillea Cypheri*, *Pimelea Hendersonii*, *Anthurium Schertzerianum*, *A. S. Wardii*, and *Bumfelsia eximia*. The second prize was awarded to Mr. W. Vaise, of Leamington.

Mr. J. Cypher was awarded the first prize in the class for half-a-dozen stove and greenhouse plants. He staged fine specimens of *Anthurium Schertzerianum*, *Erica ventricosa* magnifica, *Phenacoma prolifera* Barnesii, *Pimelea Hendersonii*, *Erica depressa*, and *Bougainvillea sanderiana*. The second and third prizes were won by Mr. Vaise and Mr. C. Lawton, gardener to Colonel Harrison, Broadley, respectively. For three stove and greenhouse plants, Mr. Cypher was placed first, and Mr. W. Vaise second. In the class for one stove plant, Mr. Vaise was first, and Mr. Cypher second, both showing *Anthurium Schertzerianum*. The same exhibitors took the first and second places in a class for a greenhouse plant in flower.

For six foliage or variegated plants Mr. Cypher was in the first place, while for three plants of the same kind Mr. Lawton was first. In this class Mr. J. McIntyre was second, and Mr. W. Vaise third. Messrs. R. Simpson and Sons sent the best three *Crotons*, while Mr. McIntyre was second. Messrs. Simpson and Son were also first for a single *Croton*, Queen Victoria. Mr. J. Cypher won the first prize for a greenhouse *Azalea*, showing *Holfordiana*, and also for a Cape Heath, with *Erica depressa*.

Mr. Eastwood showed the best *Fuchsias*, while Mr. J. W. Hutchison took the first prize for *Calceolarias*, Mr. Haigh for *Begonias*, and Rev. G. Yeates for *Colons*. Mrs. Pease

Barlington, won first prizes in the classes for exotic Ferns. In that for a single specimen she showed Davallia filijensis plumosa, and in that for six specimens D. Mooreana, D. Bullata, D. hirta cristata, D. filijensis plumosa, Gleichenia rupestris, and Adiantum concinnum.

ORCHIDS.

Mr. Barker, gardener to Mr. W. P. Burkinshaw, exhibited the best six new or rare Orchids, those sent being Cattleya intermedia alba, Cattleya Mendeli Mande, C. Mossie reinbeckiana, Lelio-cattleya welliana albidula, L. c. Hypolyta, and Phaius bicolor purpureusens. The second prize in this class was won by Mr. J. Rollison, gardener to Mr. W. Bate-man, Pannal, and the third by Mr. Hartley, Spellow Hill Gardens. In the class for three rare Orchids, Mr. Barker was first, with plants of Cattleya Mossie reinbeckiana, Cattleya Mendeli Robsonae, and Odontoglossum crispum Mande; Mr. Rollison obtained the second prize, and Mr. C. Lawton the third. Messrs. Backhouse and Sons' prize for four Orchids was won by Mr. Barker, with Cattleya Mossie reinbeckiana, C. Mendeli L. c. Aphrodite alba, and Epiden-drum vitellinum majus. Mr. J. McIndoe was second.

There was a pretty class for a table of Orchids, 12 feet by 3 feet; cut blooms or baskets to be used. The first prize in this class was won by Mr. J. Cypher, Cheltenham, the second by Mr. J. Robson, Altrincham, and the fourth by Mr. W. Vase, the third being withheld. For ten Orchids the first prize fell to the lot of Mr. J. Cypher, who exhibited some very fine plants. The second place was occupied by Mr. Barker, and the third by Mr. Robson. For three Orchids, Mr. Sanderson, of York, took the first prize with Oncidium Marshalli, L. c. Camhamiana, and a Lelio-Cattleya seedling. The second prize was awarded to Mr. J. T. Barker, and the third to Mr. Robson. The best six Orchids were shown by Mr. J. Cypher, Cheltenham, who sent specimens of Miltonia vexillaria, Cattleya Mossie grandis, Lelia purpurata, L. p. Njobe, Thunia Marshalli, and Cypripedium lawrenceanum. Mr. W. P. Burkinshaw, Hessele (gardener, Mr. Barker), was second, and Mr. Robson third. The best single specimen orchid, Sobralia macrantha, was sent by Colonel Harrison, Broadley (gardener, Mr. C. Lawton). Mr. Barker won the second prize, and Mr. S. Leetham, York, the third.

ROSES.

The Roses, considering the lateness of the season, were good. In the class for seventy-two blooms the first prize was won by Messrs. Harkness and Sons, Bedale, their collection including five blooms of Duke of Wellington, Mme. Watteville, Mme. Hoste, Ernest Metz, Killarney, Bridesmaid, The Bride, &c. The second prize was taken by Messrs. J. and A. May, Bedale. Messrs. May also obtained the first prize in the classes for forty-eight and thirty-six distinct varieties.

The best collection of twenty-four distinct varieties was sent by Messrs. Harkness and Son, the second prize being taken by Messrs. J. Burrell and Co., Cambridge. Mr. J. W. Hutchinson was first for eighteen distinct varieties. The first prize for twelve yellow or white Roses was won by Messrs. Harkness and Sons, among them being good blooms of Niphetos, Marchal Niel, Souvenir de S. A. Prince, and Mme. Hoste. Mr. Hutchinson was first in a class for eighteen distinct Roses from amateurs.

PETALOGONISMS.

The first prize for a dozen show Petalogramis was won by Mrs. Tetley, Leeds (gardener, Mr. J. Eastwood). Mr. Eastwood was first for six show Petalogramis, and also for three zonals. Other first prizes won by Mr. Eastwood were those for a dozen zonal or nosegay Petalogramis, for half-a-dozen, three, and nine double zonals, and also for three double Ivy-leaved Petalogramis. In the last-named class the second place was occupied by Mr. Pylms, Monckton Moor, who also won the first prize for three double zonals.

BOUQUETS, &c.

In each of the four classes for bouquets the first place was taken by Messrs. Perkins and Sons, Coventry; their single bouquet was composed of Dendrobium, Phalaenopsis, Cattleyas, and Oncidiums. Mr. J. Summers was second for bridal, hand, and single bouquets. Mr. G. Webster, Sunderland, and Mr. W. Church, gardener to Mr. H. Thebbson, Broadworth Hall, Doncaster, also had handsome arrange-ments.

In a class for a basket of cut flowers the first prize was awarded to Messrs. Perkins and Sons, Messrs. J. Summers and W. Vase being second and third respectively. Messrs. Perkins and Sons were also first for a hand-basket of cut flowers, Orchids excluded, while Mr. Summers was second, and Mr. J. Snowden third. Mr. Webster was first and Mr. Summers second, for a stand of flowers and foliage. In a class for floral designs, such as wreaths, crosses, anchors, &c., Mr. Summers was placed first, and Messrs. Simpson and Son second.

Messrs. R. Smith and Co., Worcester, took the first prize for a fine collection of hardy cut flowers, including fine spikes of Erenurus robustus and E. himalaicus and others. Messrs. Harkness and Son were second, and Mr. Hutchinson third. Mr. J. Smellie, Bushby, N.E., and Messrs. M. Campbell and Son, High Blantyre, N.E., were first and second respectively for very fine collections of forty-eight blooms of fancy Pansies.

TABLE DECORATIONS.

In the class for a decorated table of fruit, not to exceed fourteen dishes, Mr. J. McIndoe, gardener to Sir J. W. Pease, Bart., M.P., Bliton Hall, Yorks, was first with very fine dishes of Black Hamburg and Foster's seedling Grapes, dishes of Grosse Mignonne and Early Alfred Peaches, Lord Napier and Stanwick Elruge Nectarines, Downton and Bizarre Napoleon Cherries, Hutton Hall and Best of All Melons, Brown Turkey Figs, Purple Imperial and Early Transparent Gage Plums, and Charlotte Rothschild Pineapple. The decoration consisted of classes of Asparagus and Masdevallias in the centre, with small glasses of Lelia purpurata, Odontoglossums, &c. Mr. J. Tullett, gardener to Lord Barnard, Barnard Castle, gained the second prize, while Mr. J. Summers was third.

FRUIT.

For a collection of six kinds of fruit, Mr. J. McIndoe was again first, his exhibit consisting of Black Hamburg and Chasselas Napoleon Grapes, Hutton Hall Melons, Lord Napier Nectarines, Grosse Mignonne Peaches, and Brown Turkey Figs. Mr. J. Easter, gardener to Lord St. Oswald, Nostell Priory, Wakefield, occupied the second place, and Mr. J. Tullett the third. Mr. McIndoe was also first in the class for four kinds of fruit, namely, Black Hamburg Grapes, Best of All Melons, Stanwick Elruge Nectarines, and Grosse Mignonne Peaches. Mr. J. Leadbetter, gardener to Mr. A. Wilson, Tranby Croft, Hull, won the second prize, and Mr. J. Easter the third.

In the class for three bunches of Black Hamburg Grapes the first place was taken by Mr. Gates, gardener to Lady Hawkes, while Mr. W. Nicholls, gardener to Lady Beaumont, was second, and Mr. Wallsoop, gardener to the Right Hon. T. Saville, third. For white Grapes, Mr. Nicholls was first and Mr. McIndoe second. The first prize for a dish of Nectarines was awarded to Mr. McIndoe for Lord Napier, while that for Peaches was awarded to Mr. C. Lawton for a dish of Grosse Mignonne. The first prize for Strawberries was won by Mr. Alderman with Royal Sovereign, and that for Melons by Mr. Goodacre.

VEGETABLES.

Mr. McIndoe exhibited the best dish of Tomatoes. He also won the prizes offered by Messrs. Sutton and Sons and Messrs. Welsh and Sons for six kinds of vegetables.

NON-COMPETITIVE GROUPS.

Mr. G. Yeld, Clifton Cottage, York, showed cut flowers of various varieties of Iris, and also Hemerocallis. Mr. F. C. Edwards, Leeds, showed a group of plants, including Carnations in flower and flowers of Pansy Baden-Powell. A large group, containing a great variety of stove, greenhouse, and hardy plants, was staged by Messrs. R. Smith and Co., Worcester.

Messrs. J. Veitch and Sons, Ltd., Chelsea, were awarded a gold medal for a very handsome group of Orchids. A gold medal was also awarded to Messrs. Charlesworth and Co., Bradford, for another group of choice Orchids. Messrs. Hugh Low and Co., Enfield, also had a fine group of Orchids.

Messrs. W. Cutbush, Highgate, obtained a gold medal for a large and very fine group, in which Carnations were prominent. It also included Caladiums, Liliiums, Ericas, and other subjects.

Messrs. Laxton Bros., Bedford, had a fine exhibit of Straw-berries, Mentmore, Filbasket, and Climax, for which they obtained a gold medal. Messrs. Webb and Son, Stourbridge, exhibited fine plants of the new Early Pea Pioneer, and also Begonias and Gloxinias.

Messrs. Kelway and Sons, Langport, had a large collection of cut flowers, as also had Messrs. Dickson, of Chester. A group of Gloxinias and also Begonias was sent by Messrs. J. Peed and Sons, Norwood. Mr. J. Wood, Kirkstall, Leeds, staged a group of rocky plants in a temporary rocky. Mr. R. Sydenham, Birmingham, exhibited some beautiful Sweet Peas and Carnations. A fine group of stove and greenhouse plants was sent by Messrs. W. Chlbran and Son, Altrincham and Manchester.

ROYAL HORTICULTURAL SOCIETY.

FLORAL COMMITTEE.

A splendid group of Carnations shown by Mr. Martin R. Smith (gardener, Mr. C. Blicke), Hayes, Kent, was awarded a silver-gilt Flora medal. Among the sorts were Cecilia, a fine yellow, Calypso, Mrs. Martin Smith, and Grace. Messrs. B. S. Williams and Son, Upper Holloway, also staged a nice group of Carnations, interspersed with Crotons, Adiantums, &c.

A lovely collection of Peonies, with Gaillardias and Delphiniums, was shown by Messrs. Kelway and Sons, Langport, and was awarded a silver-gilt Banksian medal. Messrs. H. Cunnell and Sons, Swanley, obtained a silver Banksian medal with a group of very pretty hybrid Aquilegias.

Mr. Amos Perry, Winchmore Hill, obtained a silver-gilt Banksian medal for a fine collection of choice hardy flowers, among which were Leontopodium himalaicum, Philox carolina, Saxifraga ligulata, Campanula rhomboides, C. speciosa, Dactyanus caucasicus, and other things. This was one of the finest groups of hardy flowers we have ever seen.

Messrs. James Veitch and Sons, Chelsea, showed an excellent group of Peonies and Irises in pots, in which also were some splendid spikes of Erenurus robustus, and another group of cut Irises, obtaining a silver Flora medal.

Messrs. T. S. Ware, Ltd., Feltham, showed a fine group of hardy flowers, among them being Irises, Nymphheas, Libum rubellum, Aster alpinus, Sempervivum montanum, &c. This group won a silver Banksian medal, as also did a fine collection of hardy flowers from Messrs. Barr and Sons, Covent Garden, and a group from Messrs. R. Wallace and Co., Colchester. Mr. M. Pritchard, Christchurch, also won a silver Banksian medal for a group of herbaceous plants, such as Tropaeolum polyphyllum, Eryngium alpinum, Delphiniums, and Peonies.

A group of seedling Rhododendrons sent by Mr. A. Waterer, Woking, was awarded a bronze Banksian medal. It included Robinia grandiflora, R. Baccansea, R. hispida, and R. maphylla. Another group of Rhododendrons and hardy Bamboos was shown by Messrs. Y. N. Gauntlett and Co., Redruth, which also contained Corydalis australis, Escallonia exoniensis, and Embotrum coccineum. This obtained a bronze Banksian medal.

Messrs. J. Veitch and Sons staged a pretty little group of Kalauchoe flammea and their bright Rhododendron hybrids. A fine group belonging to Mr. George Pincoe, Oxford, and containing some beautiful cut Roses and Sweet Peas, was awarded a silver-gilt Flora medal. There were fine blooms of Muriel Galan, Marchal Niel, Souvenir de S. A. Prince, Mme. Cochet, Paul's Carmine Flower, &c.

Messrs. Frank Cant and Co., Colchester, staged an excellent group of Roses, among which were Papillon, Irene Watts, Cameons, Reine Olga of Wurtemberg, Rainbow, and others. This obtained a silver Flora medal. Silver Flora medals were

also awarded to Messrs. W. Paul and Sons, Waltham Cross; Messrs. G. Cooling and Sons, Bath; and Mr. F. W. Campion (gardener, Mr. Fitt), Trumpets Hill, all of whom staged very attractive groups of Roses. Silver Banksian medals were voted to handsome groups of Roses set up by Mr. E. R. Cant of Colchester, and Messrs. Paul and Sons, Cheshunt. Other groups of Roses, of considerable merit, were exhibited by Lord Gerard, Ashford, Kent, and Messrs. J. Veitch, who showed hybrid Sweet Briars.

Sir John Pigott (gardener, Mr. Flemming), Wexham Park, Slough, had a lovely group consisting of Zonal Pelargoniums, Carnations, Francoas, and very fine plants of Humea elegans, and H. e. alba. A silver-gilt Flora medal was awarded. This group almost succeeded in gaining a gold medal.

Mr. H. J. Jones, Lewisham, staged a very attractive group of Sweet Peas in pots, some of the prettiest sorts of which were Snowdrift, Triumph, Wideawake, and Cream of Brockhampton. It also contained Begonias, Celosias, Pelargonium Miss Jessie Cottie. A silver Flora medal was awarded.

Messrs. J. Veitch and Sons had a group of Rosa multiflora Electra, a pretty yellowish white flower obtained from R. multiflora simplex, and W. A. Richardson. This firm also sent Senecio Greyi, Mr. E. S. Towell, Hampton Hill, sent a group of his cactus-flowered Pelargonium Fire Dragon. From Mr. Amos Perry, Winchmore Hill, N., came plants of Dactyanus caucasicus, D. c. elegans, D. c. pallidus, Iris germanica Her Majesty, Campanula tubifera, and Heuchera crubescens.

Messrs. Heath and Son, Cheltenham, exhibited Carnations Cecil Rhodes and Mrs. Blooman White.

Mr. H. Barnard of Southgate, sent plants of Petunia Lady Whyte, Mr. E. W. Campion, Reigate, showed a seedling border Carnation Mrs. Potter. From Messrs. Kelway came Peonies Miss Shand and Hon. Mr. Portman, and Delphiniums Lord Chesham, Purple Emperor, Bold Beauty, and Major-General Baden-Powell. Adenophora Potamini was sent by Messrs. Jackson and Son, Woking, and Anchusa italica Florence Molyneux by Mr. E. Molyneux, Swamore Park. Mr. James Kendall sent Anemone-centred and single cactus Pyrethrus. Messrs. Wallace and Co., Colchester, sent Peonies Kathleen and The Grisha. Messrs. T. S. Ware, Ltd., showed Erenurus Warei.

From Mr. J. T. Bennett-Poe, Cheshunt, came Veronica scopioides, while Mr. D. A. Cator, of Upper Tooting, sent Onopordon tauroicum.

ORCHID COMMITTEE.

Messrs. Stanley Ashton and Co. sent a nice group, which was neatly arranged. In the back row were several good varieties of Lelia tenebrosa, a grand specimen Cattleya Mossie with thirty-five flowers, several good varieties of C. Mendeli. The highly-coloured orange-scarlet flowers of Epidendrum vitellinum majus were in striking contrast to the numerous white-flowered Odontoglossums. Some good varieties of O. crispum and O. citosumum were represented by very pretty forms. Cypripediums, Masdevallias, and Lycastes were also very fine. A silver Banksian medal was awarded.

Messrs. B. S. Williams and Sons sent a small group, consisting of finely-flowered Vanda teres, V. suavis, good varieties of Cattleya Mendeli, and Lelia tenebrosa. Lelio-Cattleya canhamiana (Mossie - purpurata) were well represented. Numerous hybrids and species of Cypripedium and Odontoglossums in variety. Vote of thanks.

Messrs. H. Low and Co., Bush Hill, Enfield, sent a group, the principal features being the numerous fine varieties of Cattleya Mendeli. Varieties of C. Mossie were also very fine. A fine dark variety of C. Warscewiczii with two flowers was very striking against the lighter varieties around it. Some dark varieties of Lelia tenebrosa and Vanda teres were well represented. Odontoglossum crispum was represented by good forms. Several spotted varieties of O. Pescatorei and O. andersonianum were also included. A silver Banksian medal was awarded.

Mr. J. Gurney Fowler, Gilehlands, South Woodford (gardener, Mr. Davis), sent six distinct and fine varieties of C. Warscewiczii, a good variety of Lelio-Cattleya Aphrodite (C. Mendeli - L. purpurata), Cattleya Eldorado, Cypripedium callosum Sandere with two flowers, and L. Lawrenceanum Hyacum. Cochlioda Noetzliana, with its broad scarlet flowers, were most attractive.

Mr. J. Colman (gardener, Mr. Bound), Gattom Park, Reigate, sent some good varieties of Odontoglossum crispum. Among the numerous varieties of Cattleya Mossie were three distinct forms of C. M. reinbeckiana. A good plant of Oncidium serratum was also included (silver Banksian medal).

Sir T. Lawrence, Bart., M.P., sent a nice group, for which a silver Flora medal was awarded. Prominent among these were two beautiful varieties of Odontoglossum crispum with thirteen and fifteen flowers respectively, the flowers being 4 inches in diameter; a grand variety of Lelio-Cattleya Arnoldiana, Lelia tenebrosa (Walton Grange var.), in which the sepals and petals are of lemon-yellow, the lip creamy white and crimson-purple; Lelio-Cattleya canhamiana, with seven flowers; the rare Cypripedium macrochilum (candatum Lindenii - grande), having a very large lip, which is the more remarkable when it is considered that one of the parents is the pouchless variety of C. candidum. Cattleya Mossie var. Lawrencei is a pretty white variety with rose like veins upon the lip. A large plant of the hybrid Sobralia Veitchii and a finely-flowered plant of Epidendrum fragrans were very attractive. Masdevallia fairiam (Davisii - Veitchii) shows the intermediate characters of the parents. Several interesting botanical species of Orchids were also included.

Mr. E. A. Bevan (gardener, Mr. R. Ward), Trent Park, Barnet, was awarded a silver Flora medal for culture of a plant of Cologne Dayana, which carried fifty spikes of flower, averaging forty flowers per spike. This is undoubtedly the finest-flowered specimen we have seen, and created much interest.

Mr. H. T. Pitt (gardener, Mr. W. Thurgood), Rosslyn, Stamford Hill, was awarded a silver Banksian medal for a

neat group consisting of finely-flowered *Odontoglossums*, *Cattleyas*, *Lælias*, and *Cypripediums* in variety; also some well-flowered plants of *Platyclinis filiformis*.

Mr. H. F. Simonds (gardener, Mr. G. Day), Woodthorpe, Beckenham, sent a charming group, which was neatly arranged. In the back row were about a dozen finely-flowered plants of *Lælia purpurata*, several good forms of *Cattleya Mossie* and C. Mendeli, and a grand plant of C. Schilleriana with nine flowers. *Miltonias*, *Odontoglossums*, and *Dendrobiums* were well represented. Among the many *Cypripediums* were some yellow ground varieties of C. Godefroyae leucochilum. Some nicely-flowered *Oncidiums* and *Sophranitis grandiflora* were also included. A silver floral medal was awarded.

Baron Sir H. Schroder (gardener, Mr. H. Ballantine), was awarded a silver Flora medal for ten plants. These included a fine plant of *Lælio-Cattleya eximia*, which carried a four-flowered raceme. The original plant of L. C. canhamiana Lady Wigan with three of its delicate lilac flowers with streaks of purple on the disc of the lip and yellow in the throat. *Odontoglossums* included O. crispum Rex, O. c. xanthotes has white flowers, except a spot or two on the sepals and petals, and some spotting of the same colour in the centre of the lip. A good variety of *Cypripedium callosum* Sanderae and a hybrid between C. Curtisii and C. Stonei platycaenum; *Lælio-Cattleya Hippolyta* was also included.

M. Claes Ellerbeck, Brussels, was awarded a silver Banksian medal for a nice group, which included some good varieties of *Odontoglossum crispum*, O. Willecannum, and other hybrids.

Mr. W. Thompson, Stone, sent *Odontoglossum crispum* The Earl, which was recently certified.

Sir F. Wigan, Bart., Clare Lawn, East Sheen, sent two distinct varieties of *Phalaenopsis speciosa*, and a good form of P. grandiflora.

Sir J. Miller, Bart., sent *Lælia Evelina*.

Mr. A. H. Smece sent *Eulophia gracilis* with pale green and brown flowers.

Mr. J. Douglas sent *Dendrobium tortile*.

Mr. W. P. Berkushaw, Hessele, Leeds, sent a charming variety of *Cattleya Mendeli*.

Messrs. J. Charlesworth and Co., Bradford, sent a fine variety of *Cypripedium* (Chapmani) and *Dendrobium Phalaenopsis album* with five pure white flowers.

Messrs. Heath and Son sent *Lælia Diglyana*.

FRUIT COMMITTEE.

Lord Gerard (gardener, Mr. Walters), Eastwell Park, showed a collection of Melons, all of which were remarkably fine for so early in the season. Among the finer were British Queen, Countess, a beautiful creamy-coloured Melon; Frogmore Seedling, Countess, Hero of Lockinge, and British Queen (silver Knichtian medal).

Mr. C. Suachan (gardener, Mr. H. Folks), Gaddesden Park, Hemel Hempstead, sent a collection of Peaches and Melons. The Peaches were of useful size, and very finely coloured (silver Banksian medal).

Lord Wantage, V.C., K.C.B. (gardener, Mr. W. Fife), Lockinge Gardens, Wantage, Berks, sent a collection of fruit, which included six bunches of black and six bunches of white Grapes—Foster's Seedling in the latter case, and Madresfield Court in the other. Carter's British Queen Melon, Imperatrice Nectarine, Stirling Castle Peach, and Brown Turkey Figs were included, and all were exceedingly fine (silver Knichtian medal).

COMMITTEE MEETINGS.

The Royal Horticultural Society committees will meet at 11.30 at Richmond on Wednesday next, the 27th inst. Members will sign their names in the attendance books at the entrance.

REVOLVING BARREL FOR STRAWBERRIES.

This was shown by Messrs. John Jackson and Co., 17, Philpot Lane, E.C., and the Strawberries apparently thrive excellently under these conditions. We hope to illustrate this novelty.

NATIONAL AMATEUR GARDENERS ASSOCIATION. SUMMER SHOW AND CONVERSAZIONE.

THIS body of enthusiastic amateur gardeners, instead of holding its exhibition at the Royal Botanic Gardens, Regent's Park, N.W., as heretofore, have arranged for its summer display to be held at Winchester House, Old Broad Street, E.C., on Tuesday evening, July 3, at seven o'clock. On this occasion several championship trophies, including those for Sweet Peas, Pansies, hardy flowers, &c., as well as many other competitions, will be contested. In connection with the exhibition, a conversazione has been arranged, under the patronage of the Right Hon. the Lord Mayor of London, whom it is expected will open the proceedings. Fruit and light refreshments will be provided, and the cost of the tickets is 1s. each. The honorary secretary is Mr. V. Stacy-Marks, 1, Anglesea Road, Surbiton, Surrey, who will be pleased to give any information respecting the work of the association.

NOTES FROM HIGH BEECH.

THE bog garden seems from my experience to be one of the best places to secure plants which seem in ordinary gardens to disappear after certain successful interludes; for example, *Primula japonica*, from its probable biennial habit, seeds, and yearly gives a fair display. *Osmunda regalis* not only comes up on the edges of the small water basin filled with *Aponogeton*, but spreads itself in one or two rough spaces many yards away. *Saxifraga peltata*, from a small island, has floated its seeds to the opposite banks. *Iris Kämpferi* seeds

along a little stream flowing out of the basin, and the Hard Fern (*Blechnum spicant*) and also *Athyrium spinulosum* are naturalising themselves on the northern bank. *Orchis foliosa* is seeding, and has given what I believe to be a natural hybrid with O. maculata. Altogether one is always coming on some small surprise in the way of self-sown or emigrated plants.

(GEORGE PAUL.)

NEW AND RARE PLANTS.

ODONTOGLOSSUM ROLFÆ WALTON (GRANGE VARIETY).

(PESCATORIE × HARRYANA).

THIS is a remarkable variety, the flowers being 4 inches in diameter, the sepals 2 inches long, 1 inch broad, and deflexed; the ground colour is white, suffused with rose and heavily blotched with deep brown. The petals are as long as and broader than the sepals, almost wholly brown, mottled with white at the base and a rosy suffusion at the apex. The lip is upwards of 1 inch broad, 1½ inch long on the flat portion, the front portion creamy white. In the centre there is a large deep brown blotch, outside which there is a rose suffusion with numerous rich purple markings. The disc is bright yellow, with brown markings. The plant carried six expanded flowers. This is by far the finest variety of this hybrid we have seen. A first-class certificate was awarded, Royal Horticultural Society, June 19. From the collection of Mr. W. Thompson (gardener, Mr. Stevens), Stone, Stafford.

SOBRALIA VEITCHI AUREA.

(S. MACRANTHA × S. XANTHOLEUCA).

THIS is a most distinct variety, with wholly bright yellow flowers of the form and substance. From the collection of Sir F. Wigan, Bart. (gardener, Mr. W. H. Young), Clare Lawn, East Sheen. Award of merit, Royal Horticultural Society, June 19.

IRIS PARADOXA.

WHAT was said to be the true I. paradoxa was shown by Mr. C. G. van Tubergen of Haarlem, Holland, at the meeting of the Royal Horticultural Society on Tuesday, and given an award of merit. Quite a little group of it was shown. This Iris belongs to the *Oncocyclus* group, is dwarf, and has a flower of exquisite beauty. The standards are of remarkable delicacy both in texture and colour, being somewhat broad, and lined with violet on a pure white ground; the quite inner segments are pale yellow, dotted and lined with purple, and the outer segments almost black so deep is the purple colouring, whilst their "furry" character gives a decided interest to the flower. I. paradoxa is a species so beautiful that those who love Irises will assuredly grow it.

IRIS URMENSE.

THIS is also an *Oncocyclus* Iris, of the same height as I. paradoxa, and shown also by Mr. Tubergen, an award of merit was given. The flowers have rather broader segments, and the standards are sulphur yellow, with deeper coloured frills. A charming species.

IRIS GERMANICA BLACK PRINCE.

THIS is certainly one of the most distinct of the German or Flag Irises. We welcome it heartily as a good variety for woodland and border. The flowers are large, fragrant, and handsome in colour, with light purple standards and deep velvety purple frills, the broad rich yellow marking running into the depth of the flower relieved the other shades. Shown by Mr. Amos Perry, Winchester Hill, N. Award of merit, Royal Horticultural Society, June 19.

DELPHINIUM QUEEN OF HUNGARY.

THIS is of wonderful colour. It has a strong spike of intense blue flowers, the colour of the Gentian, and quite black in the centre. A group of this in the garden would make a telling picture of an intense and beautiful colour. Exhibited by Messrs. Kelway and Son of Langport, Somerset. Award of merit, Royal Horticultural Society, June 19.

EREMURUS WAREI.

THIS is said to be a new species, and has a slender spike of yellow flowers, whilst the nut brown buds increase its beauty. Probably it is a natural hybrid between E. Bungei and E. Olga. It comes from the mountains of Central Asia, and in the root stock it resembles the late summer flowering E. Olga, and in foliage and habit is somewhat like E. Bungei and E. persica. In ordinary seasons under favourable conditions it grows 8 feet high, and flowers in May, even before E. robustus Flvesianus; the spike

shown came from a plant grown in an unfavourably exposed spot. Exhibited by Messrs. T. S. Ware, Ltd., Tottenham. Award of merit, Royal Horticultural Society, June 19.

CAMPANULA PERSICIFOLIA MOREHEINI.

THIS is evidently a thoroughly good garden plant, a semi-double form of the Peach-leaved Bellflower, and as white as driven snow. The flowers are large and produced freely on the spike, and would be useful for cutting. We shall illustrate and write more about this excellent perennial. From Messrs. T. S. Ware, Ltd. Award of merit, Royal Horticultural Society, June 19.

GERANIUM SANGUINEUM ALBUM.

A DELIGHTFUL white variety of the native G. sanguineum, a gem for the rock garden. Exhibited by Mr. Perry. Award of merit, Royal Horticultural Society, June 19.

PEONY EASTERN QUEEN.

A NOBLE single variety of the herbaceous class, with broad, overlapping guard florets of intense crimson, a full, rich, and handsome shrub, and a glorious centre of old gold. An artistic and welcome novelty. Exhibited by Messrs. R. Wallace and Co., of Colchester. Award of merit, Royal Horticultural Society, June 19.

ANCHUSA ITALICA GRANDIFLORA.

A VERY fine variety of this beautiful blue Anclusa. It is a large edition of the other, and a handsome plant for cool spots. Shown by Mrs. Bulteel, Sefton Park, Slough. Award of merit, Royal Horticultural Society, June 19.

Hieracium villosum.—This pretty composite is now one of the brightest things in the rock garden with its large clear yellow flowers and woolly foliage. It should be planted in long drifts in full sunshine towards the upper part. It is well to keep a good stretch for plants with grey and glaucous foliage, where this good plant will find a place in company with *Othomopsis*, *Achillea umbellata*, *Geranium argenteum*, *Antennarias*, and some of the encrusted Saxifrages.

TRADE NOTES.

WEBB'S ROYAL EXHIBIT.

CONSIDERABLE interest was evinced in the exhibit of new and improved varieties of cereals which were exhibited by that well-known firm Messrs. Webb and Sons, the Queen's seed growers, of Worsley, Stourbridge. Messrs. Webb have been engaged for many years past in selecting and cross-fertilising Wheat, Barley, Oats, and other farm and garden plants, and their long experience is a guarantee of the sterling value of their introductions. At the recent Royal Counties' Show, H.R.H. the Duke of Connaught expressed his great satisfaction with the many new kinds of cereals, &c. which Colonel Webb brought to his notice. Among the new sorts exhibited was the Hardy Winter Black Oat, a wonderful cropper, producing bright stout straw and an abundance of plump heavy grain of high feeding quality. A fine collection of vegetables was also exhibited, and now that growing vegetables for market is a course so largely adopted by agriculturists throughout the country, this section of Messrs. Webb's stand was a centre of great attraction, particular attention being paid to the Emperor Cabbage, Early Mammoth Cauliflower, Pioneer Pea, &c. the latter in actual growth, with the haulm literally covered with pods. Webb's strains of flowers made a grand display, and the numerous gold medals which they have recently secured are evidently well merited. *Gloxinias*, *Begonias*, *Calceolarias*, &c., were finely shown, whilst the hardy flowers were also excellent, both in richness and diversity of colour.

TREE GUARDS.

WE have received the excellent list of tree guards with illustrations from Messrs. Bayliss, Jones, and Bayliss, Victoria Works, Monmore Road, Wolverhampton. Several designs of great value are represented, the guards being suitable for various kinds of trees, whether of the garden, woodland, park, or street. We give one illustration of a very pretty guard which stands 6 feet 9 inches high from the ground when fixed by 12 inches square, and is covered on all four sides with galvanised wire lattice to within 6 inches from the ground for *Clematis* or other creeping plants. Almost any size may be made of these guards. Those who wish to protect their trees should see this list. Illustrations are also given in the list of guard fencing.



TREE GUARDS.

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers.—The Editors intend to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITORS OF THE GARDEN, 29, Tavistock Street, Covent Garden, London. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.

Names of plants.—*Mrs. S. Kishorn.*—The plant sent is the Buck-bean or Marsh Trefoil (*Menyanthes trifoliata*). It is one of the Gentian tribe, and, like most of the Gentians, has an intensely bitter root, which has valuable tonic properties. It is a handsome plant and well worth a place in the bog-garden. — *H. C. B.*—1. *Gentiana bavarica*. 2. Right for *Muscari bot. pallida*. 3. All pale-coloured forms of *Chiranthus mutabilis*; there is a much better and deeper-coloured form. 4. *Aquilegia* blooms arrived quite shattered; we think it unlikely that such a cross should be effected. *Photinia japonica*.—It is unusual for this to flower in England except in the extreme south. — *R.* The correct name is "*Esculus Pavia* var. *pendula*," to be had from the trade as *Pavia rubra pendula*. The common red Horse Chestnut is *Esculus carnea* or *E. rubicunda*. *Subscriber.* The flower sent is called New Life.

L A W.

The use of sulphur in maltings nuisance to neighbours.—*A. E. B.* At some maltings within 100 yards of your garden sulphur is burnt to bleach foreign Barley, and the fumes seriously affected your health while working in your garden. You say that the fumes have also killed some of your fruit trees, &c., and have seriously damaged other trees, &c. If this burning has not been carried on in these buildings for 20 years and upwards, you may recover damages in an action in the county court on proof of the facts related. In any case the sanitary authority may, and should, interfere, as although they are not concerned with the injury to the trees, &c., yet it seems that the burning is a source of nuisance to health within Section 91 (6) of the Public Health Act, 1875. It also is, we think, a noxious trade within Section 112 of the same statute, and if the authority decline to move in the matter on your individual complaint, you may get two legally qualified medical men to certify that the burning is a nuisance or injurious to the health of yourself, or you may get any ten inhabitants of the district to do the same, and the authority must then institute proceedings under Section 114. If they refuse or neglect, you should then represent the facts to the Local Government Board.

FLOWER GARDEN.

Climbing plants for a north wall (*Mrs. A. H. Winstanley*).—*Garrya elliptica* would answer two of your requirements, for an Evergreen and a plant of bold appearance on a north wall, but it does not get on quickly at first, though it grows apace after the first two years. The most beautiful climbing we know for north walls is a combination of *Guedler Rose* and *Clematis montana*. The latter is of very rapid growth, and though neither are evergreen, yet the wall becomes so well clothed that the effect is almost as satisfying.

Garden Pinks (*Allice*). There is no better time for propagating these garden Pinks by means of pipings or cuttings than just now. Pick or cut out shoots some 3 inches to 4 inches long, make a solid base to each by cutting off the bottom part even with a sharp knife, then dip these cuttings thickly into pots, pans, or boxes filled with sandy soil or under a hand-light stood beneath a north wall or other shade, or failing such protection, then in the open soil that has in it a good proportion of sand; but if in a frame or handlight the rooting is greatly accelerated. Dip them in from 2 inches to 3 inches apart, and fix each cutting very firmly. Give occasional waterings, but do not moisten the soil unduly lest damping ensues. So treated it will be found easy to have a large number of strong-rooted plants to put out in the autumn.

The native Sea Holly (*Agnes*).—The plant you sent is the Sea Holly (*Eryngium maritimum*) of the English coasts. It is a picturesque, silvery, prickly-leaved plant, and has bluish flowers. The Sea Hollies *E. alpinum*, *gigantum*, *olivaceum*, and others are very charming on hot rather dry borders.

Polyanthus seed (*C. J. S.*).—You will probably have to exercise a little patience with your *Polyanthus* seed. Like that of all the *Primulas*, it is hard-shelled, and when it has been kept a few months, the skins become very hard, and a long time is needed to soften them to enable the process

of germination to proceed. We have had long experience of these seeds, including that of *Auricula* specially, and know that between the first and last growth from a seed pan or box that six months has often elapsed. But this does not show that wherever possible seeds of these *Primula* should be sown as soon as ripe, as then germination is quicker and good. Of course, it is difficult to obtain fresh seed in that way from seedsmen, as they do not get in their seed from the growers until the autumn, but all who save their own seeds will find August sowing to be by far the best.

Sweet Peas (*Forest*).—As your early-sown Sweet Peas are now coming into bloom, and you have none others coming on in succession, you will find that yours will be getting out of bloom, perhaps, indeed, be quite over by the time of the great Sweet Pea Show at the Crystal Palace, at the end of July; you may, however, so as to secure flowers then, and a much longer season of bloom, cut back one-half of your Pea plants several inches, and thus compel them to break afresh, which they will do, rendering them a month later in flower, especially if you put some manure about them, and also occasionally give liberal waterings. If your plants seem rather crowded, cut out a few of those you cut back, as it will give those left a much better chance.

FRUIT GARDEN.

Barren Strawberry plants (*Reader*).—We have heard of numerous cases in which Strawberry plants put out newly as rooted runners last autumn have failed to produce bloom this season. But we do not any the more regard this result as evidence that the plants have become permanently blind or barren. Really, such action on the part of Strawberry plants is much less common than is generally supposed. We think that the primary cause of the blindness of the young plants this season is that last summer and autumn the weather was hot and dry, and for that reason plants did not become sufficiently strong to make fruiting crowns, for if such crowns are not created in the plants in the autumn they do not develop in the spring. You will do well to leave your plants till next year, and no doubt then you will find them flowering and fruiting abundantly.

Cherries under glass (*Alfred*).—There are diverse forms of training which suits the Cherry for house culture, although we like best having the trees in pots, and pruning them to a semi-pyramidal shape, as those so grown are capable of easy transference from inside to outside when desired. But you may plant Cherries 2 feet apart or a little wider, and carry up stout stems as with Vines, but at 12 inches apart, keeping the stems hard spurred. We have seen trees so growing fruiting finely. You may also have them trained erect to pillars in a house, or fan-shaped trained to a back wall. As to varieties, nearly all sweet Cherries do well under glass. The fruits also come very fine and clean, but of course the trees have to be constantly syringed and kept free from black aphid. Six fine varieties are: Early Rivers, Black Circassian, Bizarreaux, Governor Wood, Napoleon, May Duke, and Black Eagle.

Strawberry runners (*Amateur*).—There are two good reasons for layering Strawberry runners into small pots singly. The first is their great value for potting on for forcing in the winter and spring; and second, the facility with which they can be transferred from the bed to form a fresh bed elsewhere without disturbing the roots. To have very early strong runners, most gardeners adopt the plan of putting out in rows 2 feet apart on good soil at the end of August freshly rooted runners, then the following spring pinching out any bloom-stems that show on them. Runners break earlier and are stronger than is the case with fruiting plants, and these are at once layered into pots. The pots should be 3-inch, be almost filled with good loamy soil, and each one be stood in a hole in the ground made between the rows of plants, so as to half bury it and keep it erect, the runner just as it is about to throw roots being pegged into the pot. These need to be frequently watered, and should root in about three weeks.

Scalded Grapes (*Cope*).—The Grapes sent show very plainly that they have suffered from scald. That is caused by too much moisture settling on the berries in the morning, the vine being kept too close shut at the top, and the vapour created during the night condensing heavily on the leaves and bunches, then early strong sunshine bursting on to the vine, sun rays become concentrated on to the globules of water on the berries, and through this agency scald is caused. Where top air is not given all night, some should be given very early in the morning. Cut out the injured berries, and give more night air.

Melons not setting (*W. J.*).—The chief cause of the non-setting of Melons is imperfect fertilisation. Cucumbers are in exactly the same case as Melons in producing male and female flowers, but with those it is useful to impregnate the latter only when seed fruits are required. In the case of Melons, no fruit will set unless properly impregnated, and as it is the rule to keep Melons rather damp, more than usual care is needed that impregnation, by placing the pollen anthers of the male, or fruitless bloom, in contact with the centre or fertile organs of the female or fruit flowers. It is well to do this two or three times to ensure fertility.

Thinning Apples (*Stetson*).—No doubt you had it difficult to understand the advice given you

to thin out the heavy set of fruit on your garden Apple trees, but it is good advice all the same. Still, it will be time enough to do that when you see that all is swelling up. Such fruits as do not swell well soon fall. In the case of very early varieties that produce large fruits, you can remove one-half as soon as they are large enough for cooking, but in all cases it is wrong to allow any of these trees to carry very heavy crops. Fewer fruits and finer are much better, and do far less harm to the trees. On orchard trees, of course, thinning is out of the question.

KITCHEN GARDEN.

Coleworts (*Albin*).—You may perhaps have heard of these members of the Cabbage family under the term "Collet" or "Collard." They are really Cabbages, but are grown for consumption chiefly in the winter when the weather is cold, as then the flavour seems to be much improved. Early in June is soon enough to sow seed. If you get a little seed of the Hardy Green, which is the best, and will sow it thinly in one or two shallow boxes filled with soil and stood in a frame, germination will be quick and good. You should in that way obtain plenty of strong plants to put out on to ground from which early Potatoes or Peas have been taken in six weeks from the time of sowing or soon after. Coleworts do not grow large, and may be planted at 12 inches apart each way. In clearing them off as wanted, it is best to pull them up by the roots, cook the heads, and throw the stems to dry and be burnt. Their season is properly from December till March.

Jersey Potatoes (*Amateur*).—The early Potatoes found in such great quantities in our shops and markets now in the form of long, flattish kidneys, though called Jersey Pinkes are not so, as vast quantities of them come from the south of France. The true name of the variety is International Kidney. It was raised many years ago by Mr. Robert Fenn, then of Woodstock, and was put into commerce by Mr. R. Dean, of Ealing, at the price of 2s. 6d. per pound. Mr. Fenn objected at first to its being put into commerce, because its table quality is so indifferent, although it is one of the finest and handsomest kidneys ever offered in trade, and is a splendid cropper. But certain of the Jersey growers saw in it immense possibilities, and now it is sent into this country by hundreds of tons. Little was it thought when named International that it would so fully justify its name.

Late Peas (*W. J. S.*).—It is not wise to sow Peas late in small gardens unless the soil is deep and retentive. In soils that are somewhat shallow and dry, late Peas under the effects of great heat and drought soon suffer from mildew and thrips, the blooms become blind, and the result is failure. But if you have a good holding soil, you may sow a drill or two yet, especially if for the purpose you will throw out trenches 18 inches wide and deep, bury in, and mix with the soil as returned a good quantity of short manure. Then sow the Peas in rows thinly, and if the weather be dry, water freely from time to time. At this time of year, with midsummer close at hand, you had better not sow late varieties, but those that are moderately early, such as Chelsea Gem, height 2 feet, or Gradus, May Queen, or Senator, 3 feet, as likely to give the best results.

Failure in Carrots (*Obbie*).—So far as we have seen this season, Carrots from spring sowings are very good. It has sometimes happened that maggot has nearly destroyed the crop, especially during a very dry time. Your crop seems to have suffered from the same cause, and you should pull and carry away, burning or otherwise destroying all infested plants, also giving to those left a watering with a strong dose of soot water. You should get a small piece of ground deeply dug so soon as it may be cleared of some other crop, and, if poor, dressed with manure. Add to it a heavy dressing of soot. Then obtain seed of either Intermediate or Scarlet Model, and sow in drills thinly the first week in July. If good growth follows, you will avoid injury from maggot, and you can pull delicious Carrots all the winter.

GARDENING APPOINTMENTS.

MR. ALFRED DRYDEN, lately head gardener to Mrs. Blacker, Castle Martin, Newbridge, County Kildare as head gardener to Sir Gilbert King, Bart., Charlestown, Drumona, County Leitrim

OBITUARY.

MR. WILLIAM WATKINS.

The death has occurred, at Eastbourne, of Mr. William Watkins, popularly known as "The Butterfly King." He had devoted the greater portion of his life to the collection of butterflies, and his entomological collection was considered to be one of the finest in England.—*Times*.

Erratum.—We regret to have to call attention to an error on page 152, where an outline illustration of *Catagena* is named *Pernettia* and accompanies a note on *Pernettia*. It arose from our having two blocks of these two berried plants of exactly the same size, and the wrong one of the two being inadvertently used.—*Eds.*

PHOTOGRAPHS AND NOTES.—We shall welcome very much any photographs and notes sent to us, and hope readers who thus give practical assistance in making THE GARDEN interesting and useful will give their full names and addresses, not necessarily for the sake of publication, but to enable us to thank them for their kind co-operation in our work.



SEA HOLLY.

THE GARDEN.

No. 1493.—Vol. LVII.]

[JUNE 30, 1900.

LILIES IN THE BRITISH ISLES.

THE following are some more of the helpful answers we have received by the filling up of the forms that were sent out, and are in continuation of those printed last week :

From the Rev. C. Wolley-Dod :—

1. County.—Cheshire.

2. Soil.—Stiff clay, but all flower borders and beds *made soil*, lightened with surface loam, leaf-mould, granite chips, &c.

3. Special conditions.—Sunshine very deficient. Westerly gales violent and destructive ; everything above a foot high has to be tied.

4. Kinds that do well.—All Martagons except white, which is very uncertain (breaking up into small bulbs) ; vars. dalmaticum, pyrenaicum, p. rubrum—bulbiferum, croceum, umbellatum, monadelphum (Colchicum) does exceptionally well. Martagons and Colchicum seed all over the garden ; seeds getting mixed up with the dressing of the borders. In rich peat beds well-drained all the pardalinum class flourish wonderfully, and come up in the borders promiscuously, where I treat them as weeds, as they are so difficult to make stand upright. *L. giganteum* does well in these peat beds, growing spontaneously from seed. The native soil (brick earth) would grow *no* Lilies, except, perhaps, Martagon and Colchicum ; none of the auratum or speciosum succeed with any treatment in my garden. Chalcedonicum and testaceum fairly well, soil being adapted artificially.

6. Time to plant.—I rarely transplant any Lilies except Chalcedonicum and the offsets of giganteum. Most of them flower for three or four years where they come up, and then die worn out, and others come forward in other parts of the border. If transplanted it should be done before the stem is dead, and the root should not be cut ; in fact, they should be replanted immediately, *i.e.*, the same day and hour.

7. Remarks.—I never knew any Lily do well transplanted in spring ; for transplanting August is late enough for any kind I grow except giganteum. Lilies bought dry as imported or exposed in shops generally take two or three years to recover (except auratum, which seems to flower better the first year than ever again). Chalcedonicum always flowers better for being put into new soil, and is not the least injured by transplanting, but the holes are dug ready, the lump of bulbs

is dug up root and all, and if large pulled to pieces.

I can grow *L. Hansoni*, *Humboldti*, *Washingtonianum* in a large glazed frame, 6 feet high, made over a peat bed. The first crosses with Martagon spontaneously frequently, but I do not care for the hybrid.

From Mrs. Everard, Leamington :—

1. County.—Warwick ; situation end of the town of Leamington, well above the river.

2. Soil.—Light, dry ; subsoil gravel.

3. Special conditions.—Garden open to the south and west, sheltered from the north and east. Very windy. No hills.

4. Kinds that do well.—There are at least fifty-six varieties of Lilies grown here. The old *L. candidum* (Madonna Lily) does well when planted in the spring, and no Lily is more lovely. It has not yet had the disease. *L. excelsum* (testaceum) is most satisfactory at all times, also the *L. lanceifolium* (speciosum) ; of these the most beautiful are *Melpomene* and *Kraetzeri*, always trustworthy.

6. Time to plant.—Here I think March the best time for planting most Lilies, but not the early flowering ones.

7. Remarks.—*L. Browni*, a lovely Lily, very lasting and flowers well for years. *L. Harrisii* will bloom for one year, then it must take refuge in one of the houses. The *tigrinum* Lilies always good late in the season. *L. t. Fortunei giganteum* is splendid. The *L. umbellatum* in variety are most satisfactory. *L. davuricum* is magnificent ; it is best represented by *L. d. incomparabile* its finest form. *L. thumbergianum* and *L. pomponium* are rich foreground plants, and do well. *L. chalcedonicum* is always successful. That shy beauty white Martagon will only flower the first year. I am now trying it in a pot side by side with another tantalising subject, and submitted to the same treatment. *Hemerocallis aurantiacum*, its lovely apricot velvet flowers come so late in the season, the second year they do not come at all ; so now it is lodged in a pot. *L. auratum* is always good. It lasts in beds three years. *L. Leichtlini* is an intractable beauty, and we only see its lemon face and dark spots the first year. *L. Kramerii* is unsatisfactory. This year we are trying *L. longiflorum robustum* from Japan, with what success is still hidden in the future. Mr. Wallace recommends a piece of Sphagnum moss in each hole. I find it makes no difference. In every case here the soil is *made* for the plants, for they are *all* expected to grow. The Lilies are set 9 inches deep.

From Lord Battersea, Overstrand, near Cromer :

1. County.—Norfolk, sea coast ; on verge of sea shore.

2. Soil.—Loamy, in parts sandy, and in parts subsoil of clay.

3. Special conditions.—Sea fogs beneficial, and nearness to sea shore doubtless saves us from the effects of sharp frosts felt here keenly half a mile inland.

4. Kinds that do well.—I grow here well, and those in italics extremely well, *Pomponium verum*, *Browni*, *tigrinum splendens*, and *t. flore pleno*, *speciosum* and varieties, *superbum*, *Humboldti*, *Harrisii*, *Fortunei*, *candidum*, *washingtonianum*, *auratum* and varieties, *chalcedonicum*, *excelsum*, *longifolium giganteum*, Martagon and *M. album*, *szovitzianum*, *Colchicum thumbergianum* and vars. *Leichtlini* and *Maximowiczii*.

7. Remarks.—I think sea sand very beneficial, planting 6 inches to 8 inches deep, the bulbs bedded and covered in sand to about 3 inches under and 3 inches over ; this assists them much in ripening, and is a protection during winter. I add to my present soil about one-third of leaf-soil, and soak occasionally during summer months. As much as possible I shelter from the east, north, and north-east by backgrounds of shrubberies, and where planted in thicker shrubberies, plant in old petroleum tubs, without bottoms, to protect the bulbs from the roots of neighbouring trees.

From Dr. Bonavia, Worthing :—

1. County.—Sussex.

2. Soil.—A loam about 1½ foot to 2 feet deep.

3. Special conditions.—Rather exposed to south-west gales, and also to north-east winds, less than a mile from the sea, which is due south.

4. Kinds that do well.—*Lilium candidum*, *chalcedonicum*, and *croceum* have done well and increase. The *auratum* have not done well, nor have the *tigrinum* and *speciosum rubrum* and *album*. All the *thumbergianum* have done well and increase. The *giganteum* threw up a stem 8 feet high last year and flowered well. The Martagons have done well, but I have lost their tickets and cannot identify them till they flower. The *longiflorum* have not done well.

6. Time to plant.—I think the best time for *L. candidum* is early September. The others in autumn.

7. Remarks.—As soon as all my Lilies flower I shall endeavour to identify them, and then I shall write further about those that have done well.

(To be continued.)

EDITORS' TABLE.

DOUBLE SWEET ROCKET.

I WAS surprised the other day to find a writer on hardy plants generally decrying the value of the Rockets, or at least inferring that they were plants not to his taste. I enclose three spikes of the double white form which I have now grown for many years, and which you, I believe, saw in Suffolk when I lived there. Here in Derbyshire, in a vastly different and much heavier soil, it does even better, and I think you will agree with me that the spikes sent are fine. They have had no special treatment beyond the few little attentions which the grower of double Rockets must give if he intends to keep his stock good. Can there be a finer plant grown in its season? I think not, for it comes in at a time when there is a gap between the spring and summer flowers; it is grand for cutting, charmingly sweet, and altogether a precious plant that the most inveterate of fault-finders would find difficult to traduce.

J. C. TALLACK.

Shipley Hall Gardens.

[We have never seen finer spikes of this beautiful old garden flower. Eds.]

Several contributions are held over until next week.

A COLOURED PLATE

OF LILIUM THUNBERGIANUM ORANGE QUEEN.

A COLOURED illustration, by H. G. Moon, of this beautiful new Lily will be given in THE GARDEN for July 7.

BOOKS.

Kew Bulletin Of Miscellaneous Information. We have received the bulletin containing a list of the additions made to the library last year, either by gift or purchase, with the exception of such current periodicals and annuals as continue sets already catalogued. In a note it is mentioned, "like the catalogue, the list is printed on one side of the page to allow of its being cut up." It is probable that many persons and institutions will make the Kew catalogue the basis of their own, and will use the lists of additions to supply printed slips for fresh titles.

NOTES OF THE WEEK.

National Chrysanthemum Society.

The annual outing of the members and friends of this society will take place on Wednesday, July 25, and be in the form of a visit to Balton, Tring, the residence of Mr. Alfred C. de Rothschild. The company will travel to Wendover by the Metropolitan Railway.

The National Carnation and Picotee Society.

The annual exhibition of this society will be held at the Crystal Palace, Sydenham, on Wednesday, July 25. The Carnations and Picotees give promise of an exceptionally good bloom this season, and a very large display is anticipated. The schedule is a liberal one, all classes of exhibitors being provided for, four silver cups and about £300 being offered in prizes. The hon. sec. is T. E. Henwood, 16, Hamilton Road, Reading, who will gladly answer any enquiries respecting the society.

A note from Scotland. Abundant and general rains throughout Scotland, with the exception of the south eastern districts, where, up to the time of writing, the rainfall has been almost nil, have been most beneficial to crops of all kinds. In the hardy fruit producing districts of Clydesdale

the rains were much appreciated, fruits having set in great abundance, and the prospects of a fruit year beyond the average thereby rendered all but certain. The Strawberry crop, too, which last year was so deficient alike in quantity and in quality, has rarely if ever been more promising, and it bids fair to ripen earlier than usual. In some gardens the abnormal drought and heat have made early Camellifers small and the crop short lived.

Horticultural Club. The last monthly dinner and conversation for the session took place on Tuesday, the 19th inst., the chair being occupied by Sir J. D. Llewelyn, Bart., M.P. The subject for discussion was the "Clematis," opened by a paper by Mr. A. G. Jackman, who was unfortunately not able to attend through indisposition, and the paper was read by Mr. George Bunyard, and an interesting discussion followed. There were present the Rev. W. Wilks, Messrs. H. Selbe-Leonard, Harry J. Veitch, S. A. de Graaff, P. R. Barr, R. Notcutt, R. Pines, J. Asbes, G. Bunyard, and J. Walker.

Sale of Japanese plants. Messrs. Robinson and Fisher sold recently a collection of curiously trained Japanese "floral and arboreal plants," the 300 lots producing a total of about £2,000. The highest prices were paid for specimens of what is known in Japan as the "Chabo Hiba" or small Fir, of which the botanical name is *Thuja obtusa* nana. The finest plant of all was described as coming from "the renowned gardens of the Gambei family," its height being 3½ feet, and width 6½ feet, whilst the age was given as "about 350 years." This plant realised 90 guineas; another specimen of the same, but about half the size, the age stated to be "over 250 years," sold for £35. Both these were the green variety, of which there were many other specimens, which sold at prices ranging from 20 guineas to 36 guineas. Specimens of the golden variety sold at prices which varied from 20 guineas to 20 guineas each.

Akebia quinata. Never have I seen this Chinese climber blossoming more freely than at the present time. Too often it is regarded purely as a greenhouse subject, whereas in all the southern counties it should speed well out of doors. An ideal spot for it is at the foot of an east wall on each side of a gateway, where its charming drooping habit and delicious flower fragrance can be so well enjoyed when passing under its branches. It will grow in any good garden soil to which is added some half rotted manure at planting time. E. M.

The St. Brigid Anemone. This Irish type of Anemone has been a great success this season, flowering most profusely from plants raised from seed sown in June and sown at once in boxes two years since. When once a good type of strain is secured the raising of plants is quite a simple matter from seed, there being no occasion whatever to procure roots. Raise the plants in boxes in a cold frame, and plant out where they are to flower when large enough to handle. Abundance of moisture when the plants are making their growth in April is an advantage, moulching the surface at the same time with half decayed horse manure, and again in October with partly rotted leaves. As is well known, the colour of the blooms in this type is most variable, red, crimson, magenta, and pure being a few that are to be found. The blooms, too, are single and semi double. Where the soil is heavy and retentive of moisture some preparation is necessary of the roots will die off during the winter months. Deeply trench the soil, placing a layer of drainage at the bottom and replace some of the natural soil with that of a sandy character. E. M.

Spanish Iris. This group of Iris contains many charming varieties most useful during the months of May and June, either growing or in a cut state. To grow these Irises well, a sandy soil with abundant drainage and a southern aspect is necessary. It is during the winter and early spring months that the bulbs are liable to suffer from damp and cold in soil which is heavy and retentive of moisture. This section, which are more commonly known as *Xiphiums*, of which *X. vulgare* is the type, contains many curiously tinted

varieties. So lasting are the blossoms that they will keep quite fresh ten days after being cut, hence their value for room decoration. In sandy soil the bulbs should be planted in October, but in soil that is heavy February would be a better time. The following is a brief selection of attractive varieties: *Adelina Patti*, very fine dark bronze; *La Vestale*, light blue; *Belle Chinoise*, deep golden yellow; *Emperor Maximilian*, lilac and white; *Baronne de Rothschild*, yellow, with bronze centre; *Blanche Superbe*, pure white; *James Carter*, light blue; *Gold Cup*; this is really a magnificent variety, rich bronze purple, yellow and brown; *Canary Bird*, clear pale yellow, with orange blotch; *Celestial*, light blue with orange-yellow blotch; *Chrysolora*, bright yellow, a large early flowering variety; *Garibaldi*, fine bright blue with a yellow blotch; *Lady Blanche* is a desirable pure white orange blotched variety; *Mont Blanc* has a deep yellow blotch on a pure white ground; *Royal Queen*, violet blue, reticulated with black and an orange blotch. — S.

Lobelia tenuior. This is an extremely pretty Lobelia, and though the flowers are blue, it is totally distinct from any of the varieties of the universally grown *L. Erinus*. It forms a rather upright growing plant, the slender crowded stems reaching a height of 1 foot or more, and are clothed with variable-shaped leaves. As a rule those near the base are more or less pinnate, and the upper ones entirely or nearly so. This is not invariably the case, as some individuals differ greatly from others; indeed, so variable is it in this respect that it was formerly known by the specific name of *heterophylla*. The flowers, which are freely borne on the upper part of the plant, are nearly 1 inch across, and of a rich cobalt blue with a white centre. This is the usual form, but variations occasionally exist, some being lighter than this, while a pinkish shade sometimes appears amongst them. It forms a very pretty greenhouse plant at this season, and some pots of it are very attractive just now in No. 4 greenhouse at Kew. *Lobelia tenuior* is a native of the Swan River district of Australia. — T.

Philadelphus Lemoinei erectus.

This *Philadelphus* is certainly superior to *P. Lemoinei* itself, the shoots being longer and more profusely laden with blossoms than in the type. By far the best examples that have come under my notice had all the old flowering wood cut out last season, directly the period of blooming was past, thus imparting additional vigour to the young shoots, which originate near the base of the plant. That this treatment was the right one is shown by the present wealth of blossoms, the long flexible shoots, forming veritable living wreaths. It is certainly a delightful flowering shrub, and one particularly adapted for gardens of limited extent. Not the least valuable feature is the fact that it is at its best when the bulk of spring flowering shrubs are over. This *Philadelphus* was raised by the eminent hybridist, M. Lemoine, of Nancy, the parents being the little New Mexican *P. microphyllus* and the European *Mock Orange*, *P. coronarius*. In vigour it is about midway between the two, while the flowers have not the heavy smell of the common *Mock Orange*, but partake rather of the fruity fragrance of the other parent. — H. P.

The Colchic Lily (Lilium szovitzianum).

There is no danger of confounding this with any other Lily, possessing as it does such a distinctive character of its own. Of the early flowering Lilies it is certainly entitled to a very prominent place. It flowers as a rule about the end of May, but this season, in the middle of June, numerous examples at the back of the Palm House at Kew were in good condition, and formed a delightful feature. It is too well known to need any detailed description, therefore it will suffice to say that *L. szovitzianum* is of good sturdy growth, reaching a height of 3 feet to 6 feet, while the flowers which in strong examples are disposed in a pyramidal shaped raceme, vary in colour from a pale primrose to a moderately deep yellow, and while some are thickly dotted, others are almost without spots of any kind. The segments of the flower are prettily reflexed as in the different members of the Martagon group to which it belongs, but the leaves are not disposed in regular whorls as

* Kew Bulletin of Miscellaneous Information. Price of post free, to be obtained from Messrs. Ego and Spottiswoode, East Harding Street, Fleet Street, E.C.

in the common Martagon, being like *L. chalcidonicum* and *L. pomponium*, scattered around the stem. The roots of this Lily are few in number, but they are very strong and proceed directly downwards, so that a deep soil is necessary. A good loam suits it best, and in this the bulbs may be allowed to remain undisturbed for years. Besides the name at the head of this note it is also known as *L. colchicum*, *L. monadelphum*, and *L. ponticum*.—T.

Kalmia angustifolia.—The first of the *Kalmias* to flower is the pretty little *Kalmia glauca*, whose purplish-pink blossoms are now over. Next to this comes *K. angustifolia*, which forms a compact rather upright shrub, as a rule not more than 2 feet high. This is now crowded with its bright-coloured flowers, which are not only very attractive in themselves, but serve as a connecting link between *K. glauca* and the largest member of the genus—the Mountain Laurel of the United States (*Kalmia latifolia*), which handsome shrub as a rule unfolds its earliest blossoms at about the time that *K. angustifolia* is at its best. Not only are the *Kalmias* valuable outdoor shrubs that will succeed under the same conditions as their allies the Azaleas and Rhododendrons, but they are also well suited for flowering under glass. They are, however, not amenable to hard forcing, but must be brought on very gradually. —H. P.

Pyrethrum, Jubilee.—Although there are many excellent single varieties of these early summer flowering plants, which are highly esteemed on account of the free display which the plants make, there are few better sorts in cultivation than the variety under notice. I have looked through several catalogues in my endeavour to trace the variety, but so far without success. The plants have been in my possession for three years, during which time they have increased in a wonderful manner. The vigorous constitution of the variety may account for this. The flowers are large, of the richest crimson-carmine colour, with an orange disc. —D. B. C.

Verbascum olympicum.—If any one flower in this most flowery week of June could be called the most important of the week the title of honour might be given to this grand Mullein. Certainly no plant has a more important aspect in the garden landscape. It stands 9 feet high, with a central spike that is like a 4-foot long and 3-inch thick solid rope of pale yellow bloom; its base surrounded with some three dozen other spikes from 1 foot to 2 feet long, the whole forming a gigantic flower 5 feet high, and for the lower two-thirds of its length 2 feet in diameter. Groups of this grand plant do well on dry sandy banks, or anywhere in poor, well-drained soil. It is classed among biennials, but takes three years to come to flowering strength, but meanwhile the handsome grey-green leaves are nobly ornamental, and if a fairly large place can be given to it, with plants in all stages of growth, the space will always be well clothed, while at blooming time there will be a fair proportion of the magnificent flowering plants. Like all Mulleins it is at its best either in the late evening, early morning, or on cloudy days, as the flowers flag in hot sunshine.

The Common White Pink. A garden is scarcely a garden in the best sense that is without this old favourite, so indispensable is its pretty modest beauty and its incomparable sweetness. Every year as its flowering time comes round one greets it as one of the old treasures most to be loved and prized. Nothing is a prettier edging to a walk, for even when the bloom is over its neat tufts of bluish foliage are charming, and it should not be forgotten (though in June it is difficult to believe that winter is ever here) that in winter the leafy tufts are at their very best.

Iris in Italian oil jars. We lately noticed an artistic feature in Italian oil jars filled

with the German Iris. The result was happy in the extreme, the beautiful glaucous pointed leaves of the Iris, cool in colouring, associating well with the colour of the jar. Even without flowers this "jar gardening" is successful, but the rich blue flowers in May increase the charm of this arrangement. This brings us near to the tub gardening, which is a delightful phase of plant growing properly considered. Agapanthus, Myrtles, Sweet Verbena or Lemon plant, and many other things are full of charm and quaint beauty when thus grown.

Rose Blanche de Coubert.—Those who do not already possess this grand double *R. rugosa* should note it to get in the autumn. One is loth to be unfaithful to older friends, but the hitherto much-appreciated *Mme. George Brant* is quite put in the shade by the greater purity of white and more distinctive general character of the newer plant. Every year new hybrids of *R. rugosa* appear, and hybridists have still in store for them a wide field for further labour. The great hardiness of *Rugosa* is one of its most valuable qualities, and one that it appears to transmit to its hybrids even if the other parent be a Rose of tender constitution.

Rose Mme. Alfred Carriere.—The singular merits of this beautiful Rose can be

by being as the books say, "Grateful to cats." Our mousers lie most contentedly among its thick tufts, muzzling and nibbling away at its odorant masses, and though they do not exactly eat it, their repeated attentions keep it very short at the corners.

Geum coccineum fl.-pl. Among the many bright things in the hardy garden at this time, few are more brilliant than this double form. It is a wonder that the plant is not more largely grown, as its flowers are continuously produced from May until September is past, and when a number of plants are grouped together a rich effect is obtained. The ease with which the stock may be increased by division and the extremely hardy character of the plant are two good points in its favour, and the flowers also stand well. —D. B. C.

NOTES FROM BADEN-BADEN.

GERANIUM GRANDIFLORUM is a mass of bright ultramarine elegantly-borne flowers; they are as large as a crown piece, and their colour is softened by some reddish streaks. This will become a standard plant everywhere.

Dianthus callizonus is a native of the rocks of Transylvania, and is one of the prettiest



GERANIUM GRANDIFLORUM AT BADEN-BADEN.

but little known, for how seldom is it seen in gardens. It is free and quick of growth, bounteous of bloom both early and late, and graceful in every aspect. The somewhat loose flowers are large, and of a pleasant rather low-toned warm white, deepening to a somewhat fuller warmth of colour in the centre. The bud is also beautiful, of pointed shape, and flushed outside with a deep red stain. The Tea Rose-like leaves are large, and yet have an air of remarkable refinement, with a rather pale brightness of yellow-green colour. It is a grand Rose to trail, or to ramble over arbour, pergola, or any kind of rough support.

The Feather Hyacinth (Muscari comosum monstrosum).—Among the many good old garden plants that receive a most undeserved neglect the old Plume Hyacinth should be noted. It is good in clumps by itself, but still better if grouped with something of allied colouring. An excellent companion is *Nepeta Mussini* (the garden Catmint), which might also be cited as a good thing often overlooked. It is interesting to note, by the way, that this plant justifies its name

alpines we have; it forms a low tuft, flowering very freely, the blooms are large, and often of the brightest rose-colour, whitish in the middle, and thinly specked with crimson.

Aster Fremonti is well worth having. It comes from the Rocky Mountains; it flowers early and has heads of six to eight blooms, each about 2 inches through, of a soft pink colour. A beautiful plant is also *Aster alpinus* var. *bimalaicus*; it is richer flowering, and the flowers are considerably larger than in the typical plant.

For many years I have been raising Mountain Peonies, and have been successful this year in flowering a fine cross; the female parent was that most beautiful of all tree Peonies, *Gloria Belgarum*, and the male parent a single-flowered very deep red Japan variety. The offspring is a perfect model in shape and outline, of a deep magenta-red, with a touch of violet. I call it *Isis*. —MAX LEITCH.

GARDENING OF THE WEEK.

KITCHEN GARDEN.

SOWING SEEDS.

AT this season of the year there are several kinds of vegetables to be raised from seed, which is best sown at the present time. In the first place the Colewort Cabbage claims attention, and a great deal depends upon the needs of the household as regards quantities sown, and for early autumn use there can be no question but that the Rosette is the most useful, and the Hardy Green for later supplies. In the north it may be necessary to sow the seeds in June for late use. In the south I advise two sowings, as by an interval of some weeks a longer supply is maintained. No matter when sown it is advisable to give ample room in the seed bed to plant out early, not allowing the plants to become drawn, and to give a rich root run to early plants. I gave advice concerning the value of winter Cabbage recently. Sowings of these made earlier should be thinned out by planting the strongest seedling. We find autumn Spinach useful: this sown now on a cool border, well enriched, will give good cutting material well into the autumn if such kinds as Carter's long-standing variety be sown. Carrots sown now will be useful for spring supplies. A liberal sowing of Red Globe or Yellow Perfection Turnips will give a full autumn supply. A good quarter of Kidney Beans is always serviceable; these sown now on a rich soil will give a late supply, and it is essential to success that in dry weather the seeds have enough moisture to assist germination at the start, and not crowded at any time.

SUMMER VEGETABLE CROPS.

Though we may get enough rainfall for some things others suffer, and the summers of late years have been dry, so that more attention is needed to keep shallow rooting crops in good condition. On the other hand, such plants as Asparagus, which is now most active in growth, should be treated liberally; indeed, there is no better time to feed, and this vegetable will repay ample supplies of liquid manure. Failing this, salt or other foods well washed into the soil will be most beneficial. Celery in certain soils should be kept moist at the roots; give food in a liquid state as growth is made, as this is preferable to masses of rank manure at the root when planting. Seakale in light porous soils well repays a liberal supply of liquid, and especially is this the case whenever the roots are needed for early forcing. Tomatoes in full growth with a good set should now be given food, also Vegetable Marrows, Cucumbers, and Capsicum plants well covered with pods. The crop of Beans obtained from both runners and dwarfs will not fail if the plants are fed; in light or poor soils the plants cease to set their flowers if lacking moisture, and ample top growth is also a great draw on the roots. Such things as Salads in dry weather benefit greatly by waterings overhead late in the day. So much depends upon the soil and situation in giving advice, but there can be no question that in poor light soils feeding, mulching, and watering are important points, and should not be overlooked to prevent loss of crop and improve others.

PLANTING CROPS.

The remainder of the winter and spring crops should be got into their permanent quarters as early as possible. I have previously referred to Brussels Sprouts, and here we always plant a good lot at this season from the second lot sown in the open ground. This planting, though dwarf, will stand hard winter and give Sprouts much later than the large plant sown under glass. Much the same advice applies to Celery any time through July. Seedlings may be planted for late supplies, and I advise single rows at 4 feet apart, but plant sturdy material—not long drawn plants—for keeping, as a dwarf plant is preferable. Kales should be got into their growing quarters, and few vegetables are more useful from November to May. The Savoy Cabbage I find more useful in mid and late winter than earlier, and in planting I prefer an open

border and full exposure. For late use the Perfection and New Year varieties are superior to the older kinds. The last lot of Cauliflowers for early winter use should be planted in wet soil. Pearl and Walcherer are good for this purpose, as though much smaller than the autumn Giant, the heads are more acceptable, being mild in flavour, and they are grown more quickly, and many like a small white flower. All arrears of planting should be completed as early as possible or as soon as the land can be got ready. G. WYTHES.

Syon House Gardens, Brentford.

FRUIT GARDEN.

STRAWBERRY LAYERING.

To be successful next season in forcing, strong healthy plants must be grown by the end of the coming autumn. To attain the desired end the work of layering and other requirements must be duly attended to. Those layered during the next two or three weeks will, with fair treatment, at the end of the growing season be what are required.

In places where many Strawberry plants are grown it is necessary to plant out every autumn young plants to produce early runners, and the following year to pinch out the flower-trusses so that the energies of the plants are directed to the runners. Apart from this, ripe fruit and runners together are difficult to deal with without damaging both. Another recommendation is that plants in pots are more fruitful when raised from young plants than from old. The runners nearest to the parent develop into the best plants. Beyond this I pinch off the runner, taking only one plant from each runner.

Three-inch flower-pots are the most suitable. Fill them with finely-chopped loam to within half an inch of the rim, without any admixture, with the exception of a sprinkling of soot, and slightly firmed. Place the pots in alternate spaces between the rows of plants, turning the runners to them. Other spaces may be used for paths for getting along to do the work of layering, and afterwards watering and other requirements.

For holding the plantlet on the soil in the centre of the flower-pot nothing is better than pegs made from wire or old brooms. Layer the stronger forthwith, and continue to do so until enough are done, bearing in mind to do sufficient to select from at the time for potting and afterwards for planting out. After being layered attention must be paid to watering in the afternoon through a rose when the surface of the soil is dry. Should runners not be so numerous and strong as they ought to be through the lack of moisture at the roots of the parent plants, give a thorough watering, which will soon have the desired effect.

From four to five weeks from layering young plants will be sufficiently rooted to bear being severed from the parent plants and potted; 6-inch pots should be used, and rather light loam. Reliable varieties for forcing are Royal Sovereign, La Grosse Sucree, and Vicomtesse H. de Thury for first earlies, and President, Sir Charles Napier, Sir Joseph Paxton, and British Queen for later supplies.

Gathering and packing for sending a distance require care. For packing there is nothing better than light boxes 2 inches deep, with leaves at the bottom, between the fruit, and over the top, the same leaves answer well for Raspberries and Cherries. Sow

TOMATO SEED.

if not already done, for raising plants to bear fruit in the early winter months, and grow on the plants sturdily in a light house or pit. Plant out Melons, and sow seeds for the last supply of the season. Young

VINES.

rased from eyes this year, and grown and potted on as advised, are now well rooted in 8 inch pots, and if required to bear fruit next season must, without delay, be potted in pots 14 inches in diameter. Although these will not force so early as cut backs, they will bear equally well later in the season. G. NORMAN.

The Gardens, Hatfield, Herts.

INDOOR GARDEN.

CARNATIONS.

THE earlier batches of winter-flowering Carnations should now be potted into their flowering pots, those struck very early into 8-inch pots, and the second batch, except perhaps the very strongest, into 6-inch pots. The soil used will probably have been mixed earlier in the season, as I have advised in former notes, but in case this was not done it may be as well to refer again to the subject. The main staple should consist of good loam of a medium nature, *i.e.*, neither very light nor very heavy, and should contain a considerable amount of fibre in a semi-decayed state. Newly-cut loam is not desirable, it is far better used from a heap that has been stacked for at least nine months, and even if it has been cut longer than this it will be none the worse. A considerable amount of sand may also be mixed in; this need not be silver sand, river sand or even road grit answering the purpose just as well, provided it is sharp and gritty to the touch. For the rest, I prefer broken oyster or cockle shells, which the plants are very fond of, and so, too, are they of bones; but these latter are so often found of poor quality, and, indeed, sometimes quite dangerous to the roots, owing to a kind of slime fungus which they develop, that I hesitate to recommend their use, except after a sample has been tried on something else less delicate and found to be in good condition. A little manure may be added either in the form of semi-decayed horse droppings or a very little of an approved concentrated manure, though these things are perhaps as well left out for the present and applied later in diluted liquid form. Drain the pots well, but not over freely. Pot moderately firm, and stand the plants back again under glass, where they may be shaded until re-established and ready to be plunged outside to harden. There will still be some stopping to be done, but this should not be carried out simultaneously with potting, and with those plants required to give flowers in late autumn the final stopping should have already been carried out. One secret in successful Carnation culture is to hit the happy medium between hard and soft growth. It is just as much, or even more, a mistake to put the plants out of doors too soon and to get them over-hard as it is to keep them inside altogether.

RHODODENDRONS.

All Rhododendrons of the Japanese section should be overhauled, and those which need it potted, giving small shifts and using good peat and sand, and ramming this firmly. This section enjoys a considerable amount of warmth, so should get different treatment to the purely greenhouse section; shade will be necessary to preserve the leaves unharmed, the syringe should be freely used on them, using soft water only, and a somewhat close atmosphere may be kept up with advantage.

CELOSIAS.

Plants showing their colour should be potted on into their flowering pots, in which they may be sunk deeply, and rich soil should be given them. I prefer waiting till this stage is reached, as then one can see which are likely to turn out good, and the poor ones, of which there are sure to be several, even from the best selected seed, may be discarded. Keep close and shaded for a few days after potting, but not long enough to encourage the plants to draw. J. C. TALLACK.

Shipley Hall Gardens, Derby.

CHRYSANTHEMUMS.

THE weather of late has been most favourable for Chrysanthemums, and all newly potted plants will have derived much benefit from the frequent and refreshing rains. In one or two districts I have heard of promising collections of plants being completely wrecked by thunderstorms. On the 18th inst. I saw as fine a lot of plants as one could wish to see in June, which in a few hours after were completely spoilt, so much so that in all probability the whole of the plants will have to be cut down hard, which in such cases is by far the best mode of procedure, and, although flowers of

the highest quality can hardly be expected, there would be yet time for the plants to break and make a good display.

Some varieties, especially Eva Knowles, Mme. Carnot and its sports lose their foliage at this season, while the plants are apparently in perfect health, and I have never yet found any satisfactory reason for this behaviour. I have proved that too much moisture both at the root and foliage will increase the tendency rather than otherwise, so that the plants should be kept grouped together by themselves, avoid syringing, and keep the soil moderately dry.

Do not hurry to take off the disfigured leaves or the plants will suffer, and I can discover no trace of fungus which can possibly affect the uninjured leaves, and later in the season, when the pots become filled with roots, it will cause less trouble.

Earwigs will soon begin to make their presence felt, and no time should be lost in looking after these. The neatest and surest way of trapping them is to secure Broad Bean stalks, cut off square at the ends, in lengths of about 4 inches, tie a thin piece of twine about a foot in length round the centre of the stalk, and make fast to the stake supporting the plant near the top, and fix the trap between the stake and the plant. These should be blown out each morning into a vessel of water with the mouth. In the case of new or choice varieties a trap should be placed to each plant. Once a week dust the plants with tobacco powder after syringing in the evening, which should be thoroughly washed off the following morning. In many places the minute yellow thrip does considerable damage, especially to some varieties; they are particularly partial to the whole of the Queen family, and unless means are taken to eradicate these the growth will become blind and useless. I have found them give most trouble during July and the early part of August. Strong soft soap and water is a safe and sure remedy, syringing the points thoroughly two or three times a week during the evening.

Dust the plants occasionally with black sulphur as a prevention against mildew when the foliage is damp, puffing it thoroughly on the under-parts of the leaves. Remove all buds and superfluous growth, and strictly attend to tying the young growth as required. Complete the potting up of all the late and decorative kinds as soon as possible, using a sweet fibrous compost similar to that advised in previous calendars. Avoid too large pots, as for all purposes over-large pots are unnecessary, as they take up valuable space when housed, are unsightly, and the best results are generally obtained by using those of moderate size when judicious feeding and watering is carried out.

Mme. Desgrange, its sports, and all early flowering varieties cultivated in pots and grown as bush plants should have their growth carefully regulated, but avoid unnecessary staking, as the plants are much more presentable when grown in the most natural style. These will be the first to require feeding, which should be done as soon as the pots become filled with roots. Farmyard manure and soot-water well diluted is one of the best stimulants to apply, and by way of a change a small application of Clay's, Thompson's, Ichtheime Guano, or some approved artificial manure may be given, but great care must be exercised in using these; directions are generally given, however, with the packages.

E. BECKETT.

Albion House Gardens, Elster.

A LETTER FROM TAORMINA, SICILY.

It was no good trying to write a gardening letter from Palermo, for there would have been nothing to say. I never saw a town so devoid of flowers; the only notable features are enormous masses of Bougainvillea against the houses, up to the second floor, of three lovely shades—one a gorgeous strong violet, the other two more like crushed strawberry and terracotta; but the wealth and brightness of bloom are such as to be almost blinding. Then in the Botanic Gardens at Palermo, which are not so well done as they might be, I saw a very copious collection of Mesembryanthemums, all

arachnoides being specially pretty; then large pink Anemones and charming Iberis of two kinds. The peasants fence in their fields with large hedges of Cactus, the fruit of which they eat. I tasted it. They call it *nichi d'Indoa*. It tastes flabby, and I think horrid!

On the trip from Palermo to Messina, which is of incomparable beauty, always along the coast, with delicious views into the valleys and upon old Arabic-looking towns, these Cactus hedges are over-grown with masses of Pelargoniums in full bloom, such a gorgeous effect as I cannot find words to describe. The steel-like glint of these barbaric weapons of the Cactus leaves and the velvety masses of flaming red between are a marvellously beautiful combination. Sometimes it is not the branching old zonal Geranium, but the creeping Ivy-leaved pink ones; that is also quite lovely, especially when it hedges in a grove of large old Lemon trees laden with flowers and pale gold fruit.

Here at Taormina we have reached, I should say, quite the most beautiful spot in Europe. It is an old Arabic town perched on some huge rocks high above the sea at the port of Actua. It is tropical in aspect and vegetation, and yet the eternal snow of Etna is close to it, and the endless blue of the Mediterranean is at its feet. The town is of unsurpassed beauty of form and colour, and it is crowned by a magnificent old Greco-Roman theatre in ruins. Scarcely a house in the little patriarchal, clean town is without some lovely bit of Gothic, or Romanesque, or Renaissance sculpture. One can wander all day and never get tired of it. It is the most *sympathique* place I have ever seen.

There is an Englishman here who has a little house in a terraced garden full of the most beautiful Tea Roses I ever saw. I was much interested in all he told me. He grows zonal and Ivy-leaved Pelargoniums of all those new and lovely big English kinds, and gets bunches of them in the open ground with blooms 3 inches across. His tufts of Arum in the open borders he digs up in the peasants' gardens, and with a little manure and water gets from fifteen to twenty blooms on one plant. The Heliotrope and Marguerite bushes are of a man's height. It makes the

poor northern gardener's heart sink into his shoes to see this audacity of vegetation and to think of one's poor little achievements at home.

I forgot to say that one sees lovely big open-air Daturas here, full of flower—a joy to see and to smell! They grow a quantity of things in pots, especially splendid hanging Carnations and Irises in quantity.

The Freesia has become almost a national flower; it grows in every garden, over-running the borders, and is only outdone by the luxuriant foliage of Amaryllis Belladonna, which, as they tell me, is gorgeous in June. I should love to see it, and so would you. I have learnt something as to the requirements of Pelargoniums here; I hope I shall do them better



A STREET IN TAORMINA, SICILY.
(From a photograph by Signor Crupi.)

grown, of course, out of doors. The gardens also have an odd collection of Cactuses, grown in a hot, dry place without any protection whatever, many of them 8 feet to 10 feet high. There are a great many varieties of Cereus, Phyllocactus, Echinocactus, and Mammillaria, also numbers of Euphorbias, Aloes, and Agaves. The Yuccas peep into the first floor of houses with as many as ten or twelve heads. The Arum Lilies grow everywhere in the open fields. But, as I say, the culture of flowers in gardens, in spite of these heavenly conditions of soil and climate, seems absolutely neglected. In the mountains during our walks I picked big bunches of lovely branching Asphodels, several kinds of terrestrial Orchids, Ophrys

when I get back. They want far more dryness, a poor, gritty soil, and a sloping, sunny position. The bushes of enormous purple, pink and white Stocks are the size of your Laurustinus, and I am sure there are more than 200 heads of bloom on some. They crop up out of the most unpromising dry chinks and corners, as the common Wallflower would with us.

Did I tell you the Lemon groves at Palermo are thickly carpeted at this time with *Oxalis cernua* in bloom, looking like a delicate reflection of the wealth of golden Lemons overhead. M. von G.

NOTES FROM DALMATIA.

THE traveller who makes his way to Dalmatia, whatever his particular interest may be, will probably spend a few days at Spalato, the little mediæval city which is contained within the walls of what was once the vast palace built by Diocletian to be a quiet country retreat for his old age, and in which he lived from his abdication in A.D. 305 until his death seven years later. The two temples dedicated to him as is supposed, one to Jupiter (though he may have intended this, some antiquarians think, for his own tomb), and another to Esculapius, have become respectively the Cathedral and the Baptistery, and except alas! by modern restorers these have been little touched. The fine peristyle which led to the Emperor's private apartments remains intact, though houses small and great and of many dates and styles are niched in between its classical columns. With the exception of the open space between the two rows of these columns, the area of the ancient palace is covered with narrow mediæval streets built of stone of the Roman ruins, while the entire circuit of the wall, enclosing a parallelogram of nine acres in extent, and three out of the four gates are fairly perfect.

I must not, however, fill my space with a description of all that can be seen within these walls and gates, for outside ancient Spalato and beyond the old Venetian and the modern suburbs there lies what is for Dalmatia an unusually large tract of fertile country, and it is of this that I should say a few words. It is backed by a range of precipitous limestone mountains, and out of the face of these mountains, about six miles from Spalato, there rushes in a broad cataract the already full grown river Gjadro, the Jadro of the ancients, of which Porphyrogenitus says that its water is sweet above all waters, as they say who have tasted it. This translation of the sentence from Porphyrogenitus is quoted from Mr. T. G. Jackson's admirable book on Dalmatia, "The Quarnero and Istria." The river has, like so many of the limestone streams of that country, a long underground course, and as soon as it issues from the rocks of the Cabauit Mountains part of the broad stream is diverted and is carried to Spalato for the use of the city by the aqueduct which Diocletian built to take the water to his palace.

Notwithstanding this diversion, a very brimming river of considerable volume goes on its way through vividly green meadows towards the ruins of Roman Salona, the Emperor's birthplace, and at about three miles from its appearance out of the rock, in some land, which at the time I saw it in April was partially flooded, our eyes were greeted by a waving mass of Snowflake in full flower.

There must, indeed, have been eight acres or more entirely occupied by the plants, which could have been mown in an even swathe so thickly was it growing and with such an

abundance of blossom. A brisk little breeze was blowing when we came upon it, and as the green and silver mass bent to it in the sunshine, waves of brilliant light and grey shadow swept over it. Here and there the clear water of the flooded meadows reflected the flowers and the sky, making together a most beautiful and delightful picture.

From Spalato the region skirting the bay to the north-west for about sixteen miles is called the Riviera dei sette Castelli, and it is famed for its Vines, Cherries, and Olives. The limestone mountains, usually so close to the coast, here break back and leave a crescent-shaped tract of rich alluvial soil, watered in parts by the Gjadro. It was only in this well-watered region with its deep soil that I saw the Snowflake. On the rocky declivities many other plants were growing, Iris of several sorts, the large dark purple and the pale variety being very conspicuous, although they were only just coming into flower. Near the sea the *Cytisus* had the effect of gorse in full bloom, and the hills were covered with shrubs such as are common in Capri and other southern districts, of Lentisk, Myrtle, and Ilex. I saw frequently *Dryas octopetala*, *Trollius europæus*, *Acanthus*, *Lithospermum prostratum*, and several *Campanulas*, but not yet showing any flowers.

We were not plant hunting or my list would have been a much longer one. There was more opportunity during our short journey for studying the architecture of the country than its varied and interesting flora, which even in the present cold and backward spring filled the rocks and fields of Dalmatia with delight.

GARDEN ROSES AT THE DRILL HALL.

THE hall had all the appearance of a Rose show on Tuesday, June 19, so gay was it with flowers. Some 150 different varieties were staged together. It was pleasant to see the improvement manifest in the arranging of these garden Roses. One of the prettiest in the hall, and one that attracted much attention, was the new Rambler Rose Leuchstern, a variety that was noticed in these columns recently. It seems destined to become very popular.

A very lovely single Rose is Una. It has all the appearance of a wild Bear in the growth, with a creamy flower as charming as a Tea Rose. The Rambler Rose Aglan was shown in all the groups. Although not so yellow as some imagined it would be, yet it will doubtless prove a most useful Rose where less hardy varieties will not thrive. Electra, a kind exhibited for the first time on this occasion, should have appeared before Aglan, for it suffers somewhat in comparison, although it will possibly flower on young plants, which Aglan will not. With the latter one must wait two or three years ere its beauty is seen. There were some pretty old Gilber, Damask, and Moss Roses on view that one does not often meet with at the present day, such as Adele Prevost, Domitille Bourard, La Ville de Bruxelles, Blanchetour, Mme. Hardy, Leda, Graells Moss, &c. Rugosa Roses were also fairly well represented. Everyone should grow the delightful Fimbuata, and, of course, Blanche double de Courbet and Mme. G. Brunant are indispensable. Schneelich seems a promising white kind. What one wants now in new garden Roses is distinctness. Many of the new crosses are interesting, but they lack this sufficient individuality or attractiveness. The miniature Provence were pretty, as they always are. Especially interesting is the white De Meaux. Of course the Hybrid Sweet Bears were well represented, and Janet's Pride was beautiful. Blain No. 2, when well grown is even to-day one of our most precious climbing kinds. The clear colour and charming buds remind one more of a Tea Rose than a Hybrid Chinese.

One of the loveliest of new single Roses is Rosa Sinica Anemone. Some blooms exhibited on this

occasion by that good amateur grower Mr. Campion were fully 4 inches in diameter, and of the lovely pink colour of the Japanese Anemone. It seems a much better Rose for general purposes than *Rosa sinica*, although this grand kind when it takes to a particular spot is one of the handsomest of the single whites. Macrantha and Paul's single white are large and useful single Roses, and, of course, Bardon Job and Carmine Pillar are almost indispensable to any garden. Where possible all these Roses should have shelter from wind.

China Roses such as Irene Watts, Queen Mab, and Mme. Eugene Resal were very fresh and pretty; in fact, Irene Watts, as shown here, had more the appearance of an elongated Tea Rose, which possibly it is. But the classification does not much matter so long as we have the varieties. Morletti is a very promising climbing Boursault, just the soft pink colour wanted. The old Tuscany, with its rich velvety flowers, resembling a small Empereur de Maroc, were sweet reminders of bygone days.

A most delightful climber that grows well is Daniel Lacombe. The mixture of tints in this Rose is very lovely. The Dawson Rose never appears to great advantage when cut, and, for the matter of that, neither do any of the single Roses upon a hot day; but planters should use it more for grouping on banks, &c. The Bourbon Purity was very good, the half-open flowers very much like H. T. Souvenir de Mme. Eugene Pernet; but, of course, it is quite distinct in growth.

THE FLOWER GARDEN.

THE PEACH-LEAVED BELLFLOWERS.

(*CAMPANULA PERSICIFOLIA* AND VARIETIES.)

IN the early summer, the time when warm and soft weather follows a "dripping" spring, the forms of the Peach-leaved Bellflower may be seen to advantage in many gardens, and no section of this widely-varied group is better suited for general cultivation by those who desire beautiful and useful flowering plants. As flowering plants, too, in this great race of perennials, these kinds come early, when very few pure white-flowering subjects are to be found. This early flowering should really tend to make them highly prized, for the white-flowered forms are pure beyond compare; they are hardy and free-growing, and, not least, endure well when employed in a cut state. Grown as pot plants, all the Peach-leaved kinds are valuable, though none so much so as the white forms. It little matters whether the plants are established or not so long as undue heat is not given them, for in the ordinary greenhouse these plants grow away freely, opening their flowers with perfect ease and freedom. Not only so, for in this way they are graceful, and in their purest forms pleasing. Having grown these plants and forced them into bloom in this way through a series of years, when growing hardy plants for exhibition, I can strongly recommend them to those having constant demands upon their cut flowers at any time to the end of June. I find for this particular use that autumn-potted clumps firmly potted and plunged in ashes in the open are better than the same things pampered all along in frames. By introducing plants to the greenhouse in the middle of March, serviceable spikes will be forthcoming by the end of May, or rather earlier, according to weather. More interesting, perhaps, than pot culture or forcing is the great value of these subjects in the open garden. What effect may be produced by them is, perhaps, best conveyed in the accompanying illustration, which well represents one of the

foremost of the group, viz., *C. p. alba grandiflora*, a single-flowered kind that is without a rival in this family at the present time. Well grown this splendid perennial will attain nearly, or quite, 3 feet in height. Not all the handsome spikes of its flowers will be of this height in any one year, but, as shown in the picture, many of smaller size will be appearing at the sides, that not only render the picture a better one artistically, but really represent the lesser stoloniferous growths as these early attain to flowering size. Such as these are strengthened year by year, while the older and bolder spikes produce offsets that in turn rise again to the flowering stage. This occurs with the several kinds that each year produce their best spikes from the strongest growths of the preceding year.

I have made mention of the illustrated example, firstly, because of the importance attaching to it as the selected of a grand race, and because it is the more recent good addition to this section. As such it is not likely to disappoint, provided always the best form—for I believe there is more than one—is obtained. Apart from this particular kind, the section is also represented by other white-flowering varieties, more or less good for every purpose to which the first one may be used. Secondly, the original white, a dwarfer plant, not often exceeding 2 feet high, very free and pure, with bells a little more than half the size of the variety *grandiflora*. Next there is a showy and valuable kind known as *persicifolia coronata alba*, distinct in the way the corolla is encircled externally with a collar-like appendage near the base, and which adds materially to the whiteness of the display when seen in a group. It is a most useful variety, free-flowering, and about 2½ feet high. Thirdly, there is the double white Peach-leaved kind, which is good enough in its way, but requires a treatment more generous to bring it to perfection in ordinary soils. These are the most important of the white forms.

There are also blue kinds, varying in shade, and others, generally seedlings, that appear intermediate between the two principal colours. These latter are, generally speaking, the result of seed raising, and they form pretty subjects for freely introducing into the shrubbery border or similar place. The percentage of good flowers of these from seeds is very small, however, while those who require fixed colours will do well to propagate the best sorts, as stated above, by division alone. The small stoloniferous shoots that in good clumps appear in plenty are those best suited for stock, and such as these may be secured in early autumn and potted and plunged, ready for planting, in good ground in early spring, or if put into boxes in the same way as cuttings such things give but very little trouble.

So far as the open-air culture is concerned, this is simple enough provided the soil is right. What these kinds prefer, and what not a few others of the same family prefer, is a rather heavy and moisture-holding soil. In a good rich clay they are quite weeds, and in that light warm soil so beloved of many bulbous

things they have perished; but given a cool run for the roots, and a soil that does not release all its moisture in a few hours, these *Campanulas* will form solid tufts upon the soil. At such times the harvest of flowers is very great. In selecting the position, then, if the soil be not of a holding character, try the next best, a shady spot. In light soils, over gravel, avoid the fully exposed places, for in such not only will the roots decline, but in dry and hot times the leaves, stems, and flowers will become the resting-place of various species of thrips as well as red spider, that defy all attempts, save a constantly spraying hose-pipe, to dislodge or disconcert them. E. JENKINS.

TREE OR MOUTAN PEONIES.

In spite of the extreme usefulness, as well as the ease with which they may be grown, the herbaceous type of Peony is destined to be superseded in the near future by the Tree or Moutan section. The latter, with their semi-double huge blossoms, are

its wood not ripening thoroughly. Like all other shrubs, maturity of growth is essential to a freedom of flowering. In selecting a site, bear this in mind. Planting may be done directly the blossoms have faded, as the plants are generally grown in pots by the nurserymen.

The following is a selection of deserving semi-double-flowered varieties: *Aphrodite*, white; *Calene*, French-white, with purple spots; *Diamond Jubilee*, rosy purple; *Duchess of Marlborough*, pure bright flesh-pink; *Eastern Prince*, dark, but brilliant scarlet, which forms a grand contrast with the golden anthers; *James Kelway*, rich rose colour, with a dark carmine centre; *Beauty*, rosy lilac; *Fascinated*, rose and white; *Hecate*, maroon, with gold stamens; *Lord Byron*, salmon-rose; *Venus*, blood-red; *Cobianche*, rosy peach; *Atlanta*, deep purple-red; and *Berenice*, white, touched carmine. Single-flowered varieties: *Cecil Rhodes*, cerise-scarlet, shading to crimson, fringed petals; *Lord Kitchener*, deep blood-crimson; *Countess Crewe*, pale salmon-pink, flecked with pearly silver; *Ella C. Stubbs*, pure



GROUP OF THE WHITE PEACH-LEAVED BELLEFLOWER (*CAMPANULA PERSICIFOLIA ALBA GRANDIFLORA*).

more showy, graceful, and less lumpy in a cut state than are the herbaceous kinds. The Moutan or Tree Peony is a sub-shrubby plant, well adapted for the outdoor decoration of the garden. For growth in pots this Peony is quite amenable, and when gently forced and had in bloom in March, they are useful and uncommon. Like the herbaceous section, the Moutan varieties require several years to become established, but when carefully planted in a suitable site and well attended to by mulchings of manure during the time the plants are making new growth, they grow rapidly and flower abundantly.

Planted in a mass of one colour on grass or singly on the lawn these Peonies appear to the greatest advantage. Exposure to the south with shelter from easterly winds is what is required in the selection of site. Deeply-trenched and well-manured soil, with abundance of water during the growing season, are conditions absolutely essential to success.

If the Moutan Peony is planted in a partly shaded situation it flowers but scantily, owing to

white, very large; *Henry Irving*, monster blossoms of maroon-crimson; *Lord Iveagh*, rich rosy red; *Don Quixote*, rose, shaded lilac; *Atro-purpurea*, deep purple; *Violacea*, purple; and *Mrs. J. W. Simcox*, salmon-rose. E. S.

RHODODENDRONS.

hardy Azaleas, and other American plants, like most other flowering trees and shrubs, have produced a wealth of blossom this season, and in order that they should make a quick growth and be able to recoup themselves for next year the seed vessels must be picked off immediately the flowers are past their best, and the plants should be thoroughly watered during spells of dry weather. All newly-planted trees and trees which were moved late this spring have had a most trying time, and in many cases are just lingering on between life and death. With care and attention many may be saved, but frequently, and especially among amateurs, too much water is given at the roots, which is really worse than being kept dry.

To keep pouring water into a newly-planted tree when the growth is inactive means that the soil becomes soddened and the roots rot. What they need most is a thorough damping of the foliage daily with a syringe. Especially does this apply to Hollies, Yews, Thujas, Cupressus, Portugal and common Laurels, and the like. Many of the deciduous-flowering trees, such as Crataegus, of sorts which are often slow to make growth after being transplanted and which appear to be almost lifeless, will, if the old growth be materially shortened back, break away freely after midsummer, and in a short time thoroughly regain their former vigour, whereas if left to take care of themselves would in all probability have died. E. BECKETT.

Aldeham House Gardens, Elstree, Herts.

THE CARNATION.

Those who grow Carnations in pots for flowering under glass, where they can be safely protected from sunshine on hot cloudless days and from heavy driving rains, will now be getting their plants into the house before the flower buds are too far advanced. The reason for thus getting them into the greenhouse is to have the plants fumigated without delay to prevent their being injured by thrip. This troublesome pest gets in between the closely folded petals of the Carnation even before the calyx is burst open. It is a curious fact that this parasite attacks the Carnation in bud when the plant is grown in a flower-pot, and does not interfere with the same variety when it is planted in the open garden. Placing sticks to the flower stems has to be attended to in an early stage of growth, and after the stems are attached to the sticks they require attention, as their rapid growth causes them to snap sometimes owing to their being caught with the ties. Careful attention as to watering is the most important part of their culture when under glass. Blinds are also necessary when shade is needed, but this is the case only when the flowers are expanded. Plants in beds or borders should have a surface dressing of short, partly decayed, manure. I find the manure from stables where peat litter is used excellent for this purpose.

Many persons esteem a Carnation because it happens to have very large flowers, but it is possible that such may have a tendency to burst the calyx, which will have the effect of causing the petals to fall out on one side, but this ought to be prevented by slipping an india-rubber ring over the unopened flowers, or tying the calyx with a strip of matting or thread. If very large flowers are desired the buds must now be thinned out to three on each stem, and surface dressings will help considerably the expansion of the flowers.

As soon as the flowering period is over, or even before it, layering must be attended to, as the sooner it is done the stronger will be the plants for next season. This process is performed by stripping the leaves from the base of the shoots and cutting upwards through a joint with a sharp knife; the layers are then pegged into the ground amongst some fine sandy soil, and they are ready to be removed from the parent plant about six weeks afterwards. The best time to remove the layers is early in October, and they may be planted in the open garden at once or may be potted and replanted out in the spring during the months of March and April. If the plants are put out in the open garden in October preparation should be made some time previous to doing so. No real success can be obtained unless this has been done. If the ground has been ready three months before the time of planting so much the better; well decayed manure should be worked into the soil, and, if the nature of the ground admits of it, it should be trenched to the depth of 18 inches or 2 feet. To do the thing well a layer of manure ought to be placed at the bottom of the trench, and another layer 6 inches below. Remove the layers carefully from the plants with all the roots possible and plant them at once, and any plants that are tall or weakly, and likely to be injured by high winds, should have sticks placed to them. The plants will winter better if a mulch of some light decayed manure is spread over the surface. Carnations

should not be planted in ground where wireworms are known to exist, nor where hares or rabbits can get at them. Those intended to be wintered in small flower-pots should be potted up about the same time. Place the plants in garden frames in a sunny position, and see that they are freely ventilated during the late autumn and winter months; indeed, the lights should be pulled off altogether whenever the weather is fine.

Not much water is required during winter, but it is very undesirable to allow the soil to become dust dry. Green fly may attack the plants, but it is easy to fumigate to destroy them. The best time to repot or plant out all Carnations wintered in frames is during the months of March and April. The distance apart may be 18 inches between each plant and 2 feet between the rows. If they are planted in borders clumps may be made with three to six plants in each; they are more effective thus than if planted singly. Border Carnations are grown in flower-pots either for exhibition purposes or to obtain cleaner and more beautiful blooms. Good potting soil must be prepared of four parts of good decayed fibrous loam, one part of decayed manure, and one part of leaf-mould. The size flower-pots used are 8½ inches in diameter inside measure for three plants and 7½ inches for two plants. These are usually called 9-inch and 8-inch pots, or sixteens and twenty-fours respectively. The plants should be potted firmly, and I like to

put them under glass for a time until they have formed roots, when they may be placed out of doors in an open position. I do not think they suffer from winds, as the leaves are small and of good substance.

I always recommend the culture of seedlings as they are so easily reared, and the plants when well managed always make a much better show in the mass. The seed should be sown about the middle of March, and is all the better sown on a gentle hotbed. It will germinate and the plants all be through the ground in a week, and may be pricked out in boxes or garden frames as soon as the seed leaves are fully developed. When placing them in their flowering quarters plant them 2 feet asunder each way, as they grow into much larger specimens than the named varieties, and each plant may produce a hundred blossoms, more rather than less. It is needless to add that seed should be saved from the very best varieties in cultivation by careful cross fertilisation, and even when this is done one must not conclude that all the seedlings will be fine, well-marked flowers. The tendency of all seedling florists' flowers is to revert to the original wild form, and the Carnation is no exception. There may be a dozen plants in each hundred, or even more, with single flowers, the remainder would be double and of various degrees of quality. J. DOUGLAS.

Edinb., Great Bookham.



CLEMATIS (CIRAEUM)

ALPINA.

From a drawing by

L. G. Moon.

AN ARTIST'S NOTE-BOOK.

CLEMATIS (ATRAGENE)
ALPINA.

FORMERLY the Atragenes were kept distinct because of the slight differences in the structure of the flowers that exist between them and the true Clematides, but they now form but a smaller section. In the Clematides the flowers possess no true petals, the showy segments generally so-called being really sepals. In Atragene flowers, however, there are petals, but they are not conspicuous, and, as in Clematis, the chief decorative functions of the flower are fulfilled by sepals. Species with intermediate characters connecting Clematis and Atragene have been discovered in recent years, and botanists have adopted the simpler course of uniting them. But the name "Atragene" naturally lingers on in gardens.

The only species of this section well known in gardens is Alpina. This, although not a native of Britain, extends over a wide area in Europe and Northern Asia. It is found on the mountains of Central and Southern Europe, as far north as Siberia, and as far east as North China. It was introduced into England in 1792. It is a deciduous climber, with stems 8 feet or perhaps more in height. The stems are slender but perennial, forming large swollen joints, from which year after year flowers and leaves are produced. This is one of the earliest of the Clematides to flower, commencing at the beginning of May and continuing till the present time. The flower is solitary and nodding, and varies in size: ordinarily it is 2½ inches to 3 inches across, but this spring I have seen a flower from Messrs. Jackman's nursery that must have been close on 4 inches in diameter. The sepals are four in number, and although always of some shade of blue, they show many variations in tint. One of the most beautiful forms I have seen is the large-flowered one from Messrs. Jackman mentioned above. This had flowers of a lovely pale blue. In one variety (often called Atragene sibirica) the flowers approach a pure white, but others of quite a deep blue are in cultivation.

This plant may be grown in several ways, but I know none more attractive than to plant it in a bed and allow it to form a tangle over some rough branches of Oak, stood 6 feet or so out of the ground. It likes a rich soil, plenty of moisture, and a sunny position. It has not always been found easy to grow, which may possibly be due to a deficiency of lime in the soil. At Kew it has certainly succeeded much better since the soil in which it grows has been given a periodical dressing of lime. I notice, too, that it is said to choose calcareous soils in a wild state. This year it has, like many other shrubby plants, flowered with unusual freedom, due probably to the heat of the autumn of 1899. Still, it does not produce one great blaze and then stop: its great charm is its continuous flowering and the delicate tints of its graceful blossoms. W. J. BEAN.

FRITILLARIA ACMOPETALA.

The quaint appearance of many of the Fritillaries renders them of interest to many even of those who are unable to realise their other attractions. They are, however, not plants for the casual observer, but for those who love to spend much of their time among their flowers, and who can thus see many points of beauty which would otherwise pass unobserved.



FRITILLARIA ACMOPETALA.

(From a drawing by H. G. Moon.)

Among the Fritillaries in my garden I have none whose yearly appearance and coming into bloom is more welcome. It may be far from striking in its colouring, but it is a pleasing change from the bright tints of other flowers, and it possesses some exquisite shadings and harmonies. Its sharp-pointed segments make it very distinct from its congeners, the varieties of *F. Meleagris*, and it is almost devoid of the chequerings which so mark the flowers of that species. The exterior of the flowers is of a bronzy-black, with a pleasing bloom upon its surface. The interior of the flowers is of a bright olive, glossy and polished, as if highly varnished. Its form is very beautiful, and it is charming in the rock-garden, where it may be seen towering some 2 feet or so above the smaller plants. It has now been in my garden for a good many years, and proves very accommodating in its simple needs. It does well in light sandy soil, and is thoroughly hardy. One would plead for a little more interest in

the Snake's-head Lilies, and for greater notice being paid to the sharp-petalled Fritillary.

S. ARNOTT.

Carslhorn, by Dumfries, N.B.

HONG KONG NOTES.

FREESIAS.

THESE plants do remarkably well in Hong Kong, and the method we adopt in growing them is as follows: To begin at the end, as that appears to me to be the right way in this instance, after they have finished flowering and have completed their growth, which is about the middle of May, we turn them out of their pots, dry the corms, and then put these in dry sand until the potting season comes round again. If we did not adopt this method we should have no corms to pot, owing to our moist climate, as we have found out by experience. If the corms were allowed to remain in the pots and put under cover the results would be disappointing. The only thing is to keep the corms as dry as possible when at rest. We pot them again in the beginning of September, using a light sandy soil, and when they are well rooted give them a small dose of Clay's Fertiliser every week until the flowers begin to open, which will be at the end of February. They are very easily raised from seeds, and if these are sown about the first week in October they will produce plants which flower in the following April, and although they are not so good as those grown from corms they make a very good show. When seedlings or corms are planted out in beds they produce a wealth of bloom which comes in very useful for cutting. The Chinese are beginning to find out that it is a flower which pays for growing, and this spring there was quite a large quantity of it in the market.

GLORINIAS.

We generally have a good show of these plants every year, raised from seed. The seed is sown the first week in October under glass, as the nights begin to get cold soon after this, and we find that germination is not a success if the seed is sown in the open. As soon as the seedlings are big enough they are pricked off into pans and put into 3-inch pots as they require it. From these they are put into 6-inch pots, their flowering pots, about the end of the following January. The compost used is three parts old leaf-soil, one part sand, and one part ordinary soil. There is no peat to be obtained in Hong Kong, and the soil we have to put up with is very ordinary, or, I should say, very extraordinary stuff, and would be considered

quite useless for gardening purposes at home. When one has been accustomed to good loam and peat it takes a long time to get reconciled to the material that is provided for us in Hong Kong. Nevertheless we manage to grow many things very successfully. After the Gloxinias are well established in their flowering pots, they get a small weekly allowance of Clay's Fertiliser, for which they are very grateful. This has to be applied very carefully, however, for if it touches the leaves it "burns" them, and a Gloxinia without good foliage is not worth looking at. By the beginning of April, or six months from the time of sowing, some of them will be in flower. Many of the plants will carry eighteen to twenty blooms, which for six months' work is not bad. They can be kept through the summer, but the trouble of looking after them is far greater than that of raising them from seed.

GLADIOLUS OPPOSITIFLORUS.

Some seed of this was sown last June. It germinated splendidly, and by the end of April this year the seedlings were in flower. Rather quick work, I think. W. J. TUTCHER.

Botanic Gardens, Hong Kong.

CORRESPONDENCE.

SWEET PEAS, AUTUMN SOWN.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Last autumn I wrote to you about September-sown Sweet Peas, mentioned on page 83 of "Wood and Garden." You very kindly answered my queries, and I have now much pleasure in reporting the complete success of your plan. Our autumn sown Sweet Peas form a hedge round a small grass plot; they are nearly 5 feet high, and we gathered flowers the first week in June. This place is 500 feet above sea-level, and the aspect of garden south and south-west. Last winter was very severe up here, but we had no occasion to protect the Peas. The flowers-stalks are very long, and have three or four flowers in many instances. They are of beautiful colours, and the leaves and stems unusually large and vigorous. I felt I ought to thank you for success in our autumn sowing. E. DALRY.

The Times, Old Down, Bath.

ANEMONE RANUNCULOIDES.

[TO THE EDITOR OF "THE GARDEN."]

SIR, I am much interested in the various letters in THE GARDEN about *Anemone ranunculoides* and think my experience may be useful. Here, at a high elevation, it grows anywhere, so long as it is not in a dry place in full sun. It grows freely in a bed of Azaleas, and this year many stalks had two blooms. A good deal of peat was put into this bed for the Azaleas; the natural soil is sandy and peaty. All that class of *Anemone* do well here, *A. alpina* seedling all over the place, also *Anemone alpina* and *sulphurea*, but I suppose the climate is too cool for the Mediterranean ones, as they do no good here. L. B.

Walsingham, County Durham.

TO CLOTHE A DRY WALL.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Cut up Bamboos of all sizes into joints (internodes). Stop one end of a joint with cotton wool, then nearly fill with fine soil and a few seeds and stop again with cotton wool. Insert these into the interstices of the wall, driving them well home with a circular wooden peg and a hammer. This is the time of year to begin the work, keep it going as seeds ripen; the young plants will peep out before the autumn. We begin the new wall this week with *Scilla* and *Chionodoxa*—the fresh ripe seeds. M. C. M.

[The whole subject of growing plants in walls is so important that we print this note about a way

of inserting seeds, though we cannot see in what way it is an improvement on the simpler plan of mixing the seed with a little slightly holding compost and filling the joint with this, stopping the lower portion of the opening with a little dab of stiff loam or clay, or if necessary a small stone in cement. There is nothing that appears to be so conducive to the well-being of nearly all plants as to have stones within reach of their roots, and one would think that the Bamboo, preventing such contact, at any rate until it became decayed, would deprive the seedlings of an important source of comfort. We should be glad to hear further if the proof of any distinct advantage in the Bamboo plan can be given.—Eds.]

SAXIFRAGA BURSERIANA MAJOR.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—Regarding Mr. Jenkins's note in THE GARDEN upon the culture of this and other Saxifrages, I hasten to explain that he has quite mistaken me if he has supposed (as he seems to have done) that I advocated glass protection in winter as necessary for choice Saxifrages generally. So far as I can at the moment recollect it is only for the special Saxifrage that I personally find the protection from wet almost essential.

Guildford.

H. SELFE LEONARD.

PEACH LEAF BLISTER.

[TO THE EDITOR OF "THE GARDEN."]

SIR, Some time ago your able correspondent "A. D." remarked in THE GARDEN that the Peach was the only member of stone fruits subject to leaf blister, and hinted that science and practice were at variance as to the cause of the malady. During many years I have read a few of "A. D.'s" interesting notes, and must own to feeling a little surprised at his remarks, as they would be likely to diminish the value of scientific intelligence in connection with gardening. "A. D." is not correct in asserting that leaf blister is confined to the leaves of the Peach, as Almonds are quite as subject to the disease. Currants are sometimes its unhappy victims, and Pears occasionally suffer from an attack.

"A. D." would almost have us accept his theory that Peach leaf blister was more the result of cold than the work of a fungus, whereas he might have more rightly fostered the idea that the evil was due to both. It is well known that some fungi only develop within definite degrees of temperature, and is it not natural for their food to be most within reach when these temperatures and other conditions favourable to their well-being prevail?

In my earlier gardening days I had the honour of serving under two sons of a very clever gardener who had given forty years of thought to the cultivation of the Peach in a fertile valley more than 400 miles north of London. In those days glasshouses were scarcer than at present, and even in cold districts, much was expected from the high wall bounding most of the principal gardens in the country. In this northern locality Peaches were desired from the open walls, and leaf blister, as may be expected, was rampant on the trees at the time the gardener I refer to took charge. To overcome this hindrance to successful Peach culture he gave the greater part of the forty years he retained his charge. The remedies which proved most efficacious were applications of mixtures containing high percentages of sulphur, and sulphur alone. Sulphur, pure and simple, did not adhere sufficiently to either plants or wall, but when mixed with lime or clay it proved a decided help in arresting, if not altogether exterminating, the evil. Sulphur made into a wash with quicklime and applied to the trees and wall during the winter and spring months, until growth starts, might with advantage be tried to-day by those attempting outdoor Peach culture.

The facts adduced from those forty years of scientific practice clearly indicate Peach leaf blister to partake of a fungoid nature, as sulphur and lime, the only really useful antidotes to it, are what we still find serviceable in destroying mildew and other fungi. Under the influence of heat and light we who have had sulphur in our eyes know the effect

of sulphurous fumes, and can readily understand its chemical influence on soft vegetation and its warmth-producing power. Lime acts in much the same manner, and with a scientific and practical knowledge of these bodies we are enabled to bring practice and theory into harmony, and to ameliorate, if not to wholly overcome, the obstacles to progress.

R. R. H.

The Gardens, Rongham Hall, Bury St. Edmunds.

PRUNING APPLE TREES.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—The attack made upon the gardeners' methods of Apple culture by Mr. Simpson shows with admirable force how eminently fitted is the forester to tell the gardener how to grow fruit. But in gardens and under their methods of restriction, gardeners do grow splendid Apples, fruit such as the neighbourhood of Sheffield has not been able to produce, and which gardeners only could produce under restrictive methods. Whether the pruning be above or below, or both, and it is most commonly both, the results are remarkable, and by a long way excel anything that Worcestershire orchards can produce. But Worcestershire trees are chiefly devoted to the production of Apples for cider making, as also in Herefordshire, Gloucestershire, Somersetshire, Devonshire, and some other counties. To obtain fruit for such a purpose culture is practically wasted. Size is not sought for, only a certain distinct flavour, which some varieties produce more than others; and yet Mr. Radcliffe Cooke, M.P., the cider apostle, has complained bitterly of the lack of pruning, thinning, and common care shown in the various orchards of the counties I have named. Of what value would the fruit thus produced be in any good market as compared with the superb fruits grown on root and head pruned trees? What a fallacy runs through Mr. Simpson's diatribe against gardeners' methods is evidenced when he writes: "The fruits may not be individually so large as are some samples from private gardens, but that is not caused by want of pruning, but by too many fruits being left on the trees." How absurd! Why, one of the very things pruning—*i.e.*, thinning—is intended to correct is the production of a needless quantity of small and comparatively useless fruits, by removing spur-covered branches too densely placed, thus enabling the trees to produce finer fruit in good quantity. The result is that, whilst there may be but one-half the fruits in number, there will be equal bulk, and a sample that will fetch from 20 per cent. to 30 per cent. more in the market. I have seen some of these over-praised old Western orchards. A few years since I went into a large one to advise as to what should be done to renovate it. Many of these hundred year old trees were past all renovation, and I advised that they should be removed; others having clean stems but of worthless varieties I advised should be in the spring beheaded and grafted with superior varieties. Their fruit samples would have fetched 1s. 6d. per bushel in the market, and much less for cider making. Many trees of fairly good varieties I not only advised should be thinned, but I got up into some of them and helped to thin them. I also had several labourers placed at my disposal, and putting one each into a tree with a long rod I pointed out from the ground what branches to remove. That two days' tuition was well spent on them, and if the whole of this great orchard was served the same all over it should have been renovated indeed. Even some young trees planted two years previously had to be lifted, their roots attended to, and again planted, because the local labour had done the work wrong. A. D.

LILIUM TENIFOLIUM.

[TO THE EDITOR OF "THE GARDEN."]

SIR,—"E. J.," on page 416, is quite right in his praise of this species; it is, however, a short-lived perennial, and the stock must be constantly renewed from seed, which is abundantly produced. Many years ago I raised thousands of it, and got them to flower in their second season, but I never could keep the same bulb for any length of time; usually they showed six to ten flowers in their fourth year,

ripened plenty of seeds, and then dwindled away. I beg, however, to state that *L. sinicum* (*Lindley*) is far superior to this as regards the brightness of its glistening scarlet. It is at present out of cultivation, no reintroduction having taken place since Fortune's time. It is a pretty little plant, only reaching a height of 6 inches to 8 inches, and has one to three flowers, but is quite different from *L. concolor* (*Salisbury*), which I have also lost for the present.

Baden-Baden.

MAX LEICHTLIN.

MARÉCHAL NIEL ROSE—FLOWERS OF POOR COLOUR.

[To THE EDITOR OF "THE GARDEN."]

SIR.—An interesting and important subject is this, referred to in *THE GARDEN*, page 449. Many are under the impression that there are two varieties of this Rose. It is well known that a pale-coloured sport emanated from Germany and was termed a white Maréchal Niel. Although this is not literally correct, its flowers are much paler, and, moreover, they do not revert to the deep golden yellow we are accustomed to associate with Maréchal Niel. In fact, the flowers, save in form, resemble very much those of the variety Belle Lyonnaise.

But as to there being two varieties of Maréchal Niel (save that just mentioned) cannot, I think, be substantiated, for whereas one year the flowers on a particular plant may be pale in colour, another season with different treatment the colour is a rich golden yellow. The finest flowers I ever saw of this variety came from a plant that had liberal

doses of slaughter-house drainings applied just when the buds were formed and continued at intervals of three or four days until they showed colour. Sulphate of iron will undoubtedly give a high colour to pale Roses, only it must be used with great caution. But anyone hitherto unsuccessful with this Rose would do well to follow your advice and plant standards. The Briars may be planted in the house and budded there, or selected trees procured with abundance of fibre and planted in October. If early flowers are not required it is not at all necessary to have artificial heat. Make a good bed in the centre of the house and train the growths on to the roof. If this bed were raised above the path 2 feet it would be so much the better, the sides being boarded to keep the soil in place. Such an arrangement admits air and warmth to the roots. Give 2 feet or 3 feet of drainage, broken bricks, clinkered or rough stones will do, then procure some green sod and turn this grass downwards on to the drainage and fill up the bed with 2 feet of the best loam procurable with some well-decayed cow manure incorporated. Two loads of the former to one of the latter would be about the right proportion. Intermix a little steamed bone-meal and turn all over and let it lie for two or three months before putting in the house. Procure tall standards, plant in the centre of bed, and prune back the growths the first season to three or four eyes from the bud. The following season there will be some grand growths, which should be merely tipped and trained on to the roof. It will be understood that the house is span roof running north to south. The growths if

trained some to the east and some to the west the partial bending will cause them to yield abundance of lovely Roses. After flowering thin out small wood and a few of the oldest growths if very crowded. In the early spring following the growths are spread out to admit light and their extreme ends removed; beyond this no other pruning is needed.

PHILOMEL.

THE ROSE GARDEN AT DOWNSIDE.

ONE of the most enthusiastic Rose growers is Mr. Alfred Tate, a view in whose garden at Downside, Leatherhead, we now give. The whole place seems filled with flowers in masses—Tea, hybrid, perpetual, Moss, China, and almost every group—and the air is saturated with their perfume. This may be truthfully called a Rose garden, in which the Rose is grown for its beauty in masses in bed and border and also for exhibition. A mixed border on the hillside is a delightful picture, and illustrated in *THE GARDEN* of January 20 last.

Royal Horticultural Society. The next fruit and flower show will be held on Tuesday, July 3, in the Drill Hall, James Street, Westminster, from 1 to 5 p.m. On this occasion special prizes will be offered for Roses. At 3 o'clock a lecture on "Bedding, Hedge, and Pillar Roses" will be given by Mr. George Paul, V.M.H.



VIEW OF MR. TATE'S ROSE GARDEN, DOWNSIDE, LEATHERHEAD.

TREES AND SHRUBS.

RIBES BRACTEOSUM.

AMONGST the sixty or so species of *Ribes* there are not many ornamental plants, although there are several, such as the Gooseberry and the Red and Black Currants, which have a distinct economic value. Of the purely decorative species, *R. bracteosum*, though not the best, is worthy of more extended cultivation than it receives, if only for its distinct and striking foliage. It is a native of the western side of North America, and is hardly in most parts of this country, but it should have a fairly sheltered spot and a deep, rich soil to enable it to attain to its full standard of perfection. The greenish-brown flowers open in the latter part of May, and are borne in upright racemes 4 inches to 6 inches in length, each flower having a comparatively large green bract at its base, and which on the lower part of the raceme almost attains to the size and shape of a true leaf. The leaves are palmate, five to seven-lobed, 4 inches to 6 inches long, by as much across, and much resemble the leaves of some of the Maples. They are slightly hairy on both sides, bright and shining above, paler and covered with minute yellow glands on the under side. There is also a larger gland of the same colour at the tip of each of the numerous serrations of the margins. *R. bracteosum* belongs to the Currant section of the genus, and is therefore spineless, and can be propagated by cuttings in winter in the usual manner. L.

THE POISON IVY (RHUS TOXICODENDRON).

THAT this plant has undoubtedly poisonous properties is a well-known fact to many gardeners, but this does not justify the assumption that everybody knows it. Last summer there was a paragraph in an American newspaper to the effect that a young couple who had just been married, and who were more poetical than wise, lined a hammock with the leaves of the Poison Ivy and laid in it. The honeymoon was finished in hospital. This happened in the native habitat of the plant.

To distinguish *Ampelopsis* from this *Rhus* is comparatively easy. In *Ampelopsis* the leaves always consist of five leaflets, which have deeply toothed margins. The Poison Ivy never has more than three leaflets, which are not toothed, and are more rounded and less pointed than those of *Ampelopsis*. There is an *Ampelopsis* Hoggi still in commerce, which is a slight form of the Virginia Creeper, and has nothing whatever to do with *Rhus Toxicodendron*, which was formerly sold under that name. All the *Rhus*, with the possible exception of *R. Cotinus*, are more or less poisonous, and, to be on the safe side, none of them should be handled without gloves. L.

EMBOTHRIMUM COCCINEUM.

THERE is no flowering tree that can rival this *Embothrium*, perhaps better known by its English appellation of Fire Bush, when in full bloom. Specimens from 20 feet to 30 feet in height are then simple masses of vivid vermilion that glow with surpassing brilliance. A flowering branch from Trewidden, Penzance, was exhibited at the late Temple show, and very naturally attracted much attention. Perhaps no subject has proved the lateness of the present season more effectively than the *Embothrium*, its blossoms in South Devon expanding a full month later than their usual season. In mild winters, followed by genial springs, the trees in this neighbourhood are often in bloom by the end of April, while in the present year the month of June was a week old before the flaming flower clusters had attained perfection. There are many fine specimens of this gorgeous tree in the south-west. Until a few years ago probably the largest example in this country was to be found at Scornor, but this tree has since died. Most southern Cornish gardens of repute

contain one or more specimens, while in South Devon two fine trees about 25 feet in height existed a few years ago, and probably still live, in the gardens of Coombe Royal, near Kingsbridge, while on the banks of the river Dart healthy young specimens are growing. In the south of Ireland the *Embothrium* also flourishes, a symmetrical example at Fota, near Cork, being in full flower on the occasion of my visit to that beautiful garden some five years ago. An impression appeared at one time to exist that the *Embothrium* was very impatient of root disturbance, but in two cases that I have lately met with this has had the effect of increasing vigour. In one instance a tree about 9 feet in height had been transplanted, and had evidently benefited by the move, while in the other a good-sized specimen that was blown over in the blizzard of 1891, after being propped up, shifted into a hole that had been dug behind it and cut back, made exceptionally rapid and healthy growth. It therefore would appear that change of soil and pruning are beneficial rather than otherwise. When these trees reach a certain size they, in many cases, lose vigour and often perish. One that I saw at Trelissick in April had given signs of decaying strength, and had, in consequence, been cut hard back. This heroic remedy had apparently fully answered the purpose, since the tree was throwing out numbers of vigorous shoots. Although difficult to raise from cuttings taken in the open air, cuttings 4 inches in length placed in sandy peat in well-drained pots and kept in a close propagating frame in an intermediate temperature, rarely fail to root in the course of a few months. The *Embothrium* may also be raised from seed, but layering, where practicable, is perhaps the most satisfactory method of propagation. The *Embothrium* is a native of South America, and belongs to the order of Proteaceae.

South Devon.

S. W. F.

THE FRUIT GARDEN.

GOOD NECTARINES.

OF late years we have had some valuable additions to the early varieties of Nectarines, and especially good kinds for forcing, but it will be found that none of the new kinds can beat the older but excellent

LORD NAPIER,

as both for crop and quality it is unrivalled. By this it must not be thought I desire to minimise the value of such splendid fruit as the new Cardinal and Early Rivers, both excellent for pot or house culture, and the last named for open walls, but those who grow fruit for table from June to September will not fail to agree with me that the older variety is still one of the most valuable fruits we have. On the other hand, for first crop in the open no one will omit the newer

EARLY RIVERS.

Coming to maturity nearly three weeks before Lord Napier, it is of great value; but on the other hand I am not yet quite sure if it will equal the older variety in its cropping, but no one can be certain with young vigorous trees, and in some soils the newer variety is doubly valuable, as the fruit does not crack, at least I have not observed it, and in late localities it will be valued on this account. It is certain that there can be no question as to the value of the three varieties noted above, when one sees such fine fruits as were recently exhibited both at the Temple in May and at Westminster on June 5. Lord Napier though was one of the earlier of Mr. Rivers' introductions. I am aware there are several other varieties that should find a place in this note, but for general usefulness I am inclined to place Lord Napier at the top of the list, and I am inclined to do so not only on my own account but after seeing for some years the splendid tree at Gundersbury House of this variety, where a house is given to it, and it will repay for the space occupied by the quantity and quality of the fruit. For many years

PITMASTON ORANGE

was a great favourite, and as regards flavour it has few equals. It is certainly one of the best of the yellow fleshed varieties, but a later fruit than Lord Napier, and valuable in a cool house. There are few of the later fruits that are more valuable than the Pine Apple, and it is like Pitmaston in flavour and colour, but later; this, without doubt, is one of the finest of this section, and on account of its size is superior to Pitmaston Orange. There are few more profitable varieties, but I do not advise these later kinds for hard forcing, and in northern localities they do not always finish well on open walls; indeed, to do late Nectarines justice they require a warm, well-drained soil, and the trees must not be crowded. No note would be complete without referring to

HUMBOLDT.

a very fine Nectarine, also a yellow fleshed variety, and this is closely related to Pine Apple; the fruits are very large, of first-rate flavour, and the skin a bright orange yellow. The flesh is remarkably juicy, tender, and rich, and the tree is a very free cropper. This should be in all collections on account of its fine quality, and even small trees bear abundantly. There are others, such as

ELRUGE.

a beautiful fruit, but not one of the most reliable in all positions; it is somewhat tender in cold soils, but forces well. I prefer the

STANWICK ELRUGE,

as the fruit is larger and the growth better. I have by no means exhausted the list, but the above varieties are recommended for crop and quality combined, and to lengthen the season, as many persons like still later kinds, such as the Victoria. I do not advise them for open walls, neither is the flavour of fruit under glass equal to those named above. G. WYTHES.

NOTES ON SOME GOOD PLANTS.

CENTRANTHUS RUBER.

IN many chalk districts this fine plant is extremely frequent and no less ornamental. In such soils where it is not already established it should be freely planted, when its feathery seed will carry it still further afield and plant new colonies in that wonderful way that can never be so well done by the hand of man. In some parts of England it has made itself at home in chalky railway cuttings, where its rosy bloom is seen most favourably against the chalk, whether in the soft pure whiteness of recent quarrying or in the weathered silver-grey of more mature exposure. The deeper-coloured variety is rather the best in gardens. We lately saw in a garden a combination of a patch of this Valerian mixing with the happiest effect with a deep scarlet Oriental Poppy. There is a white variety, but it is a poor white, and scarcely worth cultivating.

IRIS VARIEGATA AUREA.

This is one of the very best among the flag-leaved Irises, and has a grand effect in a good mass. The colour is rather difficult to describe, but is of a rich yellow that inclines to a battery quality. The upper and lower divisions of the flower are of the same colour, brightened by a full beard of rich orange, which is all the more conspicuous because the upper part of the "fall" on which it rests is there of paler colour, daintily veined with a deeper yellow.

MULGEDIVM (LACTUCA) PREMIER.

This new relation of Lettuce and Dandelion has a tall flower-stem bearing at the top a spreading panicle of grey-lilac Succory-like bloom, followed by silky-feathered seed. In many gardens it may be thought only worth a position in their rougher outskirts, but some think it worthy of a place in the choice flower border on account of its very handsome foliage, which has the rare merit of remaining in good order throughout the summer and of taking a fine bronze tint in the autumn. As the leaves also increase in size when the bloom is over it is useful to place next to such early-blooming plants as Oriental Poppies, or anything that flowers early and then leaves a gap.

CRAMBEE MARITIMA.

In large flower borders or bold clumps of flowering plants let no one be afraid of planting Seakale. The immense panicles of white bloom are of the utmost importance in early June, and when these are cut away no foliage plant can beat the beauty of the bluish boldly-crumpled foliage. This is one of the none too many plants that holds handsome foliage all the summer, a quality that should be carefully looked for, and, in the words of the immortal Captain, "when foinl made a note on."

BRIER DOUBLE YELLOW PERSIAN.

No 6 feet high warm wall-space should be thought too precious for this grand Brier. Its copious wealth of bloom and glowing colour are indeed typical of that far eastern land whose wealth of Roses has always been extolled by the poet and the historian, and from whence we have our Peaches (Persica).

RAPHIOLEPIS OVATA.

In the favoured climate of Devon and Cornwall this handsome shrub is quite at home, but in most of the southern counties it does well in a warm place at the foot of a wall. It will live in the open, but is grateful for the additional warmth and comfort of the wall. The flowers are not unlike small Apricot blooms, but are of purer white and of three times the substance: in fact, their texture is like that of smooth white leather. The beauty of the dead-white bloom is much enhanced by the bunch of crimson stamens which, beginning of a pale yellow colour when the flower first expands, acquire their full strength of colour as it matures, and again fades away as it passes its best. The bud is also daintily tipped with crimson. The flowers are in terminal clusters of a dozen, more or less, on the main and lateral growths of last year, and are accompanied by the young leaf-shoots of the current year. The leaves are roundish and leathery, irregularly bluntly toothed at the edge, somewhat recalling the character of the Arbutus leaf, though round instead of pointed.

ROSEMARY AND CHINA ROSE.

Let all who love garden delights mass these two old favourites together in warm sheltered places, and from June onwards enjoy the full charm of the true sentiment of the simple old gardens of our grandfathers and of theirs for many an earlier generation.

TWO GOOD HELIANTHEMUMS.

There seems to be a class of these that forms a link between

Cistus and the quiet prostrate Rock Roses. Within this comes the beautiful *H. formosum*, sometimes called *Cistus formosus*; but botanists tell us that no true *Cistus* has yellow flowers, a useful guide to the amateur. The flowers of this capital dwarf shrub are of a clear, rather pale yellow colour, with a blotch of deepest red-brown near the base of the petal that looks almost black by contrast with the bright flower. At the point where the petals are attached they deepen to a fuller yellow, that is repeated in the stamens and gives a look of rich colouring to the centre of the flower. In general habit on an exposed bank the plant is half trailing, but among other growths it will rise 3 feet. It is one of the most important among this beautiful family, but its beauty must be looked for in the morning, for the fugacious bloom is nearly all fallen by noon.

H. halimifolium is like a young brother of *H. formosum*. The bloom is smaller and even more numerous, deeper in colour, and without the

blotch. The habit is more trailing, and altogether the whole plant seems to take a step nearer to the better known garden kinds that are now in such profuse bloom, and are some of the best of plants for hot sunny places.

THE DOUBLE POINSETTIA IN JAMAICA.

Of the many beautiful shrubs to be seen in the gardens of Jamaica, none excites more admiration than the double Poinsettia. Its origin is involved in obscurity, and it appears to be unknown in England. Its red leaves are smaller than those of *P. pulcherrima*, but far more numerous and closely packed. The difference, perhaps, may be best illustrated by taking a spray of each kind. In the ordinary form we find, say, three principal branchlets, each dividing into three sub-branchlets, which bear the red leaves. These are rather large



DOUBLE POINSETTIA.

(Drawn by Miss H. A. Wood, of the Jamaica Botanic Gardens.)

and hang loosely. In the double variety we have three or four principal branchlets. These divide into several sub-branchlets, and these again into sub-sub-branchlets, and the red leaves are borne in thick stiff masses. In the specimen under consideration one sub-branchlet, not the largest, has 192 red leaves, and the whole spray of four sub-branchlets must have between 800 and 900. The two sprays measure approximately the same, about 1 foot in length and 1 foot in breadth.

The plant has been sent to England, but appears to revert to its ordinary form. In Jamaica the superiority of the double kind is incontestable. A young plant bearing a few sprays is a striking object, but the brilliancy of a native specimen carrying scores of them is such that it dims the splendour of even the brightest of its many neighbours. W. J.

NOTES FROM NEWRY.

Quite a number of interesting plants have recently flowered here, and no doubt your readers will like to know about them.

Mecynopsis cambrica plena has been very good as a number of young plants together, but these do not compare very well with an established clump upon which I counted fifty-three open flowers at once; it is a right good hardy plant and very showy.

Heuchera zabeliana, a green-leaved plant, with tall 2½ feet scapes of deep rose flowers, has been much admired the past month, and still looks fresh. *H. bryzoides* grows quite as tall, but has dark coloured leaves. Very similar to *H. Richardsonii*, the flowers are pale pink, quite large, and a sheaf of twenty to thirty scapes on a clump form a noticeable specimen.

Podanthum gracile is a tufted slender-stemmed plant, with pale blue flowers freely produced. *P. labelioides* is somewhat similar, but of more erect habit, while *P. sp.* is a more robust thing, with erect scapes 2 feet to 3 feet high, of light blue flowers.

Achillea lingulata var. *buglossis* has been one of the most admired new plants; it grows 1½ foot to 2 feet high, and bears a flat corymb of well-formed white flowers, lasting a long time in beauty.

Lupinus arboreus violacea forms a very striking mass; the flowers open white and pale blue, deepening with age to light blue and deep blue or purple; it is just as robust as its yellow type, and will furnish a wall with equal freedom.

Iris tenax, plants raised from seeds saved here, are now quite established, and have flowered most profusely, there being as many as 100 flowers open at one time. *Iris Hyerense* is said to be of hybrid origin; it has evergreen leaves and dark blue flowers, bearing a good deal of resemblance to a blue Spanish Iris. It grows about 1½ foot high, and makes a dense and floriferous tuft.

Tropeolum polyphyllum *Leichtlini* is quite as free as the type, if not freer, but the flowers are deep orange, most freely produced.

Nardostachys Jatamansi, though not just the plant to make the man in the street pause, is a pretty thing; good tufts are now coming into flower, which are pink tinted and numerous.

Matthiola Valesiaca has lovely dense tufts of soft mauve flowers; it only grows 4 inches to 6 inches high.

A closely related plant is *Hesperis violacea*; this on a raised position, having an eastern aspect, kept well watered, has lived for three years; it is, and has been for a long time, a yard-wide mass of bright lilac flowers.

Baptisia australis is a good blue-flowered plant, now quite showy. *B. leucantha* was attractive; it is of rather dwarf stature, with clear yellow flowers, but the "upper ten" of this group is *B. alba*, a branching plant with black or purple stems, deep glaucous leaves, and racemes of white Pea-like flowers. *B. australis alba* is also in flower, but it is either badly named or I have the wrong thing, as its flowers would be better described as pale blue.

Diphyllea cymosa has been beautiful, a stately mass 6 feet across, of handsome leaves and umbels of pure white flowers; it is one of those distinct things that very few even of the knowing ones recognise.

Jankaea Heldreichii is now well established in plants of various sizes, and has flowered very well, its pale blue flowers (the colour, however, is variable, some being of a deeper tint) closely resembling those of some Alpine Primulas. It is very charming.

The two *Ranondias*, *Nathalie* and *serbica*, are also well established. Many hundreds from single crowns to strong clumps have been much admired. By-the-by, is there not some mistake about these? The flowers of *R. serbica* are five parted, the same as *R. pyrenaica*, while those of *R. Nathalie* are only four parted.

Verbascum pannosum leaves *V. olynjium* behind, for although the scape does not branch as the latter does, it is a much handsomer plant. The scape is cylindrical, 3 feet to 4 feet long, flowers large,

yellow, and handsome; the leaves are quite as tomentose, very long, and more acuminate, my largest specimen being nearly 5 feet across on the ground.

Cynoglossum apemimum is a right good blue-flowered June plant, lasting a long time in beauty; it is of dense tufted habit, growing 1 foot to 2 feet high, and seems equally happy either in sunshine or shade; it likes a rich border. But amongst herbaceous plants the *piece de resistance* is *Clematis Pallasi* fol. purpureis, purple leaves and white flowers; it is delightful. *Asphodeline libanica* I did not care much for at first, but as it progressed it has made itself liked. It grows 3 feet to 4 feet high, is much more robust than the old *A. lutea*, the leaves larger and longer, the flowers being twice or thrice the size of the old plant, and a good yellow.

Geranium sanguineum album is a really charming plant, the flowers are large and of the purest white, most freely produced. *G. robertianum* is equally pretty, but the flowers are much smaller; it would scarcely be possible to kill it.

Pentstemon glauca is a most distinct plant, forming a compact tuft or rosette of leaves, from the centre of which the 6-inch stem arises, bearing six to ten Port wine coloured flowers. There are many beautiful *Pentstemon* species either in flower or coming into flower here. Among

SHRUBS

Philadelphus tomentosus distinctly shines; it is of free habit, the flowers of good size, pure white, while the calyx is purple. The contrast is at once striking and beautiful. *P. Falconeri* has also, I think, come to stay. Vigorous, the leaves narrow and handsome, the flowers large, freely produced, the segments very narrow as compared with any other specimen I am acquainted with, and slightly twisted at the apex.

Rosa xanthina is just lovely; it is a scandent species, with long flexible branches densely wreathed with butter-yellow flowers deeper in the centre.

Rhodocistus Berthelotianus is a leafy, handsome shrub, with large rosy cistus like flowers, and quite worth a warm corner, which it needs.

Olearia mysinites is a rather slender branched shrub, with coraceous deep green leaves and pure white starry flowers freely borne on the ends of the branches.

Sambucus nigra rosea plena gives us quite a new effect amongst this free growing race. A large bush, 10 feet high, and as much through, is now a mass of rosy flowers; they are white at first, quickly changing to rosy pink. It should have a place wherever there is room, but inasmuch as all the *Sambucus* will thrive under trees and in dark corners where little else will survive, there should be no difficulty about its accommodation. *Crataegus parvifolia* is a dainty little thing, only a bush, 2 feet to 3 feet high, and of rather a spreading habit. The flowers are quite large, and usually have a few extra petals, which gives them a semi-double appearance; they are borne freely right and left along the slender branches, and form lovely tuft long wreaths.

Weigelia montesque. In these days of *Weigelia*s it is seldom we get a real novelty, but in the above we have one worth adding; it is of rather dense habit, bearing in the most profuse manner flowers of a bright dark crimson colour.

Syringa villosa is worth a word of commendation, especially when it flowers as it has this season; they are soft rose coloured, borne in dense terminal heads and very attractive.

Lonicera glauca is a welcome addition—free in growth and profuse flowering, the buds are pink tipped, the open flowers deep yellow.

Fendlera rupeola has been quite charming, its slender pendulous branches wreathed with distinctly pretty white flowers.

Cercocarpus ledifolius is a distinctly pretty evergreen shrub, but its flowers, though numerous, are too small to be effective.

Leptospermum ballatum, a large bush on the open hill side and quite close to *Escallonia*s, all but killed by the frost, is now a mass of white myrtle like flowers. My experience is that many things come

more safely through a trying winter in a comparatively high and exposed position than in a lower and sheltered one.

Ceanothus ovatus is much finer than I have ever seen it. My largest specimen is rather a flat-topped bush about 4 feet across, quite covered with creamy white flowers. *C. Fendleri*—the spring stemmed *Ceanothus*—is also in flower, but is not attractive.

Lonicera pyrenaica is a small growing shrub suitable for limited rockery areas, bearing in the most profuse manner cream-coloured flowers. *L. syringantha* has flowered for the first time; it is a slender-branched shrub, with little bunches of flowers, much alike in colour and form to those of *Daphne Genkwa*, but with the most delightful perfume imaginable.

Colutea Melanocalyx is a mass of yellow flowers, almost hiding the leaves, while *C. cruenta* presents nearly the same effect in brick red; but *Rhododendron kanschatium* is the gem of all at present in flower. A clump about 1 foot across is quite covered with purple flowers, very effective and distinct; in fact, quite unlike a *Rhododendron*.

T. SMITH.

ORCHIDS.

DENDROBIUM SPECTABILE.

ORCHIDS from New Guinea have such a bad reputation for flowering in this country that the fact of this lately re-discovered *Dendrobium* having bloomed this winter in several collections for the first time aroused considerable interest. Our conditions of climate are so totally



DENDROBIUM SPECTABILE.

different from those under which these Orchids grow, that one can never expect much from them, and doubtless the heat and light during the past two summers have had much to do with the blooming of this quaint *Dendrobium*, but it is hardly to be expected we shall ever find it under cultivation producing as many as twenty or twenty-five blooms on a raceme, which it is described as bearing in its native country. The form of the bloom is very striking, the sepals and petals and also the lip bearing fanciful resemblances to animal life. The colour, though at a distance not remarkable, is, on closer observance, very beautiful, the lines and dots of red on the sepals and

petals, and more especially the rich maroon-crimson venation of the extraordinary lip, giving it a distinct place amongst *Dendrobium*s. Variation in colour more than in form we may hope for, judging by those already bloomed.

J. T. BENNETT-POE.

CYPRIPEDIUM INSIGNE IN SUMMER.

THIS Orchid is amongst the most useful kinds for blooming through the winter, providing it gets proper treatment during the summer. There are many cultivators who have very limited glass accommodation, and many of these have vines, or cover the roof of a portion of their houses with Melons or Cucumbers, and when this is so the plants growing under them do not obtain much light. If those in such a position would make more use of their pits or frames through the summer and early autumn, this would relieve their houses to a great degree. This *Cypripedium* does remarkably well during the summer in a cold pit or garden frame.

Last year I put eight or nine large plants from a vinery, early in June, into a garden frame on a cold bottom. When the sun was very hot they were lightly shaded, and during the very warm nights the lights were taken off. In the autumn they were removed into a frame on a manure bed that had been used for Cucumbers; here they remained till early in November, when they were removed to a vinery, and through December and January they flowered well. I am treating them in the same way this year. Many of our free-growing Orchids would do well under this treatment.

J. CROOK.

THE INDOOR GARDEN.

POSOQUERIA LONGIFLORA.

THIS is an old introduction well worthy of attention. It came from Guiana about seventy years ago, and belongs to the natural order *Cinchoniaceae*. It appears closely allied to the *Bouvardias*, but is much larger in all proportions, and has a five-lobed corolla with a tube about 5 inches long, the flowers are pure white, and produced in terminal corymbs. The oval leaves are about 7 inches long and 4 inches wide, bright green on the surface and downy underneath. The plants that have come under my notice have been about 3 feet high, but I believe it may be grown and flowered as a dwarf bushy plant.

It is one of those fine old plants which, at the time of their introduction, the accommodation for their culture was far from perfect, and consequently did not meet with their proper treatment, but with our more modern methods and accommodation it may prove a valuable plant. Many of this class of plants have been grown under too much shade and a close moist temperature, inducing tall fleshy, growth which invariably fails to flower. Taking the *Bouvardias*, although they come from the warmer hemispheres, they may be grown in the open during the summer, and when grown under glass require to be exposed to all the sun and light possible.

A. HEMSLEY.

SCHIZANTHUS FOR THE COOL GREENHOUSE.

THE seed should be sown very thickly in a pan in September, and the young plants potted on when they are about 2 inches high. They are then kept in a cool house and close to the glass. They should be finally shifted into an 8 inch pot. For greenhouses they are invaluable, as they come in about April and are still flowering in early June.

M. W. J. BRUCE.

St. Woolos Vicarage, Newport, Monmouthshire.

Index and Editorial Notices will be found amongst the advertisements.

IRIS GERMANICA BLACK PRINCE.

WE are pleased to give an illustration of what we think will become a garden flower of the future. This is the Flag Iris Black Prince, which was shown recently by Mr. Amos Perry of Winchmore Hill, London, and received an award of merit from the Royal Horticultural Society. As we mentioned in our report, page 471, the flowers are large and fragrant, handsome in colour, with light purple standards and deep velvety purple falls, with a broad rich yellow marking running into the centre of the flower.



IRIS GERMANICA BLACK PRINCE.

SOCIETIES.

THE CROYDON AND DISTRICT HORTICULTURAL MUTUAL IMPROVEMENT SOCIETY.

THE monthly meeting was held on Tuesday, June 19, Mr. W. Harris occupying the chair, Mr. W. J. Simpson the vice-chair. There was a large attendance of members present; six new members were nominated. The chairman introduced Mr. W. J. Jarman, one of the younger members, who read a capital and instructive paper on "Carnations, dealing very lucidly with the classification of Bizarres, flakes, Malmaisons, &c., soils, propagation by layers and pipings. Cultivation in open borders, potting and indoor culture, and suitable structures were next treated upon; insect pests and diseases were also dealt with. Mr. Jarman's paper was listened to with close attention, and at the close of the reading met with applause. An interesting and profitable discussion followed, in which many of the members took part. The subject was more interesting by the exhibition of some 116 varieties of Carnations, sent to the meeting by Mr. H. T. Dixon, of Hailsham, and a stand of capital flowers from Mr. T. Butcher.

A hearty vote of thanks was accepted Mr. Jarman for his paper. The tables were very attractive with a beautiful display of good exhibits. Mr. John R. Box sent two dozen excellent flowers of double Begonias, which received considerable attention; Mr. Lisle, Saundstead, brought some good Cattleyas; Mr. Humphrey, Backbridge, Eulophiella gracilis, a pretty miniature Orchid of botanical interest; Mr. P. Briyard, some fine spikes of *Dieffenbium Flaxinella*; Calceolarii from Messrs. Wallace and Son, Colchester; sprays of flowering shrubs by Mr. Gregory. A vote of thanks was given the exhibitors named.

The secretary read an excellent list of lectures and papers to form the programme from August to January next.

The chairman then announced that at the next meeting in July an exhibition of Sweet Peas will be held, when ladies will be invited.

The meeting closed with a vote of thanks to the chairman and vice-chairman.

ROYAL HORTICULTURAL SOCIETY AND THE NEW BYE-LAWS.

SIR, A very urgent appeal has been made to me in my official capacity as secretary of the Royal Horticultural Society by certain of the Fellows who are most anxious to show their loyalty to the council by supporting them in their proposals with regard to the bye-laws of the society, but are unable to do so entirely as long as Nos. 45, 46, and 47 are retained. They have no objection whatever, many of them cordially approve of the Swiss principle of a referendum, "Aye" or "Nay," on any important proposal, but they dislike a general proxy.

At this late date I have no time or authority to call the council together to consider this point. I am therefore writing quite unofficially to say that I am confident that the council will accept a permissive referendum on points they think to be vital to the society's welfare. The council, I am convinced, have no desire for a general proxy, but they feel, and feel very strongly, that as the society has recently been increased by such an enormous accession of Fellows living at a great distance from London it is unjust to confine the whole governing power of the society to Fellows living in or near London, which would practically be the case if no referendum on important points is permitted.

The council would, I am sure, accept the three following bye-laws in the place of the three whose numbers they bear, together with the form for a referendum which I have drafted.

I have written this letter solely in order that Fellows may have time to consider the matter, and to induce country Fellows to come up to the meeting of July 3 and support a measure to their own enfranchisement. I am, sir, faithfully yours, W. WILKS.

Shiloh Vineyard, Croydon, June 25, 1900.

ALTERNATIVE BYE-LAWS.

15. With respect to any resolution brought before a general meeting, and considered by the council to be of vital importance to the welfare of the society, the council shall have power to adjourn the meeting for not more than twenty-eight

days, in order to refer the decision on such resolution to the whole body of the Fellows, and to take a poll of the Fellows "for" or "against" it.

16. In the event of any resolution being referred for decision from a general meeting to the whole body of Fellows, the council shall, within ten days after such meeting, issue by post to every Fellow of the society residing in the United Kingdom a copy of the resolution thus referred to, together with the necessary form (form D), for voting for or against it. But the council shall not therewith, or otherwise at the expense of the society, send any communication tending to influence the vote of the Fellows.

17. When any resolution is referred from a general meeting to the whole body of Fellows for decision, the general meeting shall, before it adjourn, be requested by the chairman to nominate four scrutineers of the poll, whose duty shall be to examine and classify the votes of the Fellow, and report the result to the adjourned general meeting. Two of the scrutineers shall be chosen from amongst the members of the council, and two shall be Fellows holding no official position in the society. In a poll every Fellow shall have one vote, and one only.

FORM D.

Form to be used in the event of the council considering any resolution submitted to a general meeting to be of sufficient importance to require a poll of the Fellows to be taken to decide it.

At a general meeting of the society held on the following resolution was proposed and seconded, viz. (here insert the resolution.)

The council, considering this to be a matter of vital importance to the welfare of the society, and acting under bye-laws 45, 46, and 47, adjourned the meeting till _____ at _____ in order that meanwhile a poll of the Fellows may be taken.

You are requested to sign your name in one or other of the two blank spaces below, and to return this paper entire to the scrutineers, Royal Horticultural Society's Office.

I desire to vote _____ I desire to vote _____
 FOR _____ AGAINST _____
 the above resolution. the above resolution.
 Fellow's signature Fellow's signature

This paper is issued by order of the council, and is sent by post to every Fellow residing in the United Kingdom.

Scrutineer.

N.B. Nothing is to be written on this paper but the Fellow's signature only.

ROYAL HORTICULTURAL AND RICHMOND HORTICULTURAL SOCIETIES.

THIS most important gathering unfortunately through the fact that we go to press on Wednesday afternoon can only be briefly dealt with.

At the luncheon many eminent horticulturists were present, whose names we shall furnish next week. At the united luncheon the chair was occupied by Mr. J. T. Skewes-Cox, M.P., who in happy terms proposed the toast of "Her Majesty, the Queen." The toast of "The Royal Horticultural Society and the Richmond Horticultural Society" was proposed by Sir J. Trevor Lawrence, Bart., who, in the course of an excellent speech, commended his hearers that the keynote to success was horticulture.

This toast, to which we shall refer again, was replied to by Mr. T. Skewes-Cox, M.P., and the Rev. W. Wilks, secretary of the Royal Horticultural Society, and by one of the secretaries of the Richmond Horticultural Society, Mr. C. C. R. King, was well received.

The "Judges of the Show" was proposed in extremely happy language by Mr. Owen Thomas, and responded to in a well thought-out speech by Mr. Wythes.

The Chairman was proposed by Mr. A. Chancellor, J.P., and replied to by Mr. Skewes-Cox.

We can only say in the presence of going to press that this meeting of the two societies was an extremely happy one, and we are pleased to know that the show was opened by Lady Lawrence, and a bouquet was presented to her by Miss Skewes-Cox.

We must reserve our chief report until next week.

The Chancellor Challenge Cup for Roses was won by Mr. Frank Cant, of Colchester, with a splendid collection of forty-eight distinct Roses three blooms of each kind. The second place was taken by Mr. Benjamin R. Cant and Co., Colchester, and the third by Messrs. D. Pryor and Son, Colchester, both showing very fine collections. The Chancellor Challenge Cup was presented by A. Chancellor, Esq., J.P., and Mrs. Chancellor.

R.H.S. ORCHID COMMITTEE.

FIRST-CLASS CERTIFICATES were awarded to the following:

Cattleya Mendelliana var. *Princess of Wales*. This is a lovely variety; the sepals and petals are of fine form and substance, faintly tinted with delicate rose. The broad lips is white, beautifully fringed on the margin, and the side lobes are also white, becoming orange yellow on the disc. There are several brownish purple lines through the throat. The plant, carrying two flowers and two buds, came from Mr. H. A. Tracey, Orchid Nursery, Twickenham.

Odontoglossum crispum Duchess of Comaught. This is a most distinct and pretty variety. The flowers are 2½ inches in diameter, the exterior of the sepals being suffused with purple. The ground colour of the interior is white, with the rose tint reflected through from the back. There are several large blotches of brown through the central area, and numerous small spots outside. The petals are beautifully toothed on the margin, and suffused with rose on the apical portion. In the central area there is a large blotch of reddish brown broken up with white, and there are smaller spots on the outer portion. The plant carried a seven-flowered raceme, and was shown by Mrs. Briggs-Bury, Bank House, Accrington.

An award of merit was awarded to *Odontoglossum crispum* Empress of India, a remarkable variety, the flowers of which are each 3½ inches in diameter. The dorsal sepal is white with a streak of rose purple down the centre, which is seen through from the back; there are some large blotches and spots in the central area. The petals are of good form, white, with deep brownish purple blotches in the centre. The lip is also white, spotted with bright brown around the deep yellow disc. The plant carried an eight-flowered raceme, and came from Mrs. Briggs-Bury, Bank House, Accrington.

Mr. H. A. Tracey sent a fine dark variety of *Cattleya Mendelliana*.

R.H.S. FLORAL COMMITTEE.

Messrs. J. Peed and Sons staged a fine group of *Caladiums*, and also groups consisting of *Carnations* and *Gloxinias* respectively. Messrs. Carter also had a collection of well-grown and well-flowered *Gloxinias*, as also had Messrs. Sutton and Sons, Reading.

Messrs. Kelway, Langport, Somerset, exhibited a stand of cut blooms of *Hippocrepis*, including German Emperor, Mrs. Rank, Bret Hart, and others.

Mr. John Russell, Richmond, staged a pretty group of shrubs, including a variety of *Maples*, *Ivy*, *Eponymus latifolius*, &c.

Outside the large tent Messrs. Cutbush and Son, Highgate, had a collection of *Ivy*, and another of *Box* and *Yew*, clipped into various shapes. Mr. J. Buckhouse had a group of shrubs, such as *Bays*, *Box*, &c. Another good collection of *Ivy* came from Messrs. James Veitch and Sons, Chelsea.

The last-named firm showed also a very pretty group of *Roses*, in which *Electra* was prominent, containing also *Fremontia californica*; also cut blooms of 200 albino *Rhododendrons* and plants of *Kalanchoe flammea*.

Messrs. Phillips and Taylor, Blackknoll, Barks, showed a group of well-grown *Carnations*. A large group consisting of various shrubs, *Carnations*, *Erica*, *bothyllum*, *Kalsanthus coccinea* and other plants were staged by Messrs. Cutbush and Son, Highgate.

Messrs. J. Hill and Son, Lower Edmonton, showed a very handsome group of *Ferns* in great variety. From

ANSWERS TO CORRESPONDENTS.

RULES FOR CORRESPONDENTS.

Questions and Answers. *The Editors intend to make THE GARDEN helpful to all readers who desire assistance, no matter what the branch of gardening may be, and with that object will make a special feature of the "Answers to Correspondents" column. All communications should be clearly and concisely written on one side of the paper only, and addressed to the EDITORS OF THE GARDEN, 29, Tavistock Street, Covent Garden, London. Letters on business should be sent to the PUBLISHER. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query is sent, each should be on a separate piece of paper.*

Names of Plants. S. T. 1. *Mertensia virginica*; 2. *Linaria pallida*. Small Fern from a Cystopteris, probably *C. montana*, but broad immature and too much shrivelled to identify. Larger Fern from appears to be one of the dwarf triangular mountain forms of *Lastrea dilatata*, sometimes called *L. d. collina*. 3. *Saxifraga caryophylla*. B. Shrub; *Syringa Japonica*. Plant with feathery seed a Gum, probably *montanum* or *pyrenaicum*, but impossible to name with certainty from seed-head only, unaccompanied by flower and leaf.

FRUIT GARDEN.

Thinning outdoor Grapes (IGNORANT). Certainly it will assist in the production of finer berries if you can give the time to the proper thinning of some of the best bunches of your sweet Water Grapes, but to thin all the bunches on a large vine may be too serious a labour. It so often happens that in the case of outdoor vines far too many bunches are left, and as a result the berries are small. Were it possible to have the roots of outdoor vines near the surface, as is properly the case with house-grown vines, so that they could be literally fed with liquid and artificial manures whilst the berries are swelling, that would help them very much. But as that can hardly be, it is best to allow the crop to be a moderate one of berries as fine as can be. Some of the smallest bunches may be left unprotected, even if wasps and flies take them. If all the best be enclosed in small muslin bags, just as they begin to ripen, that will save them from much harm and improve the berries.

Planting Strawberries (KENTISH MAN.) You should have no difficulty in obtaining good strong plants of Strawberries in your neighbourhood about the end of July; but to get the best rooted layers you had better purchase from some nurseryman who layers into pits, taking great care that all the earliest runners are used for that purpose. With such plants put out into soil that has been trenched 2 feet deep and had a liberal dressing of manure buried into it, you should have a fine crop of fruit next season. The plants would probably come to you turned out of pots. When planted the roots should be loosened a little, then well fixed in the soil, not, of course, too deeply, the soil being firmly pressed. If the soil be dry give each plant a good watering. Do the planting in August if you can. Small plants put out late are almost certain to be flowerless the next year, and then there is much disappointment. Endeavour to obtain Royal Sovereign, Sir Joseph Paxton, and, for latest, either Waterloo or latest of All.

Grafted trees (O. J. S.) We are pleased to learn that your grafted Apple and Pear trees now look so well. You will do well now to remove all the shoots that have broken out below the grafting union, as it is desirable to throw all the strength of the tree into the new heads that the grafts have formed. The shoots below the grafts such as are on your trees are assumed to assist in active sap flow and root action, but that may not always be the case. We have found grafts to do quite as well, if not better, without them also. Where you have not done so lose no time in tying stout sticks to the stems of the grafted trees, and in that way you will be enabled to give some support to the grafts as they grow long, otherwise they may be blown out by a high wind. Certainly remove all bandages now as the stems will be swelling. Leave all grafts to make as free growth as they can this season.

FLOWER GARDEN.

Everlasting Peas (VOLING). Your everlasting, or, properly speaking, perennial Pea, is the large-flowered *Lathyrus grandiflorus*, which is perhaps the most beautiful of all these perennial Peas, as it is certainly the earliest. This variety gives the finest flowers of all the Pea family, the standards of back petals being particularly erect. We should like to see the standards of Sweet Peas showing this fine form. The best known other perennial Pea, one that produces clusters of several flowers on a stem and in several colours, the pure white being perhaps the best, is *Lathyrus latifolius*. A variety that is very handsome, but little known, is *Lathyrus reticulatus* or Drummond. This produces flowers of a reddish-carmine colour, and in small spikes also. You can increase yours by lifting pieces of the running roots in the winter and replanting them. You may also save seed and sow it. Generally once these plants are established they increase rapidly. Young shoots in the spring will also root as cuttings.

Rock Roses for wild gardening (S. H.). The answer to the question, "Which of the *Branthemum*s would be most effective for a wild garden, the shrubby or the herbaceous," would depend a good deal on the size and general conditions of the area it is proposed to fill. The Rock Roses usually grown in gardens (excepting some annual kinds, which are of less consequence) cannot be called herbaceous, as they are evergreen subshrubs, woody at the base. The usual low-growing kinds, in many varieties of colour, are beautiful from the middle to the end of June, and

even later, on level spaces or sunny banks or any kind of rock work. The larger sorts, which form a kind of link between these and the *Cistus*s, and are represented by such kinds as *H. formosum* and *H. halimifolium* (especially as to *H. formosum*) are less prostrate and a little more shrubby-like. It is difficult to say which are the most effective, as all are ornamental in a high degree. They can be raised from seed, but a better way is to buy a representative collection from a good nursery and afterwards to choose those that are liked best and make cuttings every two years, for, though they do not actually wear out, yet after the first three years they become straggly, and the younger plants are handsomer and more prosperous. They do best in a place fairly sheltered but in full sun.

Austrian Briar Harrisoni (A. M. G. W.).—A note of which appeared in our issue of June 16.

GARDEN DESTROYERS.

Caterpillars (J. D.).—The caterpillars attacking your plants are those of the nullin moth (*Cnecilia verbasci*). The plants are Mulleins, probably *Verbascum Thapsus*. The caterpillars should be shaken off, trampled on, or picked off by hand. I am not sure how such plants would stand any insecticide, as their leaves would become so clogged with any wash. The chrysalides are formed in the soil near the plants. In the winter or autumn they might be found by digging up the ground.

Rose leaves fastened together (SUBSCRIBER).—The east wind has nothing to do with the caterpillar that fastens the leaves of Roses together. Certain moths, of which there are several kinds, lay their eggs on the leaves, and the caterpillars, as soon as they are hatched, begin to spin the leaves together to form a shelter, and they feed on the leaves. The best way to destroy them is to hold a basket under the leaves and then cut them off so that they will fall into the basket, or the bundle of leaves may be pinched between the finger and thumb, but great care must be taken that the caterpillar does not drop out during the operation, for they will instantly if they get the chance. No insecticide can be made to reach them while in the shelter of the leaves. As regards the red rust on the Roses, the cause is not in the soil, except that some of the spores may pass the winter there. It is one of those fungi which attacks the Rose in three different forms, the red powdery spots that appear in the spring on the leaves and shoots. These spots become darker later on, owing to the formation of the second kind of spores; the third kind appear as small black dots on the under sides of the leaves, and in this state the fungus passes the winter. All the leaves that fall from a plant that has been infested from this fungus, particularly those that fall in the autumn, should be collected and burnt, and the plants before the buds open in the spring should be well wetted with 2 ounces of sulphate of copper dissolved in 3 gallons of water. The earth under the plants should be also wetted, and when the red rust appears the plants should be sprayed with weak Bordeaux Mixture once a fortnight during the summer.

BOOKS RECEIVED.

"The Story of Bird Life." By W. P. Fyrcraft. Published by Messrs. George Newnes, Ltd., Southampton Street, Price 1s.

We have also received from Messrs. Newnes "The Sunday Strand" for July. A bright and excellent number in every way.

"The Captain," also for July, which is one of the best numbers we have received of this healthy, well-written monthly magazine for boys.

"The Wide World Magazine" (July), which has amongst many good articles an excellent account, with photographs, of Mountaineering in Cape Colony.

"The Strand Magazine," which is always welcome, is as interesting as usual this month.

"Celebrities of the Army." Contents: Coloured portraits in Part VIII, just issued, price 6d, net, of Sir H. C. Cromie, Colonel R. G. Kekewich, and Lieutenant-General the Hon. N. G. Lytton, &c.

Other publications sent by this firm we shall notice more fully shortly.

CATALOGUE RECEIVED.

New Carnations and Protes. *Wm. Weyburn, Danish, Devon.*

TRADE NOTES.

AN EXCELLENT NEW FUMIGATOR.

WE have pleasure in being able to report most favourably on the Nicotifield compound for greenhouse fumigation, sold with convenient fumigators by Messrs. Hunter and Gow, of Liverpool. It is effective, simple, and cleanly, and has the advantage of leaving the house smelling sweet and clean, and without the unpleasant heavy odour left by the older methods.

ROYAL HONOURS FOR A COCK SKEEBSMAN.

IT is with much pleasure we announce the fact that Mr. Wm. Raybo Hartland, of Cork, has been sent the Royal Warrant from Buckingham Palace appointing him purveyor of seeds in Ireland to Her Majesty the Queen. The firm of Hartland is one of the oldest in Ireland, dating back to 1774.

ERRATA.

IN THE GARDEN of June 16, in the report of the Manchester Whitsum Show, for Mr. J. Kirk, Heaton, read J. Kirk, Heaton Chapel. These two places are several miles apart.

WE desire to say that our French, though by no means perfect, is not quite so bad as is represented by an unfortunate slip that escaped notice in the proof, whereby the word *carab* appeared in a strange disguise in our issue of the 23rd inst. ERS.

W. Hayward, Fife Road, Kingston-on-Thames, came a variety of floral designs, including a cross of white Pinks, a wreath of blue Cornflowers, bouquets of Rose W. A. Richardson, Carnations, &c. Messrs. Robert Green, Limited, Crawford Street, W., sent a seedling Croton, Adams.

Mr. James Hudson, gardener to Mr. Leopold de Rothschild, Gunnersbury House, Acton, staged an effective group of *Nymphæas* in tubs, with *Myosotis* and fronds of the common bracken. The *Nymphæas* included *N. tuberosa*, *N. marliacæ*, and *N. stellata*, the latter beautiful kind being well in flower.

Mr. McLeod, gardener to Mr. J. P. Morgan, Dover House, Roehampton, exhibited a fine group of plants, consisting chiefly of such subjects as Carnations, *Caladiums*, *Crotons*, *Kalosanthis coccinea*, *Clerodendron falax superba*, &c.

RICHMOND HORTICULTURAL SOCIETY—ORCHIDS.

Sir F. Wigan had one of the finest groups of Orchids that has ever been staged at this show, the whole group being most remarkable for the quality of the flowers. In the back row were some remarkable varieties of *Sobralia macrantha*, a fine plant with four large flowers of S. m. alba, and the plant of *S. Veitchii aurea*, which was certified at the last meeting at the Drill Hall. Among the *Cattleyas* were several grand varieties of *C. Warszewiczii*, *C. gaskelliana*, and *C. g. albescens*, with almost white flowers; plants of *Lælia tenebrosa* were also numerous, and included several exceedingly dark varieties. Among the hybrids was a fine variety of *Lælia-Cattleya* Henry Greenwood (*L. C. Schilleriana* - *Hairyana*), intermediate in character between its parents; *L. C. cambiana* (*purpurata* - Mossie) with two racemes of four and three flowers respectively; and *L. C. Wiganie*, a new hybrid between *L. C. Golliana* and *C. Mossie*. The latter plant carried two racemes of two flowers each. There were also *L. C. Wiganie* var. *auca* and *Cattleya Grayæ* (*Velatina* - *Schofieldiana*), *Erides*, *Cypripediums*, and other species were well represented. The group was neatly and tastefully arranged, and every credit is due to Mr. W. H. Young.

Mr. H. Little, Baronshalt, Twickenham (gardener, Mr. Howard), also staged a fine group, containing some finely-flowered plants of *Cymbidium Lowianum* and *Dendrobium* in variety. The *Cattleyas* were represented by some grand varieties of *C. Mendeli*, several grand varieties of *C. Mossie* and *C. Warszewiczii*, and a distinct variety of *Lælia-Cattleya*, *Lady Wigan*, with purple streaks down the petals. *Odontoglossums*, *Cypripediums*, *Miltonias*, and other species formed a most interesting and attractive group.

In the competitive classes for six Orchids in flower, Mr. Little was first with a grand plant of *Vanda* with twenty-two spikes of flower, V. tricolor with three spikes of flower, a fine specimen and variety of *C. Mendeli*, *Lælia tenebrosa*, *L. purpurata*, and *Thunia Marshalliana*. Sir F. Wigan was a close second with *Epidendrum vitellinum majus*, *E. plesmatorcarpum*, *Lælia tenebrosa*, *Cypripedium Lawrencianum*, *Cattleya Warszewiczii*, and *Phalenopsis grandiflora*.

The only trade group of Orchids was sent by Messrs. Hugh Low and Co. It included, among many others, fine varieties of *Lælia tenebrosa*, *Cattleya Mossie*, *C. M. Wagneri*, *C. M. Wagneriana*, *C. Mendeli*, and *C. Warszewiczii* were also finely represented. A pretty variety of *Vanda* teres and the rare *V. Hookeriana* was also included, and a *Cypripedium Vipani*.

RICHMOND H.S. AWARDS.

In a class for a group of plants arranged for effect, not to exceed 60 square feet, the first prize was awarded to Sir F. Wigan, Bart., East Sheen, and the second to Mr. J. W. Barker, Ham Common.

For forty-eight distinct Roses, three blooms of each, Mr. Frank Cant, of Colchester, took the first prize, while the second and third places were occupied by Mr. E. R. Cant and Messrs. D. Prior and Son respectively. In the class for twenty-four distinct Roses, Messrs. D. Prior and Son were first, Mr. E. R. Cant second, and Mr. Frank Cant third. In that for twelve distinct Roses, Messrs. D. Prior and Son took the first prize, Mr. E. R. Cant was second, and Messrs. G. and W. Birch, Peterborough, third.

For table decorations, the first prize was taken by Miss N. H. Cole with a pretty arrangement of Carnations, *Centaureas*, &c. The second prize was awarded to Miss C. R. Cole, and the third to Mrs. Noy.

In the class for a bouquet for the hand the first prize was won by Mr. William Hayward, and the second by Mr. W. Frowman, Richmond.

Hardy flowers, fruit, and vegetables formed a leading feature, but we must leave over a full report until next week.

NATIONAL ROSE SOCIETY, SALISBURY

(By telegram).

IN the nurseryman's class for forty-eight blooms, distinct varieties, Messrs. Dickson and Sons were first.

For thirty-six varieties of garden or decorative Roses, Messrs. Paul and Son, Cheshunt, were first.

In the amateur classes for twelve blooms (open), the Rev. J. H. Pemberton was first.

In the Tea and Noisette section (Princess Memorial Cup), Mr. A. H. Gray, of Bath, was the winner.

For twelve distinct varieties (amateur), Mr. Gray was first.

NATIONAL DABELIA SOCIETY.

A COMMITTEE meeting will be held on July 3 at 4 p.m. in the afternoon in the rooms of the Horticultural Club, at the Hotel Windsor, Victoria Street, Westminster, by kind permission of the members of the club.

Agenda: Election of judges for meeting on September 25, and other business. J. F. HUBSON, Hon. Sec.

GARDENING APPOINTMENT.

MR. THOMAS STILING, previously head gardener at Cranmore Place, Chislehurst, Kent, has been appointed to succeed the late Mr. Jenkinson as head gardener at Livermore Park, Bury St. Edmunds, Suffolk.

