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1. *Peltanion Arizonicum* 2. *Ipomoea Hartwegii*

Floricultural Cabinet, December 1844

THE
FLORICULTURAL CABINET

AND
FLORISTS' MAGAZINE.

JANUARY TO DECEMBER, 1845.

VOLUME XIII.



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P R E F A C E,

THE passing away of another Year, and the close of another Volume of the FLORICULTURAL CABINET, necessarily imposes upon us the pleasing duty of returning our grateful acknowledgments to our Friends for the unabated support which they have continued to favour us with.

We very sensibly feel the friendliness of our supporters, which, after thirteen years of Editorial labours, is not only continued, but increasing proofs of favourable regard are constantly afforded us. This extended and substantial sanction of our Magazine has evinced that our annual promises have been most satisfactorily realized, and our labours favourably regarded.

The very unprecedented sale of the FLORICULTURAL CABINET assures us of its having a firm hold of a Floricultural public, and this is to us in the highest degree flattering.

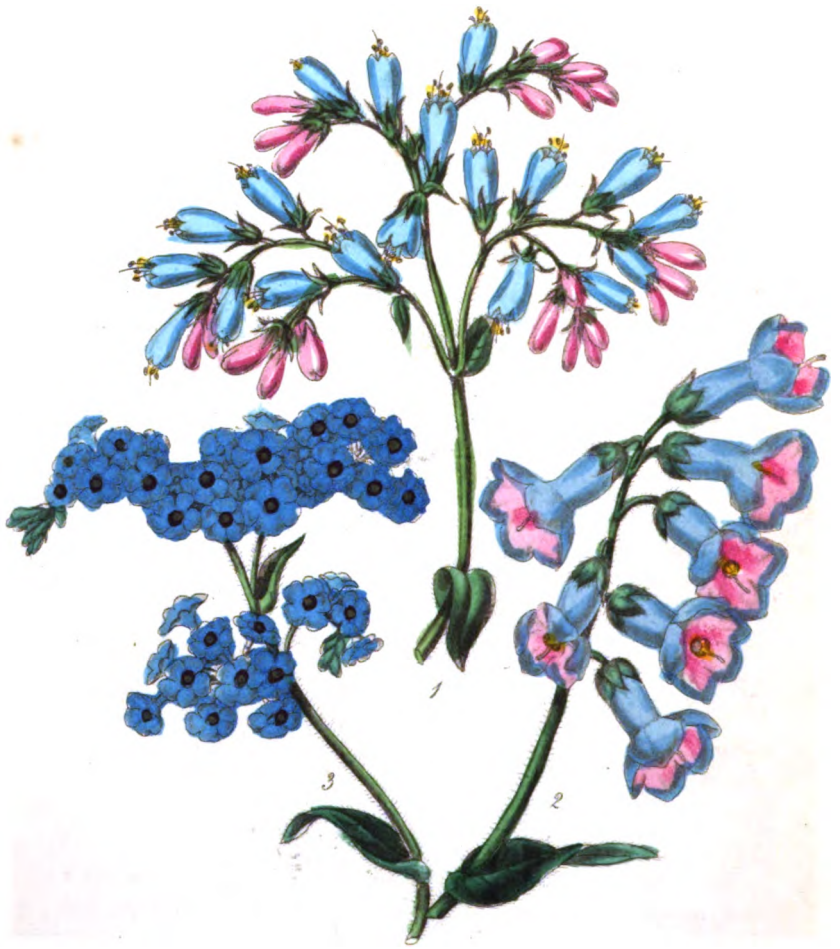
This encouragement will excite us onward, and give a fresh impulse in increasing zeal to future duties, and in demonstrating that our gratitude to our numerous supporters is genuine, deep, abiding, and again most cordially renewed.

During the past year we have had numerous testimonies forwarded us of the improvement effected in the Volume now closing, especially so in the faithfulness and excellence of the new style of Engraving and Colouring of the Figures in our Plates, as well as of the selection of the new and best flowers given. In these respects we shall not only in future endeavour to maintain our position, but, as far as practicable, improve thereon.

Hitherto we have successfully appealed to our friends through this medium for their assistance in literary contributions, of what is deemed interesting and useful to Floriculturists. We feel assured our long faithful friends will not fail us now, and we in addition respectfully

solicit the co-operation of new Contributors. With such aid we can assure our Supporters no exertion on our part shall be wanting to render the **FLORICULTURAL CABINET** what it is in every respect professed to be.

Downham;
December 18th, 1845.



1 *Cochium petraeum*. 2 *Synnolophum longiflorum*. 3 *Allysimum* sp.

Floricultural Cabinet, Jan. 1845

THE
FLORICULTURAL CABINET,

JANUARY 1st, 1845.

PART I.
EMBELLISHMENTS.

ARTICLE I.

1. ECHIUM PETRÆUM.

It is a native of Dalmatia, and flourishes well in the open border, being planted out at the end of March. It requires to be kept in a cool pit or frame during winter. It does very well if grown in a greenhouse, making a fine bushy plant there, highly ornamental. It has bloomed profusely in the greenhouse at the London Horticultural Society's garden, where we saw it in spring, a most lovely object. It is easily increased by seeds or cuttings.

2. CYNOGLOSSUM LONGIFLORUM.

This very beautiful flowering plant is a native of Cashmere, a hardy perennial, border flower, growing about two feet high, and blooming profusely the greater part of summer. It is a pretty ornament for the flower-garden, readily increased by seeds or offsets.

3. MYOSOTIS AZORICA.

This very beautiful FORGET-ME-NOT is from the Azores. We saw a specimen of it in most profuse bloom, and we were informed that the plant spreads rapidly, and blooms most profusely, forming quite a mass of its beautiful rich blue flowers. It will probably require a little winter protection in a cool frame, or a glass over it; it does

THE EFFECTS OF CAMPHOR ON CUT FLOWERS, &c.

well in a pot, too, in a greenhouse. It requires to be grown in a shady situation, from powerful midday sun. It deserves to be grown wherever practicable. It may soon be obtained of the principal nurserymen.

ARTICLE II.

THE EFFECTS OF CAMPHOR ON CUT FLOWERS, AND PLANTS GROWN IN POTS.

BY MR. CHARLES CLARK, OF LEIPNIC ROAD, CAMBERWELL, LONDON.

THE stimulant effects of Camphor upon the human and some other animal bodies are well known, but those on vegetables are not only new, but very astonishing in their nature.

A tulip bloom, with two leaves on it, taken out of a stand of tulips that were apparently in the same state of health, was placed in a pint of water which had been stirred up for some time, in a *hot* state, to dissolve half an ounce of good Camphor, while the other flowers in the stand, which had the benefit of the fresh water, were quite drooping, leaves of that placed in the Camphor-water elevated themselves considerably on their footstalks, and the flower expanded more than in its natural growing state; the stamens receded from the pistillum, and the three outer leaves of the calyx, or flower-cup, were remarkably reflected back, and became extremely rigid and elastic. The internal surface of the flower perspired considerably, though a similar perspiration could not be perceived in the flowers that were in the stand of pure water, although they were in the same room, and of equal temperature.

The camphorated flowers continued in a very invigorated state for three entire days, after which they began to droop; but the leaf decayed sooner than the flower. The other flowers in the simple water did not survive half so long in a fresh state before they drooped, and on then placing them in a solution of Camphor, revived them considerably. Notwithstanding the surprising effect the Camphor so applied produced, no odour or smell of it could be traced in any part of the tulip flower or leaf, except that portion which had been immersed in the camphorated water. This circumstance seems to render it probable that the Camphor was not absorbed by the bloom,

but that it exerted its remarkable influence entirely through the portion of the solid stem which was immersed.

The appearance, however, was very striking, and might be compared to the physical effects on the human constitution. Several other experiments I have made; one in particular, on the cactus tribe, using Camphor, applied as a liquid manure; the plant was of a stunted growth, and had not made much progress for the two previous years, and was to all appearance in a totally withered state: it was taken out of the pot, with as much of the earth shaken off as could be done without damaging the roots, having ready some rich mould, and a little sand impregnated with an ounce and a-half of Camphor, pounded small, was well mixed with the mould, and the plant was planted therein, slightly watered afterwards with camphorated water in a lukewarm state, then placed on a shelf, having a south aspect. In the course of three weeks the plant threw up two fine shoots, and the old stems or limbs stiffened, and became very elastic, and now are growing most vigorously. The temperature of the house is from sixty to seventy degrees.

As Camphor is very sparingly soluble in water, it is natural to conclude that the stimulant effects were produced by a very small part of the portion mingled with the water. I hope these experiments may lead to others in floriculture, tending to promote so interesting and delightful a science.

ARTICLE III.

OBSERVATIONS ON FLORICULTURE AND HORTICULTURE,
BEING AN EXTRACT OF AN ADDRESS DELIVERED AT ST.
ANDREWS, N.B., FLORICULTURAL AND HORTICULTURAL
MEETING, BY THE REV. JAMES TAYLOR.

COMMUNICATED BY A NORTH BRITON.

HAVING had the unbounded pleasure of hearing the address delivered by the reverend gentleman above named, I feel assured it will not only be interesting to other readers of the FLORICULTURAL CABINET, but tend in some degree to promote this truly delightful art; and with these views I forward it for insertion in the January Number. After some introductory observations, Mr. Taylor proceeds as follows:—

“ I feel that I run some risk of exposing myself to the charge of presumption in undertaking to speak on the subject of gardening, in the presence of an audience so thoroughly acquainted with the art, and who have given such conspicuous proofs of the ability and success with which they have cultivated it. But as the office is one which I have not taken upon myself, and as an individual who possesses no great practical knowledge of the mysteries of a science may yet know enough of it to be able to set forth its advantages and pleasures—one point at least on which I can speak from experience—I have, without hesitation, acceded to the request made to me, that I should address you on the present occasion. The art for the promotion of which your society has been formed has been held of importance by every civilized nation in every age. It is practised alike for pleasure and for profit, and can be made subservient both to private use and enjoyment, and to public recreation and advantage. It gladdens the heart of the peasant, whose little plot may contain, as Horace Walpole expresses it, merely ‘ a gooseberry bush and a cabbage;’ and it is numbered among the choicest luxuries of the rich and noble, whose flower-gardens, and hot-houses, and orchards, are enriched with the productions of every climate and quarter of the world. The cultivation of this pursuit is not only conducive to health and repose of mind, but, moreover, has a direct and powerful tendency to form pure and simple tastes, and to call forth and strengthen the best and noblest feelings of our nature. ‘ Our first most endearing and most sacred association,’ observes a well-known authoress, ‘ are connected with gardens; our most simple and most refined perceptions of beauty are combined with them; and the very condition of our being compels us to the cares, and rewards us with the pleasures attached to them.’ ‘ Gardening,’ says Sir William Temple, ‘ has been the inclination of kings and the choice of philosophers.’ It is associated with the names of many of the most celebrated philosophers and poets, from Bacon to Cooper and Scott, and has exercised the talents of as numerous and brilliant an assemblage of distinguished writers as any one subject can boast of. It is the delight of boyhood in every rank and condition of life, and a well known statesman, after sixty years’ experience, affirms, that the love of gardens is the only passion which augments with age. The duty of ‘ considering ’ the flowers of the field is enjoined upon us by

Him who 'spake as never man spake;' and many and beautiful are the lessons which they are fitted to convey. The delicate snowdrop, the welcome messenger of spring, so pure and pale—so true an emblem of hope, and trust, and confidence, coming forth and saluting us amid the naked landscape, amidst chilling blasts and beating rain, while all its more gorgeous kindred are still slumbering in the earth—the 'yellow cowslip and the pale primrose,' associated with tender recollections of the verdant bank with its little streamlet, where we gambolled in joyous childhood and gathered flowers,

'In life's morning march, when our bosoms were young,'

and when the cares and struggles of life were as yet happily unknown—the violet, with its modest retiring beauty, and its exquisite perfume, reminding us of the pure and invigorating breezes of spring—the jessamine, 'with its dark green leaves and little silver stars,' saluting us with its delicious scent through the open casement, and bringing before our mind's eye the cottage porch with all its interesting associations—the stately lily, calling to recollection that memorable passage in the sacred volume, 'Consider the lilies of the field, how they grow; they toil not, neither do they spin; and yet I say unto you, that Solomon, in all his glory, was not arrayed like one of these'—the heartsease, the 'little western flower,' so beautifully described by our great dramatic poet—the forget-me-not, with its tender and touching associations—the pale narcissus, with its classical legend;—all of them, in short, from the rose, with its exquisite combinations of perfume, form, and colour, which have gained for it the first honours in the floral world, down to 'the meanest floweret of the vale,' speak to the taste and feelings, to the imagination and the heart, and daily read us many lessons, silent, but not less powerful, of the vanity of earthly pomp, of the beauty of heavenly simplicity and purity, of contentment and lowliness of mind. Besides the pleasure and instruction which these productions of the garden are in themselves fitted to convey, the use which has been made of them by our most admired authors has caused them to come home still more forcibly 'to our business and bosoms.' 'There has never been a poet, simple or sublime, who has not adorned his verse with these specimens of nature's cunning workmanship.' Their natural beauties have thus been greatly heightened by these acquired associations. To say nothing of innumerable other instances—what

classical scholar needs to be reminded of Melenger's garland? or what reader of English poetry does not remember Milton's description of Paradise, and the many exquisite passages scattered so profusely through the works of our great dramatic poet, as to have led to some ingenious surmises that he was born and bred a gardener? or what Scotchman is not familiar with the 'Mountain Daisy,' and the 'Posie of Burns,' in which it is difficult to decide whether the natural object or the poetical application of it is the more tender and beautiful? The custom of affixing a figurative signification to those productions of nature seems to have prevailed in all ages and in all countries. In ancient times the violet was as proud a device of the Ionic Athenians as the lilies of France, or the rose of England, or the shamrock of Ireland, or 'the rough bur thistle,' with its threatening motto, is auld Scotia's 'emblem dear.' Patriotic recollections thus combine with poetical associations and natural beauty, to stimulate to the cultivation of the delightful art. 'Talk of perfect happiness or pleasure,' says old Gerarde, 'and what place was so fit for that as the garden place wherein Adam was set to be the herbalist? Whither did the poets hunt for their sincere delights but into the gardens of Alcinous, of Adonis, and the orchards of the Hesperides? Where did they dream that heaven should be put in the pleasant gardens of Elysium? Whither do all men walk for their honest recreation, but thither where the earth hath most beneficially painted her face with flourishing colours? And what season of the year more longed for than the spring, whose gentle breath enticeth forth the kindly sweets, and makes them yield their fragrant smells?' Surely it ought to require but little argument to excite to the cultivation of a pursuit thus powerfully recommended to our notice—a pursuit which tends to diffuse peace, and comfort, and contentment throughout the land; which binds together the various classes of society by a common interest, and by the interchange of kindnesses and favours; which affords healthy exercise and innocent recreation; which gives a local attachment and strengthens the love of our native land; which excites a spirit of honourable and kindly emulation, and teaches men to appreciate whatever is natural, and simple, and pure; and, above all, which leads us from 'Nature up to Nature's God;' and, while filling our minds with admiration of these the works of His hands, at the same time inspires our hearts with gratitude to Him who

'causeth the grass to grow for the cattle, and herb for the service of man,' who 'in wisdom has made them all,' and whose 'tender mercies are over all his works.' Gardening has long been a favourite art in Britain, and there is probably no country which offers similar advantages for its cultivation. Of late years, however, this delightful pursuit has made unexampled progress, which is in no small degree to be attributed to the formation of horticultural societies. Only thirty-five years have elapsed since the formation of the London society, the first comprehensive institution of its kind, and there are now in Great Britain upwards of two hundred provincial societies, founded more or less upon its model. There are at least twenty monthly publications, and no less than three weekly newspapers devoted to horticultural subjects. Immense sums of money are now annually spent in the promotion of this, one of the purest of all human pleasures. 'The dark jungles of Hindostan, the fathomless woods of Mexico, the unapproached valleys of China,' and the boundless forests of America, are all ransacked to add to our floral treasures; and 'governments, and companies, and societies vie with men of science, and commerce, and wealth, in gladdening our British gardens with a new flower.' Our flower-gardens and hothouses are filled with the productions of every country, and of every clime. Here we see the mignonette, 'the Frenchman's darling:;' there the clove and stock gilliflower, the sweetbriar, and the wallflower of our own land. Here are the mosses and lichens dragged from under the snows of Iceland; there the tenderest creepers of the tropical jungles. At one time we behold the gorgeous geranium and the fulgent fuchsia, at another—

————— 'daffodils,

That come before the swallow dares, and take

The winds of March with beauty;'

Violets—

'That strew the green lap of the coming spring;'

And again, 'the flowers of middle summer'—

'Hot lavender, mint, savory marjoram,

The marygold that goes to bed with the sun,

And with him rises weeping.'

Holyhocks and dahlias, China asters and African marygolds mingle with the lily of the valley, the scented heath, and the peony rose.

At one time, our curiosity is excited by those wonderful resemblances of living creatures—the air-plant, the hare's-foot fern, and the Tartarian lamb—the sensitive plant, which shrinks from the hand of man—the ice-plant, that almost cools one by looking at it—the pitcher-plant, with its welcome draught—the hair trigger of the stylium—and, most singular of all, the carnivorous Venus' fly-trap ;

‘Only think of a vegetable being carnivorous !’

which is said to bait its prickles with something which attracts the flies, upon whom it then closes, and whose decay is supposed to afford food for the plant ;’—at another, our hearts are gladdened by the sight of those universal and perpetual favourites

‘That dwell beside our paths and homes.’

Fortunately, this innocent and most delightful pursuit requires the command neither of costly materials nor of unbroken leisure, to be followed with advantage and pleasure. As the love of these productions of nature is almost universal, so the opportunities of cultivating them are placed within the reach of almost all classes of society. ‘Gardening,’ it has been justly said, ‘not only affords common ground for the high and low, but, like Christianity itself, it offers peculiar blessings and privileges to the poor man, which the very possession of wealth denies. The pale-faced mechanic or weaver may derive more real pleasure from his green bed of smoked auriculas, or his mignonette growing in a cracked teapot, than the lordly possessors of Sion or Chatsworth, from their hundreds of decorated acres, because, not only personal superintendence, but actual work is necessary for the true enjoyment of a garden. We must know our flowers as well as possess them ; and the poor peasant who has the privilege of cultivating a little plot of ground, where he knows every flower, because they are few, and every name, because they are simple, whose rose-bushes and gilliflowers are dear to him because himself has pruned, and watered, and watched them, has marked from day to day their opening buds, and removed their fading blossoms,’ is furnished with the means of obtaining, if not happiness, the nearest approach to, in this world, content,—

‘Yes ; in the poor man's garden grow
Far more than herbs and flowers ;
Kind thoughts, contentment, peace of mind,
And joy for weary hours.’

In a like strain, the author of 'Human Life' beautifully says,—' I would not have my garden too extended ; not because flowers are not the most delicious things, speaking to the sentiments as well as to the senses, but on account of the intrinsic and superior value of moderation. When interests are divided they are not so strong. Three acres of flowers, and a regiment of gardeners, bring no more pleasure than a sufficiency. Besides which, in the smaller possessions there is more room for the mental pleasure to step in and refine all that which is sensual. We become acquainted, as it were, and even form friendships with individual flowers. We bestow more care upon their bringing up and progress. They seem sensible of our favour, absolutely to enjoy it, and make pleasing returns by their beauty, health, and sweetness. In this respect a hundred thousand roses, which we look at *en masse* do not identify themselves in the same manner as even a very small border ; and hence, if the cottager's mind is properly attuned, the little cottage garden may give him more real delight than belongs to the owner of a thousand acres. All this is so entirely nature, that give me a garden well kept, however small, two or three spreading trees, and a mind at ease, and I defy the world.' It is impossible, therefore, to view, without the greatest delight, the progress which the taste for these pure and simple pleasures is making among the working classes of the community ; and we cannot but regard it as a sign of a healthy state of society when the cottager is seen rearing his sunflowers and sweet-williams before his door, and the mechanic breeding his prize-competing auriculas with as much honest pride and zeal as the nobleman can take in his hothouses and conservatories. Crabbe has given a striking description of the operation of this taste in his friend the weaver, for whom—

—' Is blooming in his rich array
 The glorious flower which bore the palm away ;
 In vain a rival tried his utmost art ;
 His was the prize, and joy o'erflowed his heart ;
 " This, this is beauty ! cast, I pray, your eyes
 On this my glory ! see the grace—the size !
 Was ever stem so tall, so stout, so strong,
 Exact in breadth—in just proportion long ?
 These brilliant hues are all distinct and clean,
 No kindred tint, no bleeding streaks between ;
 This is no shaded, run-off, pin-eyed thing—
 A king of flowers—a flower for England's king."

William Howitt states that in the outskirts of Nottingham there are no fewer than five thousand gardens, the bulk of which are occupied by the working classes. It is impossible to over-estimate the amount of good done by these garden allotments, affording, as they do, the means of healthful employment and innocent recreation, and pure and peaceful enjoyments to the occupants and their families, and presenting in their attractions a most gratifying contrast to those noisy and demoralizing recreations in which the inhabitants of our crowded towns but too often indulge. Every lover of his species, and every enlightened patriot, must earnestly desire the extension of the system over the whole length and breadth of our country, and horticultural societies would be well entitled to encouragement and support if they had done nothing more than by giving an impulse to the cultivation of this pursuit among the poor, been the means of diffusing peace, and comfort, and contentedness among the homes of those who 'shall never cease out of the land.'"

ARTICLE IV.

DIRECTIONS FOR PROVIDING TENDER PLANTS TO ADORN THE FLOWER-GARDEN DURING SUMMER, &c.

BY LOUISA JOHNSTONE, OF MAY'S TERRACE, DUBLIN.

THE flower-gardens are now, during the summer months, in many cases almost exclusively decorated with exotics; and too much cannot be said in favour of a practice that enables them to rival, for a time, the sun-lit scenes of happier climes, from which we have lately received many plants so perfectly suited to such a purpose, and so exquisitely lovely when displaying their beauty in masses, that without them our gardens would be a blank indeed. What, in all the range of floral beauty, unlimited as it is, could compensate us for the loss of even that single group, the Verbenas? The duration of plants used for this purpose, under the mode of culture this practice has introduced, is only annual—as they require to be propagated in autumn or spring, produce their blossoms during the season, and perish at its close. As they cannot be turned out with any certainty of success until the season is far advanced, the small plants require to be planted thick enough to cover the soil, and produce an immediate effect. Thus a moderate-sized garden requires a considerable

number of plants to furnish it annually, a prospect that would have appalled even the best gardeners of yore; but at the present day, where sufficient means are allowed, the propagation of the plants is a matter of no difficulty. In cuttings, put in during February or March, failures seldom occur; when they do, they are generally the effect of too much confinement, and not, as is often assumed, of too much water. For the sort of cuttings I am speaking of, during the early part of the season, double glass is altogether unnecessary; watering them overhead during sunshine, while air is admitted, will prove of more service than covering them with glasses or shading, a practice that ought to be avoided.

The inexperienced will find a frame with a little bottom heat, covered 4 or 5 inches deep with light soil, the cuttings planted in the soil, a most efficient apparatus; and those who possess a stove or hothouse will find that cuttings in pots, plunged in the bark-bed, and fully exposed to the light, will root without further trouble.

The introduction of so many plants into the houses at a time when those wintered there are beginning to grow, and require more room, is a serious evil; to remove which as soon as possible, we are apt either to turn out the plants before the proper season, when they often suffer so much from premature exposure, that we are forced to replenish the beds, or endure their squalid appearance during half the season; or to retain the young plants, fifty or sixty together, in the cutting-pots, until they are finally turned out. This, no doubt, saves room, the labour of potting, and watering in a great measure; but it is the practice of the sluggard, and ought to be avoided with all his doings, as the plants invariably thrive better when potted singly, and allowed to establish themselves in the pots. To avoid these habits, and still retain house-room for more important purposes, select a sheltered spot, fully exposed to the sun, over which erect a temporary framework of rafters to support a roller, with canvass or matting. Cover the bottom of the space enclosed with sand. When the plants have been potted off, the pots filled with roots, and tolerably hardened, let them be taken to this shelter, carefully turned out of the pots, and each plant placed upon a small piece of turf previously placed upon the sand. As the plants are not expected to increase much in size while they remain here, they may be placed rather close together, thereby sheltering each other, and making the

most of the space covered. As the plants are placed, let the space between each be filled up with sand, when they will require little attention, save an occasional watering, until they are removed to their final destination. Under such a shelter, the hardier sorts, or such as have been propagated in autumn, may be placed as early as the 1st of March; the pots, and the room in the house that they occupied, to be employed in forwarding others to be treated in the same manner. High or cutting winds, heavy rains, and cold are to be guarded against, during which the canvass must remain down.

The mere saving of room is not the only recommendation such a practice possesses. When the plants are taken up with the small piece of turf attached, it will be found that they have formed numerous strong and fleshy spongioles, ready to seize upon the soil with the greatest avidity. They likewise suffer much when taken from under glass, and exposed to the direct influence of light: placed out so early, the cause is less powerful; the effect, consequently, less felt; and what they do suffer in appearance is entirely recovered while they remain where their appearance is not of the smallest consequence. Those who possess propagating-houses, and every convenience to supply the plants required of them, may deem it unnecessary to employ such an auxiliary; but the number of such is limited indeed, when compared with those who happily take an interest in a garden, and strive to make the most of the means placed at their disposal: to those who have only a green-house it is invaluable. Persons so situated would do well to propagate as many as possible in autumn; retain them in the cutting-pots during the winter, allowing them plenty of air, as the best safeguard against damp, the greatest enemy to plants at such a season; pot them off, and place them under the shelter already recommended in spring. When judiciously managed, it is surprising how many plants may be thus produced, even by a single frame. Annuals intended for planting out in beds, for which purpose there are many sorts well adapted, ought to be sown in autumn, and treated in every respect like cuttings, when they will produce a far finer display than those raised in spring.

Specimen greenhouse plants, in pots, placed singly or in groups upon the lawn, when properly introduced, produce a fine effect. To prevent plants so placed having their roots injured by the action of

the sun upon the pots, they ought to be plunged, or otherwise covered, and proper drainage secured. This is generally effected by a stratum of coal-ashes; but I have often had occasion to plunge plants where the remains of the ashes, turned up in digging, appear unsightly in the extreme: in these cases I drained the pots containing the plants by placing a small empty pot beneath each, and found the result so satisfactory, that I have adopted this plan wherever plants are plunged, it being free from every objection that applies to ashes. Pots are easier applied and removed; and more effectual, as by them worms are completely excluded. The plunging taking place when the pots required for drainage would be lying idle, they may be so applied without any sacrifice.

ARTICLE V.

ON PROPAGATION OF ERICAS.

BY THE FOREMAN OF A LONDON NURSERY.

OBSERVING in a late Number of the *FLORICULTURAL CABINET* a Correspondent asks for some information on the best mode of increasing Cape Ericas, and having, as foreman of one of the first nursery establishments in or around London, had many years' practice in the propagation of Ericas, I forward a few general instructions, which, if attended to, will ensure every desired success.

Increase by Seed.—Always sow in July or August, so that the young plants will be strong enough to sustain winter, but not too large, so as to become a dense mass of foliage, and thus be liable to rot. This would be the case if seed was sown much earlier in the season. Let the pot be filled up about one-third with drainage, such as broken pot and rough turfy peat in lumps; upon this, sandy peat, to about half an inch from the rim. Let the surface of the soil be made even, and as fine as possible; sow the seed regularly upon it, gently press it to the same by means of a flat piece of wood; this being done, only just cover it with the finest dusty sandy peat; if deep it will perish. Sprinkle it over with water as fine as dew, if possible, so that the seed be not washed bare; cover the top of the pot over with a flat piece of common glass; place the pot near the glass on a shelf in a greenhouse, or cool frame, shading from hot sun; keep the surface moist, not wet; protect from frost and excess

of damp in winter, and gradually expose the plants, by taking off the glass when the plants are up strong enough—say half an inch. Pot off singly in the following March into small 60-sized pots, well drained, in chopped sandy peat, using a little fine to imbed the fibrous roots in when first planted.

Increase by Cuttings.—Have a pot drained, one-third its depth, with broken pots, over this, sandy peat, and a few bits of stone or pot intermixed; this being made even, spread over it an inch of white, or what is called silver sand, let the surface be even with the rim; after watering it the cuttings may be inserted in rows not within an inch of the side. When the cuttings are put in, water must be given, so as to settle the sand firmly round them. After being allowed an hour or so to dry, the bell-glass should be put over. It often happens that the accumulation of wet inside the glass, running down to the surface of the soil, saturates it, so that it damps off the cuttings; to avoid this I have a zinc trough made to the size of the rim of the glass, an inch deep up the inside of the glass, and half an inch outside, with a portion that bends over the rim of the pot. This frame being pressed into the sand, the glass is fixed in it; being placed, a little sand is put round the outside of the rim, keeping the inside air-tight. This trough receives the accumulating water inside the glass, and the outside rim being lower than the inside, any accumulation of water would pass over the outside of the pot. This precaution renders it unnecessary to take off the glass to wipe away the wet, which ought not to be removed, but be kept on as much as possible. The cuttings must be obtained from newly pushed shoots; these usually may be had by May; any particular late kind is readily started by placing it in a little higher temperature. When the shoots are about three-quarters of an inch pushed, cut them off close to where they recently started from in a straight cut through. A small sharp razor should be used, so that the base of the cutting is a clean cut; the lower half of the cutting must have the leaves cut off close to the stem with the razor. Care must be taken not to bruise the stem by pinching or otherwise. In inserting the cuttings the base of each must rest upon the sand, and watering will sink it around the stem. By this mode of treatment the cuttings will root in the course of three or four weeks; when well rooted they are to be taken up with all the fibrous roots possible, and be potted

singly into small sixties in rough turfy sandy peat, watered, placed in a cool frame, kept close, and shaded from sun for a week, then gradually inured to more exposure.

REVIEW.

Observations on the Cultivation of Roses in Pots, by W. Paul Nurseries, Cheshunt, Herts. Published by Sherwood, Gilbert and Piper, Paternoster-row, London. pp. 32.

(Continued from page 293.)

“*Removal of tender Varieties.*—By the end of March, if room cannot be granted them in pits or a greenhouse, the tender varieties may be brought from their hibernal residence and plunged in an airy situation; and such as were left unpruned for late flowering should now be pruned. But if allowed to remain in the pits through spring, they will bloom much earlier, in greater perfection, and with finer foliage.

“*Plunging.*—It is an excellent plan, in plunging, to place the pots so that the bottoms rest on an inverted seed-pan or flower-pot. This secures a free drainage, prevents the roots growing through the bottom of the pot into the soil, and is an effectual barrier to the ingress of worms. The pots may be plunged level with the ground, and so far apart that the plants may not touch each other when full grown. After plunging, it is beneficial to cover the surface lightly with stable manure.

“*Watering.*—Water should be given abundantly through the growing and blooming season. Guano-water is an excellent manure for Roses in pots; it should, however, be used cautiously; an ounce to a gallon of water is sufficient. If the plants require watering oftener than once a-week, pure water should be given at the intervening periods.

“*Destruction of Caterpillars, Green Fly, &c.*—When the buds first break, and continually afterwards, the plants should be keenly sought over to destroy the grub and caterpillar, some of which are mere threads in appearance, but which travel from shoot to shoot, eating out the growing points, and thereby destroying the bloom, and whose presence can scarcely be detected till the mischief is done.

The green fly is often very annoying. The most effectual way of ridding ourselves of these pests appears to be by removing the plants to a greenhouse for the time, or enclosing them, as they stand in the beds, with a covering of wet garden mats placed double, or oiled canvass, and by fumigating with tobacco.

Disbudding, &c.—When the buds first push, if two or three break close together, the weakest, or those taking the least favourable direction, should be rubbed out. Such shoots as are inclined to grow rank, without blooming, should be stopped or taken out, if not wanted to form the head, for they appropriate to themselves the sap which should be directed into the flower-branches, and further render the plants of uneven growth. When the flower-buds are forming imperfectly they should be nipped out; and the size of the early flowers may be increased by removing, at an early stage, the small backward flower-buds.

Shading.—When the plants commence flowering, it will be necessary to shade them during the middle of the day; and the covering should be moveable, that they may have the advantage of alight rains and dews.

Characteristics of Varieties suited for Pot Culture.—In searching out the following, from an immense number of varieties which I have had constant opportunities of looking over while in bloom, I have endeavoured to hold in view the following points:—

1. Elegance of habit, regarding both growth and flowering.
2. Contrast of colour.
3. Abundance of bloom.
4. Form, or individual outline of flower.
5. Duration of bloom.
6. Sweetness.

Probably few given will have a claim on all these points; some combine them more intimately than others. The habit of a plant is always deserving of regard, and especially when intended to be grown in a pot. As a class of Roses, the Bourbons may perhaps be given as a standard of habit. In a collection, contrast of colour is of undoubted import; and some will probably be found selected on account of their distinctness, which otherwise would not have found place here. With regard to flowering, many of our profuse blooming Roses are not the most double nor the finest in form; but the magnificent appearance they present as pot plants, when viewed *en masse*, may perhaps be considered a sufficient plea for their insertion. These, however, may be distinguished throughout the list by an asterisk being prefixed. There

are various styles of Roses, each good in its way. Two points, however, (the habit of the plant and the form of the flower) should admit of universal application. By duration of bloom, allusion is more particularly made to the length of time the flowers continue in perfection when open, than to succession of flower. The Smithii (Yellow Noysette), for example, and in fact most thick-petalled Roses, hold their flowers in perfection for some days, whereas others fall almost as soon as expanded. Now, to obtain a number of flowers on one plant, in all the various stages of bloom, at a given time, is one great point the cultivator of Roses in pots for exhibition has to attend to. Therefore, both among summer and autumn Roses, such as are for some time in perfection as buds, and when expanded for some time in perfection as flowers, are certainly the most desirable. Scent, which is an estimable property of a Rose, needs no comment.

(To be continued.)

PART II.

LIST OF NEW AND RARE PLANTS.

ANEMONE OBTUSIFOLIA. DR. GOVAN'S ANEMONE. (Bot. Reg. 65.) Ranunculaceæ, Polyandria Polygynia. A native of Choor (Himalayan) Mountain, where it blooms in May. It proves to be a hardy, alpine plant, growing about six inches high, well suited for a rockwork, in a damp, shady situation, where it blooms from June to August. The flowers are produced in umbels of five or six in each, white, a separate flower, is near an inch across. It is in the collection in the garden of the Horticultural Society.

ANGULOSA CLOWESII, MR. CLOWES'S. (Bot. Reg. 63.) Orchidaceæ. Gynandria Monandria. Mr. Linden discovered this species in Columbia. It has bloomed in the collection of the Rev. John Clowes, of Broughton Hall, near Manchester. A plant will throw up several strong flower-stalks, each producing one flower. Each blossom is from three to four inches across, of a thick fleshy substance. Sepals and petals of a pretty light yellow, labellum white, with a tinge of yellow near the base.

ANEMONE CEPHALOTUS. LARGE-HEADED THRIFT. (Bot. Mag. 4128.) Plumbaginaceæ. Pentandria Pentagynia. Synonym, *Statue cephalotus*. This fine plant was introduced into this country in 1775, but soon lost. It is a native of several parts of Portugal and of Barbary. It has again been recently introduced from France under different names. It is probably not quite hardy enough to bear the open border in all parts of this country; but in a cool greenhouse it is a most beautiful object. The flower stems rise to from a foot to half a yard high, each having a head of blossoms about three inches in diameter, of a rich rose colour. It blooms from July to October, and deserves a place in every greenhouse. It may be had at the principal nurseries.

BEGONIA RUBRICAULIS. RED-SCAPED. (Bot. Mag. 4131.) Begoniaceæ. Monœcia Polyandria. In a former volume we gave a descriptive list of the fine collection of this interesting tribe of plants which we saw in the stove at the Royal Botanic Gardens at Kew, (see March, 1843, page 65,) to which is added

the present species, obtained from the Birmingham Botanic Gardens; but Mr. Cameron, the curator, gives no account of its origin. The leaves are from four to six inches across, slightly hairy, of a bright green. The flower-stems are vigorous, and every portion of a very rich crimson-red colour, producing a brilliant effect. The flowers are produced in a branching panicle. *Male flowers*, five petals; two are red, bluish-coloured, suffused with a deeper tinge; the three others of a cream colour. Each flower is near two inches across. It is a beautiful species, deserving a place in every plant-stove.

CUPHEA STRIGULOSA. STRIGULOSE CUPHEA. (Pax. Mag. Bot.) Lythraceæ. Dodecandria Monogynia. It grows wild at the foot of the Andes Mountains, near Ibaque, and has bloomed with Mr. Knight, of Chelsea, both in the stove and in the open air. It appears to be about as hardy as *Salvias*, *Verbenas*, &c., and makes a pretty shrubby plant for the open border during the entire summer season. By attention to stopping the leads of the main shoots, numerous laterals are produced, and in proportion the plant becomes bushy, and increasingly beautiful. The flowers are produced in pendulous racemes, each blossom being near an inch long. The lower half (nearest the origin) is of an orange-red, the other portion yellow, with green stripes. If grown in a sandy loam, not too rich, and in a warm situated flower-border, it will, with due treatment, be very interestingly ornamental. The flowers require to have full light.

DIPLADENIA CRASSINODA. KNOB-JOINTED. (Bot. Reg. 64.) Apocynaceæ. Pentandria Monogynia. (Synonyms, *Echites carassa*, *E. Crassinoides*.) The plant is a native of the Corcovado Mountain, near Rio Janeiro, being discovered there by Mr. Gardner. It is a stove twining plant, requiring a similar treatment to the *Echites*. We have noticed it on a former occasion, having seen it at Mr. Low's, of the Clapton Nursery. The flowers are produced in terminal racemes, several in each. A separate blossom, is about three inches across, of a beautiful rose colour, with a yellow eye. The fine salver-shaped flowers produce a showy effect. It well deserves a place in the plant stove. It requires to be kept rather dry in winter.

EPIDENDRUM MACROCHILUM VAR ROSEUM. ROSE-COLOURED, LARGE-TIPPED. (Pax. Mag. Bot.) Orchidaceæ. Gynandria Monandria. Within the last two years several handsome varieties, of various shades of rose-colour, but dissimilar in form, too, have been received from Guatemala, sent by Mr. Hartweg and Mr. Skinner. The present variety has bloomed at Nonesuch Park Gardens, near Cheam, in Surrey. It is chiefly remarkable from other rose-coloured varieties by having a perfectly flat surface. The flowers are produced in erect simple spikes. Sepals and petals of a dull purple, but green near their origin. Lip large, of a beautiful rosy-lilac. Each flower is near three inches across. It is a very interesting variety, well worthy a place in every collection.

GAYLUSSACIA PSEUDOVACCINIUM. BILBERRY-LIKE. (Bot. Reg. 62.) Vaccinaceæ. Decandria Monogynia. (Synonyms, *Andromeda coccinea*, *Vaccinium Braziliense*.) It is said to be a native of the sandy plains of Brazil, where it forms a shrub, growing from one to two feet high. In this country it is found to be a hardy greenhouse branching shrub, and to be treated as Cape-heaths are in soil, potting, situation, &c. The flowers are numerous produced in axillary racemes, ten to twelve in each. The younger blossoms are a beautiful orange-scarlet colour, and the older ones a rosy-red. Each flower is of a globular form, nearly half an inch across. We remarked in a former Number that we had seen the plant at Messrs. Loddiges's, and that it deserves a place in every greenhouse.

IXIOLIRIAN MONTANUM. MOUNTAIN IXIA. LILY. (Bot. Reg. 66.) Amaryllidaceæ. Hexandria Monogynia. (Synonym, *Amaryllis tatarica*.) Discovered on the hills in the neighbourhood of Teheran. It is a hardy bulbous plant, producing, as by the figure given, about a dozen flowers in each spike. Each separate bloom is about two inches and a half across, a rich purple-blue, with streaks of white up the middle of each of the six divisions of the corolla, which divisions reflex back in an advanced state, like the Turncap-hly. It blooms

in May and June, and is a very pretty and interesting species, well deserving a place in the flower-border.

LAPLACKA SEMISERRATA. SEMISERRATED-LEAVED. (Bot. Mag. 4129.) Ternstræmiacæ. Polyandria Pentagynia. A native of Brazil, where it grows to a tree of thirty to forty feet high. In the plant-stove in this country plants bloom profusely when even a foot high. The plant has much the appearance of the Green Tea-plant. The flowers are produced numerously, white, each blossom being near two inches across. It is in the collection of the Duke of Northumberland, Sion House Gardens.

ONCIDIUM TRICOLOR. THREE-COLOURED. (Bot. Mag. 4130.) Orchidæ. Gynandria Monandria. Sent from Jamaica to the Royal Botanic Gardens at Kew. It is a very beautiful and entirely new species, with foliage resembling that of *O. Triquetrum* and *O. Pulchellum*, but very different in the flowers, both as to form and colouring, being most elegantly varied with colours. The flower scape rises about a foot high, terminating with a much branching panicle of flowers. Each blossom is about an inch across. Sepals and petals of a yellowish green, streaked and blotched with red. Labellum white, with a yellow column streaked with red. It is a very interesting and beautiful species, well deserving a place in every collection of this class of flowers.

ORTHROSANTHES MULTIFLORA. MANY-FLOWERED. (Pax. Bot. Mag.) Iridacæ. Triandria Monogynia. It was discovered near Lucky Bay, in New Holland; and although it will bloom in the open border in Summer, it does best kept in the greenhouse, or cool frame. It is an herbaceous perennial, the flower-stem rising a foot high; each scape contains several flowers of a bright blue colour; each blossom is about an inch and a half across. It is a neat flowering plant, deserving a place in the greenhouse. It has bloomed at Mr. Henderson's Nursery, Edgware Road.

SALVIA STRICTIFLORA. ERECT FLOWERING. (Pax. Mag. Bot.) Labiatæ. Diandria Monogynia. A native of Peru. It is a shrubby plant, requiring a similar treatment to the general species. The spikes of flowers are about five inches long; each blossom about an inch and a half, of a rich crimson red. It is a very neat and pretty species. It is in the collection of Messrs. Lee, of Hammersmith Nursery.

STAPELIA CACTIFORMIS. CACTUS-LIKE. (Bot. Mag. 4127.) Asclepidæ. Pentandria Monogynia. This very singular species has been lately received from Mr. Zeyhar, who sent it from Little Namagua-land, in South Africa, to the Earl of Derby, at Knowsley Park. It has bloomed in the collection at Kew. The stem, or entire plant, has the appearance of a *Mammillaria* (Cactus), or some succulent *Euphorbia*. The flowers are produced on the summit of the plant, in form like the common *Stapelias*, of a yellow green, striped beautifully with blood-red; the summit being crowned with several of these beautiful flowers, give it a very interesting appearance.

TETRATHECA HIRSATA. HAIRY. (Bot. Reg. 67.) Tremandracæ. Octo-Decandria Monogynia. From the Swan River Colony. It is a very neat greenhouse, shrubby plant; the foliage about the size of *Pimelea decussata*. It branches numerously, and produces a profusion of its pretty starry flowers. Each blossom is about an inch across, of a beautiful rosy pink, with blood-coloured centre. It grows very freely, and is readily propagated. It deserves to be in every greenhouse. It may now be had at the principal nurseries.

PLANTS NOTICED IN THE BOTANICAL REGISTER, NOT FIGURED.

CALIPHURRIA HARTWEGIANA.—This perennial Amaryllidaceous plant is from New Granada. The flowers are produced in an umbel of about seven, the tubular portion of the flower green, and the other part of the corolla white.

HABRANTHUS NOBILIS.—This splendid species has bloomed out of doors in front of a pine-stove at Rev. F. Belfield's, Primley Hill, Torquay. Each spathe contains several flowers; tube green, limbs red, with some portion of greenish streaks outside, and whitish inside the flower.

TRIMEZIA MERIDENSIS.—This plant was discovered on the snowy mountains of Merida. The flowers are of a yellow and buff, prettily spotted.

BELLRYALLIA SYRIACA.—Bulbs were received from Aleppo by the Hon. W. F. Strangways. It has bloomed at Spofforth. Tube pale blue, limb whitish beneath, reddish above.

GLADIOLUS FESTIVUS.—A Cape species, now in the Kew collection. Tube white, limb pale rose, suffused with streaks of pale yellow.

PLANTIA FLAVA.—A pretty little plant, named after our friend, Mr. Joseph Plant, florist, of Cheadle. It was raised from Cape seed at Spofforth, the packet being named *Sisyrinchium Spec.* Involucre of four pretty pale yellow flowers.

BIDWELLIA GLAUCCENS.—A native of an elevated portion of table-land, termed New England, on the south-eastern mountains of Australasia. It is of the *Asphodelia* section of plants. Flowers striated with white and red.

LEOCHILUS HERBACEUS.—An orchideous plant, from La Guayra. It has been introduced to this country by George Wailes, Esq., of Newcastle. Sepals and petals green, with a single red stripe up the middle; lip white, tinged with green and banded with purple. The plant is of small size.

LEOCHILUS SANGUIOLENTUS.—Mr. Barker received this, too, from La Guyara. The flowers are small, but very handsome, having a deep crimson lip richly studded with clear purple spots.

EPIDENDRUM CERATISTES.—From the Spanish Main. Mr. Hartweg sent it to the London Horticultural Society. The panicle is about three feet long, and the flowers of a clear green with a whitish lip; they are very similar to those of *E. Selligerum*.

PHYCELLA OBTUSA.—From Peru. The umbel contains six flowers; base of the tube flesh-colour, the rest part green.

NEW PLANTS SEEN AT NURSERIES, &c.

AT MESSRS. LOW AND CO.—In the stove and greenhouse we noticed the following new and fine plants:—*Bouvardia strigosa*; *Lisianthus longifolia*; *Echites carassa*; *Allamanda grandiflora*; *Portlandia hexandra*; *Ruellia elegans*; *Cuphea strigolosa*; *Reevesia thrysoidea*; *Veronica salicifolia*; *Cestrum aurantiacum*; *Scutellaria*, said to be a blue-flowered species; *Budlea Lindleyana*, the flowers are blue; *Salvia alba*, flowers white; *Tacsonia sempervirens*, and *T. pinnata*,—these are from California, and are stated to be hardy species; *Achimenes alba*, a white-flowered species; *Ilex excelsior*, from the Himalayan Mountains, quite hardy, a very beautiful and noble species; *Ardisia Mexicana*, a very noble-looking plant, the foliage being as large as a moderate-sized *Magnolia grandiflora*; *Ipomœa Broadleyana*, an hybrid, raised between *I. rubrocœrulea* and *I. Horsfalliæ*, a very beautiful hybrid; *Oldenlandia Deppi*, from the Cape,—the flowers are white, like those of the white jasmine, *Jasminum grandiflorum*; *Chorozeina*, a new species, having a soft, hairy foliage, very delicate and neat; *Brachysema villosa*, a noble-looking plant, very superior in appearance to any of the other species; *Dryandra bipinnatifida*, very pretty foliage.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON CULTURE OF THE CAPE JASMINE.—If some Correspondent would say the best way to treat the white Cape Jasmine to get it to flower freely, the compost it requires, the winter treatment, situation, &c., it will much oblige
Halifax, Nov. 29, 1844.

A NOVICE.

[In a compost of equal parts sandy peat and rich loam, both from turf which has been collected and laid in a heap for several months, merely chopped up at time of potting, and having a free drainage, the plant will grow vigorously. It blooms freely when kept in a warm greenhouse, or in a gentle plant stove early in spring for a few weeks, and in June taken into the greenhouse. Keep it in a dry greenhouse during winter.—CONDUCTOR.]

ON STRELITZIA REGINÆ.—A lady who has been a Subscriber to the FLORICULTURAL CABINET from the commencement would be much obliged by being informed of the best means of propagating and managing the *Strelitzia reginæ*. She has a fine plant, which has been only top-dressed for five years, and now it appears capable of being parted; but her gardener, not feeling confident in his knowledge of the plant, fears to disturb it, lest he should destroy the whole. An early notice of the request will greatly oblige.

Ipwich, 1844.

[Offsets taken off with roots, and repotted, soon become established. They scarcely exhibit any alteration at the time when first separated from the parent plant, nor does the latter receive the least injury by the process. We have increased many by the same process. The plants will flourish either in a stove or a warm greenhouse, and grow in large pots or boxes, well drained, in an enriched turfy loam. They will do well either placed on a trellis over a warm flue, or plunged in a bark-pit; the latter is the better.—CONDUCTOR.]

ON WALLFLOWERS AND STOCKS.—It will greatly oblige a great many readers of your most useful work to inform them which is the best way of protecting the Double Wallflower and Stocks from the frosts this winter, as most of us are partial to these beautiful flowers; and most of us would like to know your opinion which kinds of Stock are the finest bloomers, and which come the most double, also which is the best time to sow the seed of Stocks to bloom in the best season. It will greatly oblige to give us information in your next number.

R. H. P.

[Our correspondent has not been explicit enough as to his purposes: we beg, however, to inform him that to have early-blooming Stocks the tribe of Brompton's furnish such, and to have later the Ten Weeks'. The former are biennial, enduring two years, the latter annual, or enduring only one year. The Brompton Stocks should be sown the first week in June, and when strong enough be planted out; if to be out of doors through winter, put them off where to bloom, and protect in winter by furze branches, pricked closely round and tied together, laying four or six inches of dry leaves over the roots, and surrounded by the furze branches, to keep the leaves in proper bounds. Where there is the advantage of a cool but dry frame, some potted off at first, in small pots, and at the approach of winter placed in the frame, or the pots sunk in the ground close under a well-sheltered south-aspected wall, &c., will generally be preserved in any part of this kingdom. Such should be transplanted, entire, by the end of March, in the situations for blooming. There are a variety of colours. The Giant is a noble red one: we have seen spikes of flowers two feet long, and a separate blossom two inches across. These come into bloom, as do the other varieties, at the end of April, and continue to a late period in summer. The Annual Stocks, viz., Ten Weeks', Russian, German, &c., are of course raised by an early spring sowing, and transplanted out as early as possible; these come into bloom by the middle of June, and continue to September. There are numerous colours of these tribes, all well deserving cultivation. Wallflowers are readily preserved uninjured, in the same way as recommended to be adopted with Brompton Stocks.—CONDUCTOR.]

ON HEARTSEASE AFFECTED WITH MILDEW.—I am a great admirer of the Heartsease, and have cultivated them for some years, but for the last three years I have experienced considerable vexation from losing several of my best kinds, from a kind of white mildew with which they have been affected, which spoils

the blooms and ultimately kills the plants. I am inclined to think it is an epidemic disease, as several of my neighbours' heartsease have suffered from the same cause. Is the disease hereditary? I mean, will seedlings raised from plants affected be more likely to be attacked than others raised from plants not diseased?

From your invariable kindness in inserting the queries of correspondents, I have been induced to ask the favour of any suggestion you, or some reader, may be able to give as a remedy for the above disease, by which you will confer an obligation on many growers in this part of Kent.

Cranbrook.

G. M. S.

[Dusting the plants over-head, and the under side of the foliage too, with common sulphur, we have found a perfect remedy. It costs but a trifle, and is readily done. In old stiffish soil, and confined, damp situations, the plants are liable to be affected with mildew. Each new plantation should be put in a *fresh*, well-enriched, loamy (if yellowish, the better) soil, on an open substratum. If a new plantation is made from the offsets of diseased plants, they should be well dusted with the sulphur, and planted in the manner above stated. If there should be appearances of an attack by mildew, the earliest attention to destroy it should be given, or it will rapidly spread. We hope some of the general cultivators of Heartsease will give us the results of their experience, in order more fully to meet the wishes of our correspondent. The disease is not inherent in the seed.—CONDUCTOR.]

REMARKS.

OPEN CARNATION SHOW.—Mr. Dickson, of Brixton, has determined on having an open show of Carnations and Picotees at the Bazaar in Baker-street, Portman-square, London, similar to the splendid Dahlia Show which took place there last September; and it is hoped, in addition to the London, that the entire of the country growers will contribute on the occasion. The show, it is expected, will take place on or about July 25, 1845.

DIANTHUS.

TWELVE BEST PINKS EXHIBITED IN LONDON IN 1844.—Headley's, Duke of Northumberland; Garrett's Queen of Roses; Aker's Lord Brougham; Neville's John Dickson; Sharp's William Cobbett; Fairburn's Bob Lawrence; Willmer's Duchess of Kent; Garrett's Alpha; Hodge's Malonia; Creed's President; Willmer's Elisabeth; Coppin's Wonder; Hodge's Gem.

A LONDON AMATEUR-GROWER.

ON CLERODENDRONS.—Last August, having four strong plants of Clerodendron fragrans, (or Volkameria fragrans,) and a good plant of *C. splendens*, I placed the plants of fragrans around the splendens, and inarched four branches of the latter upon the former; they soon united, and grew vigorously, more so than even the parent plant, and, I doubt not, but will furnish me with extra fine specimens of this beautiful flowering climber. I think this branch of inarching weakly kinds upon more vigorous ones is not attended to as its advantages entitle it.

J. M'INTOSH.

TO MAKE CHARCOAL.—Having used Charcoal most advantageously in various composts for growing hot plants in, as recommended in the CABINET, and in consequence of having to procure it from a considerable distance, and no person near me, that I could find, understanding how to make it, I had a lot of black Italian poplar poles, cut down a year previously, cut up into lengths of about two feet. Having placed a portion of straw and some dry sticks on a few bricks for a floor, I had the lengths of poplar placed in an erect position, and so as to form a cone. After lighting the materials, I covered the entire over with turf sods, allowing a few spaces for the escape of smoke. When the flame burst

forth in any place, I put over a piece of turf, and then spread a few inches of soil over the whole, to prevent the flame bursting forth, especially doing so late at night, so as to be secure during the night. Thus I kept the heap burning several days, and accomplished my object in a quantity of good charcoal. The lightest kind of wood makes the best charcoal. J. P. STOKES.

ON WINTER BLOOMING PLANTS.—The following handsome flowering plants have been found to bloom well in a temperature of 45 degrees, and to be a valuable addition to our dwelling-room plants; viz.:—*Ardisia crenulata*; *Aphelandra cristata*; *Euphorbia jacquiniiflora* and *E. splendens*; *Justicia speciosa* and *coccinea*; *Poinciana pulcherima*, and the lovely blue *Eranthemum pulchellum*, kept in the greenhouse through the summer and autumn, and now removed into the window of a sitting-room having a southerly aspect, will bloom for several weeks.

Dec. 21st.

S.

THE BANKSIAN ROSE.—This beautiful rose is often found shy of blooming. A remark upon it is inserted in a recent Number of the "Gardener's Chronicle," where it is stated that, treated by Mr. Frost, gardener to Lady Grenville of Dropmore, it annually blooms most freely. Mr. Frost states that it is customary to prune the plant in spring; but when so treated all the flowering wood is cut away, as it blooms only upon the one-year-old wood. The proper time for pruning it is midsummer, when the blooming is over; then new wood is formed in the subsequent part of the season, which will profusely bloom the following spring. Mr. Frost states that the more vigorous the plant is, and the more young wood is laid in after midsummer-pruning the finer the bloom will be, for there will be a cluster of roses at the extremity of every shoot which starts from the bosom of the leaves.

ON PLANTING EVERGREEN SHRUBS.—Observing that it was recommended in the CABINET to plant evergreen Shrubs in autumn, from the middle of October to the end of November, the earlier the better it was stated; I therefore planted a considerable number the last October, watering them at the roots when planted, and now they are growing beautifully; not a single plant even has failed.

On former occasions I have planted in spring, at the end of March or early in April, and never but with the loss of some: the cold dry easterly winds, affecting them before the roots had struck, always proved fatal. If a wet spring, then I found the Shrubs to succeed better, but I am confident early autumn planting is the best season for success to ensue—a moist atmosphere aiding the tops contributes to certain establishment. To prevent the shrubs from being loosened by the wind in autumn or winter, I secured them by tying to stakes.

AN AMATEUR.

FLORICULTURAL CALENDAR FOR JANUARY.

GREENHOUSE.—This department should have good attendance during this month.

The herbaceous kinds of plants will require occasional waterings, but less frequent and in less quantities than the woody kinds. Succulents, as Aloes, Sedums, &c., should be watered very sparingly, and only when the soil is very dry. When water is given it should be as much as will moisten ALL the soil, where water is only given to moisten the soil an inch or two at the top and the other kept quite dry, the result is generally certain, namely, the death of the plant. The plan to be attended to is, water only when necessary, but a full supply when it is done, and water at the early part of the day so damp may be dried up before evening. Air should be admitted at all times when the weather is favourable, or the plants cannot be kept in a healthy state. When the weather is damp, foggy, &c., do not give air then, let a dry air only be admitted. If

any of the Oranges, Lemons, &c., have naked or irregular heads, towards the end of the month, if fine mild weather occur, begin to reclaim them to some uniformity by shortening the branches and head shoots; by this attention they will break out new shoots upon the old wood, and form a regular head; be repotted in rich compost in *April*, reducing the old ball of earth carefully, and replacing with new soil. After shifting, it would be of great use to the plants if the convenience of a glass case could be had in which to make a dung-bed that the pots might be plunged in; this would cause the plants to shoot vigorously, both at the roots and tops. Repot *Amaryllis*, &c. Tender and small kinds of plants should *frequently* be examined, to have the *surface* of soil *loosened*, decayed leaves taken away; or if a portion of a branch be decaying, cut it off immediately, or the injury may extend to the entire plant and destroy it. *Gloxinias*, *Achimenes*, &c., now beginning to push, should be potted singly.

Auriculas should, at the end of the month, be top-dressed, taking off old soil an inch deep, and replacing it with new; give air freely when dry weather.

Bulbs, as *Hyacinths*, &c., grown in water-glasses, require to be placed in an airy and light situation when coming into bloom. The water will require to be changed every three or four days. The flower-stem may be supported by splitting a stick at the bottom into four portions, so as it will fit tight round the edge of the glass at the top. Beds of *Hyacinths*, will require attention if severe weather occurs, also beds of *Tulips*, &c.

The seed of *Calceolarias* should be sown at the end of the month, and be placed in a hot-bed frame, also cuttings or slips be struck, as they take root freely now. Sow *Pentstemon*. Seed does best sown now in pots.

Cuttings of *Salvia*, *Fuchsias*, *Heliotropes*, *Geraniums*, &c., desired for planting out in borders or beds during spring and summer, should be struck in moist heat at the end of the month, in order to get the plants tolerably strong by *May*, the season of planting out.

DAHLIAS.—*Dahlia* roots, where great increase is desired, should now be potted, or partly plunged into a little old tan in the stove, or a frame, to forward them for planting out in *May*. As shoots push, take them off when four or five inches long, and strike them in moist heat. *Seed*, sow at the end of month.

Herbaceous Perennials, Biennials, &c., may be divided about the end of the month, and planted out where required.

HYDRANGEAS.—Cuttings of the end of the last year's wood, that possess plump buds at their ends, should now be struck in moist heat; plant one cutting in a small pot (60's).

Mignonette, to bloom early in boxes or pots, or to turn out in the open borders, should now be sown.

Rose Trees, *Lilacs*, *Pinks*, *Hyacinths*, *Polyanthuses*, *Narcissus*, *Honeysuckles*, *Persian Lilacs*, *Primroses*, *Rhodoras*, *Persian Irises*, *Sweet Violets*, *Cinerarias*, *Hepaticas*, *Aconites*, *Jasmines*, *Azaleas*, *Lily of the Valley*, *Correas*, *Gardenias*, *Cyclamens*, &c., should regularly be brought in for forcing.

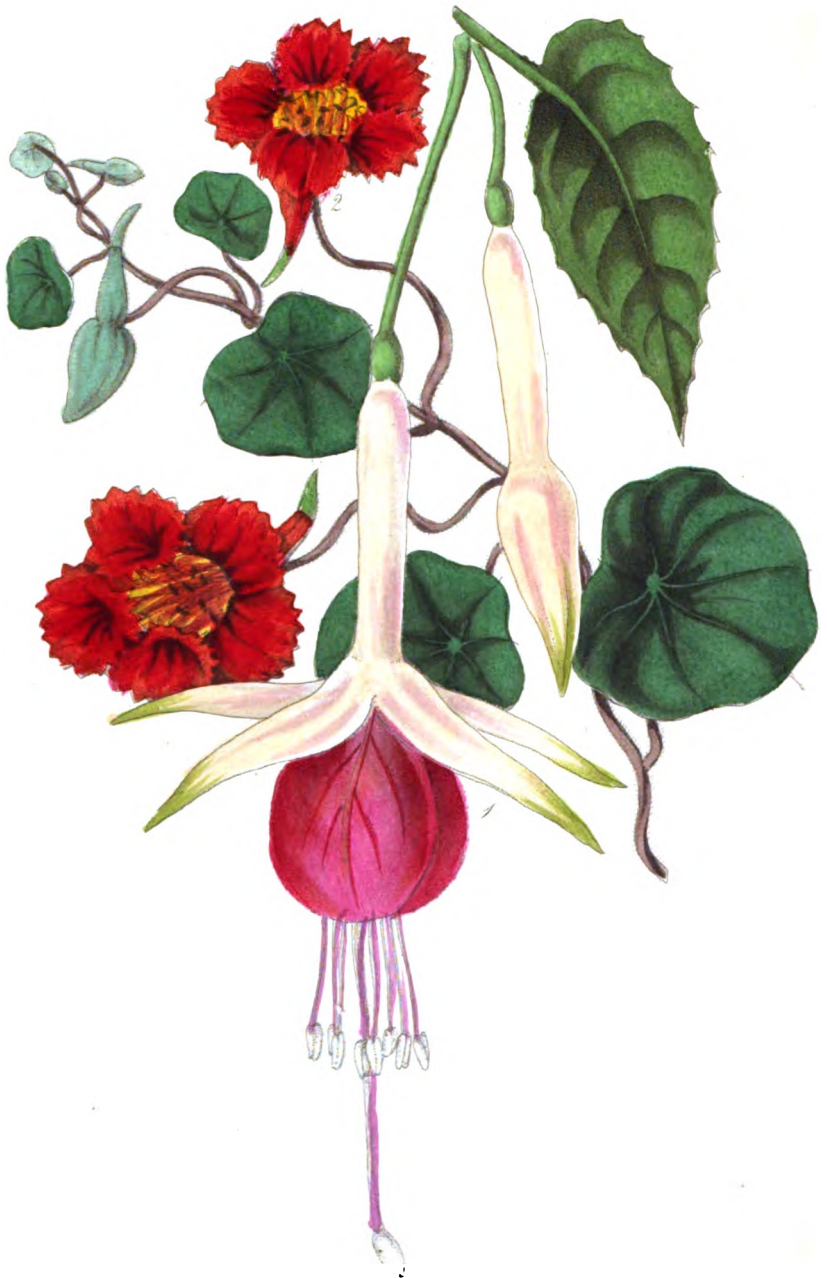
TENDER ANNUALS.—Some of the kinds, as *Cockscombs*, *Amaranthuses*, &c., for adorning the greenhouse in summer, should be sown by the end of the month.

Ten-week Stocks, *Russian* and *Prussian Stocks*, &c., to bloom early, should be sown at the end of the month in pots, placed in a hot-bed frame, or be sown upon a slight hot-bed, also some other of the tender kinds, to prepare them strong for early summer blooming.

Protect the stems of tender plants with *Furze* branches, dry leaves, &c. The stems of tender climbing *Roses* are screened by such precaution.

Chrysanthemums, the heads of decayed flowers should be dried, and saved for the seed, which probably they possess, and be sown in spring and raised in a hot-bed frame.

Protect beds of *Tulips*, *Hyacinths*, &c., *Carnations*, *Polyanthuses*, *Auriculas*, *Pinks*, *Pansies*, &c., with *Furze*, *Fir* branches, dry leaves, &c., or, if in pots, in frames.



1. Ficus, Hortensis Queen Victoria 2. Sepalum L. Linnæum.
Fl. Cult. Cabinet, Ed. 3. 1845.

THE
FLORICULTURAL CABINET.

FEBRUARY 1st, 1845.

PART I.
EMBELLISHMENTS.

ARTICLE I.

FUCHSIA, VAR. QUEEN VICTORIA.

THIS very fine variety was raised by us last year, and of its class far exceeds any other we have seen. It is of vigorous growth, and a profuse bloomer; its beautiful waxy-white tubes, and sepals tipped with green, in contrast with the rich colour of the corolla, are very strikingly exhibited, and produce a pretty effect.

TROPÆOLUM LOBBIANUM.

Mr. Lobb, the collector of Messrs. Veitch's, of Exeter, discovered this handsome species in Columbia, and plants of it bloomed during several months of the last summer in their nursery. It is an herbaceous twining perennial, which grows vigorously, and blooms very freely; it is one of the prettiest plants we have seen, well meriting to be a companion of the other beautiful kinds, and as it does best when trained to a wire, or similar trellis, is suited for exhibiting at the shows.

ARTICLE II.

OBSERVATIONS ON WHITNEY'S PREPARED CALICO, &c.

BY MR. JONES, GARDENER TO W. ROBINS, ESQ., OF HAGLEY HOUSE, NEAR STOURBRIDGE, IN WORCESTERSHIRE.

SEEING an account, in the last December number of the CABINET, of a failure in trying to preserve a crop of Figs, by erecting a frame, covered with Whitney's prepared Calico, over a tree growing against a wall, I feel induced to state a few observations, as the paper above alluded to is written for the information of an Inquirer, but is calculated rather to depreciate its value, than convey a fair and just idea of what it may be successfully used for. I reside many miles from Shrewsbury, but I was there in August last, and hearing of Mr. Whitney's house, which he had erected, and covered with Calico prepared with his composition, I called to see it, and was exceedingly astonished to see the things in it growing so luxuriant, and looking so healthy. The house is divided into two parts, the one part is kept as a greenhouse, the other as a stove; but the greenhouse plants being chiefly out of doors, the stove was the greatest attraction, and contributed most to prove the utility of the material for horticultural purposes. It admitted a very good light into the house, and the atmosphere appeared very suitable for the growth of plants; and, according to Mr. Whitney, the temperature was more uniform than it generally is under glass structures, which may be easily accounted for, from there being fewer openings for the escape of the heated air. There were young vines, only planted in April, which had made a long and strong growth, and were then ripening their wood, and appeared all that could be desired; one of them, a black Hamburgh, bore one bunch of fruit, of a good size, and remarkably well swelled berries,—it was then in the state of colouring. Cucumber plants were growing in a pit in the house, and were bearing and looking as well as I ever saw any under glass. The pit also contained a few Pine plants, which were in the midst of a vigorous growth; as well as many other kinds of plants, which seemed quite content with their situation. A plant of *Passiflora hybridæ* was traversing the back part of the house, and flowering as profusely as it generally does in other suitable situations. But in respect to its durability, when put on Calico, I can say nothing, as Mr. Whitney remarked, that it

required some stronger material for its reception ; and has since, I believe, invented a cloth woven on purpose for the composition ; and from a specimen that I have seen, it appears strong, likely to be durable, and perfectly transparent : and, although Mr. Shaw says, it is " then questionable whether it will answer the end in view," it is my opinion, that durability is all that is required further, to make it a most useful article for horticultural and floricultural purposes ; and as the time will soon be here, when plant growers will require all the room they can get, and perhaps some may wish to extend it on some economical plan, if it will not be trespassing too much on time and space, I will endeavour to point out a few ways that it may be successfully made use of. Pits may be erected, the walls composed of brick, stone, turf, or even mud, with a little straw or hay mixed, to make it hang together ; but mud walls should be prepared in summer, that they may get thoroughly dry before winter, they would not answer to be made now ; the lights for these pits, if not covered with Whitney's patent cloth, may be covered with something stronger than Calico ; if thicker, and a little darker, it will not so much matter for these purposes, and a coat of the composition put on and got dry, ready for moving some of the common and hardy greenhouse plants into, in the early part of spring, to give those that are coming into bloom a better chance and more room. All sorts of greenhouse plants will do well in these pits, if frost can be kept from them ; after these plants have been removed into the open air, which will be towards the end of May, or beginning of June, these pits may be turned to good account, by putting some loose stones in the bottom, and over that sandy peat a foot thick, and planting out some of the hard wooded greenhouse plants into it, such as Boronias, Chorizemas, Pimelias, choice Azaleas, Heaths, &c. They make specimens sooner this way than any other. Give water when planted, and afterwards when required ; let the lights be over them to shade them from the bright scorching sun, and to shelter them from heavy rains, and take them off all fine evenings, and let them remain off during the nights when the weather is settled fine, to receive the benefit of the dews ; in autumn they can be taken up with care, and potted in good sized pots, and put to stand in the pits, until they are wanted for the other plants again. Temporary frames of the same material will do for raising tender annuals or hotbeds ; also for hardening them out for

the flower garden, and for striking Dahlias, and other cuttings under. To shade and shelter beds and stages of florist flowers; and for many other purposes it will be useful to the florist, as it is a good protection, and the light it admits is not so strong as to fade the colours. For covering frames in the shape of hand-glasses; for propagating under out of doors through the summer months, for this purpose they are preferable to glass; there is many ready ways to form these kind of frames, and they will soon suggest themselves to any one that sets about it.

The kitchen gardener may use this material for raising early Potatoes, Salading, &c.; for raising seeds that require protection, as well as for Cucumber and Melon frames, if not very early in the season; for the last purpose it should be as transparent as possible; and I must observe that the lights should, in all cases, have the greatest degree of elevation, or pitch of the roof, that reason will admit, so that it may dry quickly after rain; and air should be given every favourable opportunity to dry the condensed vapour of the under surface, otherwise fungus will begin to grow, and decay soon follow. This material may also be used for protecting the blossoms of wall trees, but after they have been covered for several days, or perhaps weeks, with such a covering, much greater caution is required in removing them than is generally taken, and it should, by no means, be done at once; but I have not room to say more of this at present. To use it for any of the purposes I have named will not be expensive to those who wish to try it, and then they will be able to form their own judgment as to what further use it may be applied to.

These few remarks fall far short of doing justice to the merits of Mr. Whitney's invention; but I think Mr. W. deserves, at least, the good-will of all who are interested in gardening, for the interest he has taken in endeavouring to carry out his invention, whereby to place in the hands of those who had it not before, the means of spending their leisure hours in such a favourite amusement, and also extending it to those who were already engaged in it: under these feelings I have great pleasure in contributing my testimony, of what I have seen of it, to the pages of your most useful publication. Mr. Shaw says so little of his treatment to his tree after he erected the covering, that I cannot say what was most likely to be the cause of his failure; but if he did not make use of the syringe freely every

day, as well as give plenty of water to the roots, he need not be surprised at his fruit falling off, and the leaves becoming brown; if he had erected glass, and had not supplied the tree well with water, no doubt every leaf would have fallen from the tree in such a summer as the last was.

ARTICLE III.

REMARKS ON THE TREATMENT OF LESCHENAULTIA FORMOSA.

BY MR. J. D. WILSON, OF BECKFORD, IN GLOUCESTERSHIRE.

OBSERVING an article on the culture of *Leschenaultias*, by C. C., of Somerset, inserted in last December number, and although the observations are sensible, as far as they go, yet the subject does not go far enough in detail for the entire management. I have had the pleasure, for several years, of annually seeing the splendid specimens shown at the London exhibitions, and obtaining the particulars of management from the gardener who there exhibited the finest and most perfect plant of *L. formosa*, and having pursued the same mode of treatment most successfully with several plants, during the last two seasons, I am induced to forward the particulars of the mode of treatment pursued.

In March, 1843, having four healthy young plants growing in thirty-two sized pots, I had them potted in twenty-four's, as follows:—The compost was formed of the following proportions; viz., one-half rough turfy sandy peat, one-sixth silver sand, and the rest of rich yellow turfy loam, and a scattering of bits of charcoal. The soils had been obtained a year before in a turfy state, and been chopped up and turned two or three times. I had a drainage of broken pots, $1\frac{1}{2}$ inch deep, and over them some bits of chopped sod, to prevent the compost becoming mixed with the drainage, so as to prevent a free passage for the water to filter away. I removed a portion of the old ball, and then potted the plants carefully in the compost, keeping the crown of the roots as high as the rim of the pot, so that the water drains slightly away from the stem of the plant. When this precaution is not observed the plant is somewhat liable to perish. After potting I placed the plants in a light and airy part of the greenhouse, giving a judicious attention to watering. In the last week in July I

found the pots so filled with roots, that I re-potted the plants into sixteen-sized pots, keeping the balls entire. I retained them in the greenhouse till the end of August, when I placed them in a sheltered situation for about a month, to harden the shoots, and prepare them for the winter's cool temperature. During winter I had them in the coolest, but lightest, situation; as I have observed where the plants are treated with more than just kept from frost, they draw up weakly, become unsightly, and are soon damaged by wet, or other casualty. In March following I again re-potted them, as done previously, into the next larger sized pots, in which I kept them till August last, then put them into eights, in which they now are, perfect specimens of successful growth. The plants when young had nice leading shoots, I had them secured to a central stick, and thus continued the training, so that each plant forms a handsome and regular cone of branches, from the broadest at the base to the summit. Each plant is now three feet high, or a little more, above the rim of the pot. When in bloom they were one blaze of rich crimson, and most beautiful specimens, amply repaying for the attention I had given.

Thinking it advisable to have an annual stock of two new plants, in case of the decease of the old plants, I had some other young ones potted in March last, and in all other respects subsequently properly treated during the past season. I purpose continuing to pursue this course of provision, and so dispense with the old ones when they become unsightly from any casualty, or die away.

I have two plants of the delightful blue *L. biloba*, in course of similar treatment, and in order to render them bushy, I have stopped the leads of the shoots, excepting the central one, and they now are fine vigorous specimens.

ARTICLE IV.

REMARKS ON THE CULTURE OF THE RANUNCULUS.

BY MR. JAMES HAMILTON, OF ALMONDBURY, YORKSHIRE.

I HAVE been pleased to notice remarks from time to time have been inserted on the cultivation of that universally admired lovely little flower, the *Ranunculus*, and was pleased with the plain and sensible remarks given by Mr. Lockhart, in a recent number of this magazine. I have been a *Ranunculus* grower for about twenty years,

and during that time have had an opportunity of ascertaining what mode of treatment is successful. The natural situation where the common wild *Ranunculus* flourishes, is where the soil is a light but rich yellowish loam, as is observable in the summer season, in the deep soil of the rich meadows of our own country;—a soil that is cool and moist, during the heat of summer, even to the depth of half a yard, or more, and yet the soil at the surface is of that open sandy character as not to crack; thus preventing, what is always injurious to the fibrous roots, viz., being broken by the rending of the soil that cracks during the growing season. In order to have a bed constructed of a similar character to grow mine in, I formed one, in 1830, as follows:—The first week in February I had the soil of my garden dug out to the depth of two feet; at the bottom I laid six inches of fresh turfy loam, chopped into pieces of about four inches diameter. In the preceding autumn I had a quantity of the same kind of turfy loam procured, and laid about half a yard thick in the back yard of my garden, and from the field and cow-yard I had fresh cow-dung procured, and laid upon the soil to the depth of six inches, and as soon as spread over a portion of the soil to the depth named, I had the soil under it turned over and incorporated together; and so proceeded successively till I had through winter a sufficient quantity prepared to fill up the excavation for a bed twenty four yards long. The heap was turned over several times previous to filling in the bed in February. This compost is rich, light, but cooling with the cow-dung, and being distributed particularly throughout the soil, combines to form a compost in which I have not failed a single season, since 1830, to grow and bloom the *Ranunculus*, unequalled by any other I have seen; and I hesitate not to assert, whoever follows the same system in preparing the bed, and the following method of planting, &c., will obtain a vigorous bloom.

In the first week of February I had the space for the bed filled up, even with the surrounding ground, with the compost, well breaking it as cast in. A week afterwards I had the surface made even, and then three inches deep of fresh sandy loam from the bank of a hedge, spread over the whole; in this I plant my roots, at six inches apart, in rows, covering them two inches deep. When the dry weather sets in I cover the surface between the plants with a mixture of half sand and half loam—this prevents the bed from cracking, and the

interior of the bed being so deep with the cooling retentive compost, I have not had my plants suffer in the least degree by drought, since I adopted the system pursued, whilst at the same time I have observed others perishing by multitudes.

On taking up my roots, which are always fine, I find the fibres abound quite at the bottom of the bed. I can most strongly recommend the above as the best plan I have known practised; and as a well-bloomed collection, with their lovely and varied hues, presents one of the most interesting and pleasing sights, I trust more readers of the CABINET will be induced to cultivate, what has been denominated the most lovely of floral beauties.

ARTICLE V.

ON INARCHING THE MARCHIONESS OF EXETER CAMELLIA ON THE CAMELLIA RETICULATA.

BY MR. GEORGE REYNOLDS, GARDENER AT ABDALE HOUSE, FLINTSHIRE.

A FIGURE of the fine Marchioness of Exeter Camellia appearing in the CABINET several years back, and being so much pleased with it, I procured from Jersey, where it was raised, a good plant in 1840; it grew vigorously, and bloomed finely in the spring of 1841, and made a noble growth that season. Having two good plants off the very large flowering species *C. reticulata*, it struck me that if I inarched the Marchioness of Exeter variety upon the stock of the *reticulata* it would improve its size; I did so in 1842, and in 1843 the plant bloomed well, but not larger than the mother plant. It bloomed again the last season, and its blossoms were considerably larger than those on the parent plant. I am persuaded, from the success I had in the much-improved size of the one tried, that if others, say some of the most beautiful kinds, were worked upon stocks of the *C. reticulata*, the size would be greatly improved.

It has annually been a practice with me to thin the flower buds, where there were more than one in a place, by only retaining one—the bud was certain to remain, and the blossoms to be finer; but when more are retained, that is twin flowers, or even more in a place, they are very liable prematurely to fall off. I thin away the buds when they are about as large as a marrow pea. My Marchioness of Exeter Camellia, worked as above described, is now finely budded, and

when in bloom I will forward to the Conductor of this magazine a bloom.

I grew my Camellias in chopped turfy loam, at least six months previously collected; this is well incorporated with turfy sandy peat, old rotten cow manure, and a sprinkling of bits of charcoal. I have a free drainage of broken pot and pieces of turf. I never have soil sifted. By this, and a regular attention to watering, my plants are very vigorous, and in robust health.

ARTICLE VI.

ON THE WANT OF LACING IN PINKS DURING THE PAST SEASON.

BY DIANTHUS.

WHEN up in London this season, I attended all the first-rate flower exhibitions, and being an admirer and grower of the best kinds of Pinks, I paid attention to my pet flowers exhibited, I was much surprised to notice that in general there was much deficiency in the lacing of the petals. This I supposed was induced by the dryness of the season, and a deficiency of watering. My Pinks never did better; I grow them in a sandy loam, well enriched. I had the beds well watered to six inches deep once a week, and after sunset, before the flowers expanded, I had the plants sprinkled over, by means of a watering-can having a rose, with soft water. This attention was amply repaid by a most beautiful and perfect bloom.

ARTICLE VII.

THE HISTORY OF GARDENING.

BY CLERICUS.

GARDENING was probably one of the first arts that succeeded to that of building houses, and naturally attended property and individual possession. Culinary, and afterwards medicinal herbs were the objects of every head of a family: it became convenient to have them within reach, without seeking them at random in woods, in meadows, and on mountains, as often as they were wanted. When the earth ceased to furnish spontaneously all these primitive luxuries, and culture became requisite, separate inclosures for rearing herbs grew

expedient. Fruits were in the same predicament, and those most in use or that demanded attention, must have entered into and extended the domestic inclosure. The good man Noah, we are told, planted a vineyard, drank of the wine, and was drunken, and every body knows the consequences. Thus we acquired kitchen gardens, orchards, and vineyards. I am apprised that the prototype of all these sorts was the garden of Eden; but as that Paradise was a good deal larger than any we read of afterwards, being inclosed by the rivers Pison, Gihon, Hiddekel, and Euphrates, as every tree that was pleasant to the sight and good for food grew in it, and as two other trees were likewise found there, of which not a slip or sucker remains, it does not belong to the present discussion. After the Fall, no man living was suffered to enter into the garden; and the poverty and necessities of our first ancestors hardly allowed them time to make improvements in their estates in imitation of it, supposing any plan had been preserved. A cottage and a slip of ground for a cabbage and gooseberry bush, such as we see by the side of a common, were in all probability the earliest seats and gardens: a well and bucket succeeded to the Pison and Euphrates. As settlements increased, the orchard and the vineyard followed; and the earliest princes of tribes possessed just the necessaries of a modern farmer.

Matters, we may well believe, remained long in this situation; and though the generality of mankind form their ideas from the import of words in their own age, we have no reason to think that for many centuries the term Garden implied more than a kitchen-garden or orchard. When a Frenchman reads of the garden of Eden, I do not doubt but he concludes it was something approaching to that of Versailles, with clipt edges, beraus, and trellis-work. If his devotion humbles him so far as to allow that, considering who designed it, there might be a labyrinth full of Æsop's Fables, yet he does not conceive, that four of the largest rivers in the world were half so magnificent as an hundred fountains full of statues by Girardon. It is thus that the word Garden has at all times passed for whatever was understood by that term in different countries. But that it meant no more than a kitchen garden or orchard for several centuries, is evident from those few descriptions that are preserved of the most famous gardens of antiquity.

That of Alcinous, in the *Odyssey*, is the most renowned in the heroic times. Is there an admirer of Homer, who can read his description without rapture ; or who does not form to his imagination a scene of delights more picturesque than the landscapes of Titian or Juan Fernandez? Yet what was that boasted Paradise with which

The Gods ordain'd
To grace Alcinous and his happy land?—POPE.

Why, divested of harmonious Greek and bewitching poetry, it was a small orchard and vineyard, with some beds of herbs, and two fountains, that watered them, inclosed within a quickset hedge. The whole compass of this pompous garden inclosed—four acres.

Four acres was th' allotted space of ground,
Fenc'd with a green inclosure all around.

The trees were apples, figs, pomegranates, pears, olives, and vines.

Tall thriving trees confess'd the fruitful mould ;
The redd'ning apple ripens into gold.
Here the blue fig with luscious juice o'erflows,
With deeper red the full pomegranate glows.
The branch here bends beneath the weighty pear,
And verdant olives flourish round the year.

* * * * *

Beds of all various herbs, for ever green,
In beauteous order terminate the scene.

Alcinous's garden was planted by the poet, enriched by him with the fairy gift of eternal summer, and, no doubt, an effort of imagination, surpassing anything he had ever seen. As he has bestowed on the same happy prince a palace with brazen walls and columns of silver, he certainly intended that the garden should be proportionably magnificent. We are sure, therefore, that as late as Homer's age, an inclosure of four acres, comprehending orchard, vineyard, and kitchen garden, was a stretch of luxury the world at that time had never beheld.

The hanging gardens of Babylon were a still greater prodigy. We are not acquainted with their disposition or contents ; but, as they are supposed to have been formed on terraces and the walls of the palace, whither soil was conveyed on purpose, we are very certain of what they were not ; I mean they must have been trifling, of no extent, and a wanton instance of expense and labour. In other

words, they were what sumptuous gardens have been in all ages till the present, unnatural, enriched by art, possibly with fountains, statues, balustrades, and summer-houses, and were anything but verdant and rural.

From the days of Homer to those of Pliny, we have no traces to lead us to guess to what were the gardens of the intervening ages. When Roman authors, whose climate instilled a wish for cool retreats, speak of their enjoyments in that kind, they sigh for grottos, caves, and the refreshing hollows of mountains, near irriguous and shady founts; or boast of their porticos, walks of planes, canals, baths, and breezes from the sea. Their gardens are never mentioned as affording shade and shelter from the rage of the dog-star. Pliny has left us descriptions of two of his villas. As he used his Laurentine villa for his winter retreat, it is not surprising that the garden makes no considerable part of the account. All he says of it is, that the *gestatio* or place of exercise, which surrounded the garden (the latter consequently not being very large), was bounded by a hedge of box, and where that was perished, with rosemary; that there was a walk of vines, and that most of the trees were fig and mulberry, the soil not being proper for any other sorts.

On his Tuscan villa he is more diffuse; the garden makes a considerable part of the description:—and what was the principal beauty of that pleasure ground? Exactly what was the admiration of this country about eighty years ago; box-trees cut into monsters, animals, letters, and the names of the master and the artificer. In an age when architecture displayed all its grandeur, all its purity, and all its taste; when arose Vespasian's amphitheatre, the Temple of Peace, Trajan's forum, Domitian's baths, and Adrian's villa, the ruins and vestiges of which still excite our astonishment and curiosity; a Roman consul, a polished emperor's friend, and a man of elegant literature and taste, delighted in what the mob now scarce admire in a cottage garden. All the ingredients of Pliny's corresponded exactly with those laid out by London and Wise on Dutch principles. He talks of slopes, terraces, a wilderness, shrubs methodically trimmed, a marble bason,* pipes spouting water, a cascade falling

* The English gardens described by Hentzner in the reign of Elizabeth, are exact copies of those of Pliny. In that at Whitehall was a sun-dial and jet d'eau, which, on turning a cock, squirted out water and sprinkled the spectators. In

into the bason, bay trees, alternately planted with planes, and a straight walk, from whence issued others parted off by hedges of box, and apple trees, with obelisks placed between every two. There wants nothing but the embroidery of a parterre, to make a garden in the reign of Trajan serve for a description of one in that of King William.* In one passage above, Pliny seems to have conceived that natural irregularity might be a beauty; *in opere urbanissimo*, says he, *subita velut illati ruris imitatio*. Something like a rural view was contrived amidst so much polished composition. But the idea soon vanished, lineal walks immediately enveloped the slight scene, and names and inscriptions in box again succeeded to compensate for the daring introduction of nature.

In the paintings found at Herculaneum are a few traces of gardens, as may be seen in the second volume of the prints. They are small square inclosures, formed by trellis-work, and espaliers,† and regularly ornamented with vases, fountains, and caryatides, elegantly symmetrical, and proper for the narrow spaces allotted to the garden of a house in a capital city. From such I would not banish those playful waters that refresh a sultry mansion in town, nor the neat trellis which preserves its wooden verdure better than natural greens exposed to dust. Those treillages, in the gardens at Paris, particularly on the Boulevard, have a gay and delightful effect. They form light corridors, and transpicuous arbours, through which the sun-beams play and chequer the shade, set off the statues, vases, and flowers, that correspond with their gaudy hotels, and suit the gallant and idle

Lord Burleigh's, at Theobalds, were obelisks, pyramids, and circular porticos, with cisterns of lead for bathing. At Hampton Court the garden walls were covered with rosemary, a custom, he says, very common in England. At Theobalds was a labyrinth also, an ingenuity I shall mention presently to have been frequent in that age.

* Dr. Plot, in his *Natural History of Oxfordshire*, p. 380, seems to have been a great admirer of trees carved into the most heterogeneous forms, which he calls *topiary works*, and quotes one Laurembergius for saying that the English are as expert as most nations in that kind of sculpture, for which Hampton Court was particularly remarkable. The doctor then names other gardens that flourished with animals and castles, formed *arte topiaria*, and above all a wren's nest, that was capacious enough to receive a man to sit on a seat made within it for that purpose.

† At Warwick Castle is an ancient suit of arras, in which there is a garden exactly resembling these pictures of Herculaneum.

society who paint the walks between their parterres, and realize the fantastic scenes of Watteau and Durse.

From what I have said, it appears how naturally and insensibly the idea of a kitchen garden slid into that which has for so many ages been peculiarly termed a Garden, and by our ancestors in this country, distinguished by the name of a Pleasure Garden. A square piece of ground was originally parted off in early ages for the use of the family:—to exclude cattle, &c., it was separated from the fields by a hedge. As pride and a desire of privacy increased, the inclosure was dignified by walls; and, in climes where fruits were not lavished by the ripening glow of nature and soil, fruit-trees were assisted and sheltered from surrounding winds by the like expedient; for the inundation of luxuries which have swelled into general necessities, have almost all taken their source from the simple fountain of reason.

When the custom of making square gardens inclosed with walls was thus established, to the exclusion of nature and prospect,* pomp and solitude combined to call for something that might enrich and enliven the insipid and unanimated partition. Fountains, first invented for use, which grandeur loves to disguise and throw out of the question, received embellishments from costly marbles, and at last, to contradict utility, tossed their waste of waters into air in spouting columns. Art, in the hands of rude man, had at first been made a succedaneum to nature; in the hands of ostentatious wealth, it became the means of opposing nature; and the more it traversed the march of the latter, the more nobility thought its power was demonstrated. Canals measured by the line were introduced in lieu of meandering streams, and terraces were hoisted aloft in opposition to the facile slopes that imperceptibly unite the valley to the hill. Balustrades defended these precipitate and dangerous elevations, and flights of steps rejoined them to the subjacent flat from which the terrace had been dug. Vases and sculpture were added to these unnecessary balconies, and statues furnished the lifeless spot with mimic representations of the excluded sons of men. Thus difficulty and expense were the constituent parts of those sumptuous and selfish

* It was not uncommon, after the circumjacent country had been shut out, to endeavour to recover it by raising large mounds of earth to peep over the walls of the garden.

solitudes; and every improvement that was made, was but a step farther from nature. The tricks of water-works to wet the unwary, not to refresh the panting spectator, and parterres embroidered in patterns like a petticoat, were but the childish endeavours of fashion and novelty to reconcile greatness to what it had surfeited on. To crown these impotent displays of false taste, the shears were applied to the lovely wildness of form with which Nature has distinguished each various species of tree and shrub. The venerable Oak, the romantic Beech, the useful Elm, even the aspiring circuit of the Lime, the regular round of the Chestnut, and the almost moulded Orange Tree, were corrected by such fantastic admirers of symmetry. The compass and square were of more use in plantations than the nurseryman. The measured walk, the quincunx, and the etoile, imposed their unsatisfying sameness on every royal and noble garden. Trees were headed, and their sides pared away; many French groves seem green chests set upon poles. Seats of marble, arbours, and summer-houses, terminated every vисто; and symmetry, even where the space was too large to permit its being remarked at one view, was so essential, that, as Pope observed,

Each alley has a brother,
And half the garden just reflects the other.

Knots of flowers were more defensibly subjected to the same regularity. Leisure, as Milton expressed it,

In trim gardens took his pleasure.

In the garden of Marshal de Biron, at Paris, consisting of fourteen acres, every walk was buttoned on each side by lines of flower-pots, which succeeded in their seasons: there were nine thousand pots of Asters, or la Reine Marguerite.

We do not precisely know what our ancestors meant by a bower; it was probably an arbour; sometimes it meant the whole frittered inclosure, and in one instance it certainly included a labyrinth. Rosamond's bower was indisputably of that kind, though whether composed of walls or hedges we cannot determine.* A square and

* Drayton, in a note to his Epistle of Rosamond, says, her labyrinth was built of vaults under ground, arched and walled with brick and stone; but, as Mr. Gough observes, he gives no authority for that assertion. V. pref. to 2d edit. of *British Topography*, p. xxx. Such vaults might remain to Drayton's time, but did not prove that there had been no superstructure.

a round labyrinth were such capital ingredients of a garden formerly, that in Du Cerceau's architecture, who lived in the time of Charles IX. and Henry III., there is scarce a ground-plot without one of each. The enchantment of antique appellations has consecrated a pleasing idea of a royal residence, of which we now regret the extinction. *Havering-in-the-Bower*, the jointure of many dowager queens, conveys to us the notion of a romantic scene.

In Kip's *Views of the Seats of our Nobility and Gentry*, we see the same tiresome and returning uniformity. Every house is approached by two or three gardens, consisting perhaps of a gravel-walk and two grass-plats, or borders of flowers. Each rises above the other by two or three steps, and as many walls and terraces and so many iron gates, that we recollect those ancient romances, in which every entrance was guarded by nymphs or dragons.

Yet though these and such preposterous inconsistencies prevailed from age to age, good sense in this country had perceived the want of something at once more grand and more natural. These reflections, and the bounds set to the waste made by royal spoilers, gave origin to Parks. They were contracted forests, and extended gardens. Hentzner says, that, according to Rous of Warwick, the first park was that at Woodstock. If so, it might be the foundation of a legend that Henry II. secured his mistress in a labyrinth: it was no doubt more difficult to find her in a park than in a palace, where the intricacy of the woods and various lodges buried in covert might conceal her actual habitation.

It is more extraordinary that having so long ago stumbled on the principle of modern gardening, we should have persisted in retaining its reverse, symmetrical and unnatural gardens. That parks were rare in other countries, Hentzner, who travelled over great part of Europe, leads us to suppose, by observing that they were common in England. In France they retain the name, but nothing is more different both in compass and disposition. Their parks are usually square or oblong inclosures, regularly planted with walks of chestnuts or limes, and generally every large town has one for its public recreation.

(To be continued.)

PART II.

LIST OF NEW AND RARE PLANTS.

BACKHOUSIA MYRTIFOLIA. MYRTLE-LEAVED. (Bot. Mag.) Myrtacæ. *Icosandria Monogynia*. James Backhouse, Esq., of the York Nursery, discovered this pretty greenhouse shrub in the Illawara district, in New South Wales. Mr. Backhouse says it is a small tree, sixteen feet high, with slender branches. The flowers are produced in corymbs. It is very like a broad-leaved Myrtle, with hairy edges to the leaves.

BARBACENIA SQUAMATA. SCALY-STALKED. (Bot. Mag.) *Hæmodoracæ*. *Hexandria Monogynia*. Sent from the Organ Mountains of Brazil to Messrs. Veitch's, of Exeter. It has bloomed in the collection at Kew. It has much the appearance of a small *Yucca*, with finely spined margins to the leaves. The perianth, or flower, is a small star-like form, of a bright orange-red colour. It is a little neat stove plant.

EPIDENDRUM DIPUS. TWO-FOOTED. (Bot. Reg. 4.) *Orchidacæ*. *Gynandria Monandria*. From Brazil to Messrs. Loddiges's, with whom it has bloomed. It much resembles *E. nutans*. The flowers are produced in a compact panicle, each bloom about three-quarters of an inch across. Sepals and petals green, tinged with brown; lip white, tinged with yellow.

ERIA VESTITA. FURRED ERIA. (Bot. Reg. 2.) *Orchidacæ*. *Gynandria Monandria*. A native of Singapore, and of Manila too. It has much the appearance of a *Dendrobium*. The edges of the leaves and the stems are singularly covered with reddish-brown hairs. The flowers are produced in a pendulous raceme, white inside, and a reddish-brown outside.

GLOXINIA TUBIFLORA. TUBE-FLOWERED. (Bot. Reg. 3.) *Gesneriacæ*. *Didynamia Angiosperma*. Mr. Tweedie sent this charming greenhouse plant from Buenos Ayres. The flowers are of pure white, excepting the tinge of dark outside the tube. The tube is near four inches long. The spreading limbs of the corolla are about an inch and a-half across. The flowers are produced in profusion, are fragrant, and make a beautiful appearance. It well deserves a place in the warm greenhouse or plant-stove. It flourishes in either, and blooms for a long period.

LILIUM THOMSONIANUM. DR. THOMSON'S LILY. (Bot. Reg. 1.) *Liliacæ*. *Hexandria Monogynia*. A native of Mussooree, a province of British India. It has bloomed in the greenhouse of Messrs. Loddiges. It is a half-hardy plant, requiring a similar treatment to the *Tigridias*. The flowers are produced in fine erect racemes, of a pretty rose colour, fragrant. The blossoms are campanulate, about two inches long, and, when fully open, about the same across the mouth. It is a very beautiful species.

LUCULIA PINCIANA. MR. PINCE'S. (Bot. Mag.) *Rubiacæ*. *Pentandria Monogynia*. Mr. Pince, nurseryman, of Exeter, received seeds of this splendid plant from Nepal, and has cultivated it in the greenhouse. It is a shrub attaining the height of several feet. The flowers are produced in large cymes, which, spreading on terminal leafy branches, thus several uniting, form one compound cyme, a foot or more in diameter. They are white on the upper side, changing by age to a cream or ivory colour, tinged with blush. The outside of the flower is a deep blush, and the tubular portion red. The magnificent heads of its lovely, delicious fragrant flowers renders it one of the finest plants introduced for many years. It deserves to be grown wherever it is practicable.

NYMPHÆA RUBRA. RED-FLOWERED WATER LILY. (Pax. Mag. Bot.) *Nymphæacæ*. *Polyandria Monogynia*. A native of Hindustan, where it grows in pools of fresh water. It is a stove aquatic in this country. The flowers are of a beautiful purple crimson, very showy, nearly double, each blossom being about five inches in diameter. The tank system of heating would suit it the best. A quantity of loamy earth should be spread in the bottom of a

tub, or tank, for the roots to fix in; and in the winter the water should be drained off to its surface. But the earth must be constantly kept in a somewhat moist state, and not to become quite dry. It bloomed recently in Mr. Knight's collection, at his nursery in the King's-road, Chelsea.

SIDA GRAVEOLENS. HEAVY-SCENTED. (Bot. Mag.) Malvaceæ. Monadelphia Polyandria. A native both of the East and West Indies. It is a handsome species, with soft, pale-green foliage, and yellow flowers, having a deep blood-coloured eye. It is a moderate sized shrubby plant, with large Hibiscus-like flowers. It would be a fit companion to the *Abutilon striatum*.

SYRINGA EMODI. HIMALAYAN LILAC. (Bot. Reg. 6.) Oleaceæ. Diandria Monogynia. A fine dwarf hardy shrub, from three to five feet high; blooms in this country from May to July. The flowers have much the appearance of those of the Privet, but the heads are double their size.

TURNERA ULMIFOLIA. ELM-LEAVED. (Bot. Mag.) Turneraceæ. Pentandria Trigynia. Seeds were sent from Jamaica. It is a strong-growing plant, with herbaceous stems, said to survive two or three years. The flowers are yellow, showy, about the size of the *Allamanda Cathartica*.

PLEROMA PETIOLATA. LONG-PETIOLED. (Pax. Mag. Bot.) Melastomaceæ. Decandria Monogynia. A beautiful flower Melastoma-like plant, from South America. It has bloomed at the Clapton Nursery. The plant grows a yard high. The flowers are numerous produced, in terminal paniced heads, of a beautiful rich purple and blue. Each blossom is two inches across. It is a fine bothouse plant.

NEW PLANTS NOTICED.

APRELLANDRA AURANTIACA.—This is a very valuable addition to the bothouse winter-blooming plants. It is a noble looking plant, producing fine terminal spikes of rich dazzling orange-red flowers. It has been in bloom for a length of time at Messrs. Hendersons, of Pine-apple Nursery, London.

CORREAS.—A number of varied and beautiful hybrids are in bloom at Mr. Gaiues's, of Surrey-lane, Battersea. They are very interesting plants for ornamenting the greenhouse during winter.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

A DESCRIPTIVE LIST OF DAHLIAS.—I should be obliged by a descriptive list of the best Dahlias. AN AMATEUR GROWER.

[The advertised lists of the nurserymen, &c., will soon be given, and they will contain the information required, and will render any list in the body of our work unnecessary.—CONDUCTOR.]

ON ANTS IN THE FLOWER-GARDEN.—I should be greatly obliged if some reader of the CABINET would inform me how to destroy ants from the flower borders, which in mine greatly injure the flowers.

Bath.

A SUBSCRIBER.

ON GESNERIA ZEBRINA.—I have under my charge some fine plants of *Gesneria Zebrina*, three feet high. I am much mortified to see all their blossom buds drop off before they expand, although they grow admirably, with beautiful dark-green foliage. They have suitable soil, plenty of pot room, and good drainage, &c., with a temperature of from 70 to 80 degrees, in a moist stove. They bloom a little at first, but soon get in the way I mention. Can you, or any of your numerous friends, inform me the reason of their doing so, or the

best mode of treatment? By so doing, through the medium of your next number of the CABINET, you will much oblige

A GARDENER.

Cheshire, October 10.

P.S. I have a fine plant of *Goldfussia glomerata*, but it does not show any signs of flowering. Is it worth room, or likely to flower soon? I have had it two years.

[The *G. glomerata* is a very pretty flowering plant; the flowers are purple; it is a *Ruellia*-like plant. Let the plant have a season of rest in a cooler temperature, till the middle of March, and at the same time only water to keep the soil barely moist. Repot at the time named, and put in the usual stove temperature, giving it other due attention, and it usually blooms freely. The *Gesneria* ought not to lack water at the roots, nor be near to the dry scorching heat of the flue; perhaps the temperature where it is kept is too high. We have seen fine plants in profuse bloom in a warm greenhouse. Try different situations, along with regular due attention. The ends of shoots, having flower heads formed, cut off close under a joint, and inserted singly into small-sized pots, and placed in moist heat, soon take root; and afterwards repotted, if required, into a size larger, form beautiful flowering dwarf specimens. It is a fine plant for winter ornament; may be had in bloom the entire thereof.—CONDUCTOR.]

ON RHODANTHE MANGLESII.—A Subscriber will be very glad to know, from any one who has grown *Rhodanthe Manglesii* successfully, the mode of culture, and the soil in which it should be grown to flourish.

ON SWEET-SCENTED PELARGONIUMS.—I am desirous of procuring some of the fragrant-leaved *Pelargoniums*, and shall be obliged by the names of a few sorts of that class.

JUVENIS.

[Oak-leaved, Fair Ellen, Rose Scented, Balm Scented, Prince of Orange, Emily, Citron Scented, and Bagshot Park.]

ON GUANO.—In a late number of the "Gardener's Chronicle" it is recommended to apply 3 cwt. to one acre. Reducing that to the size of my vine border, or conservatory border, *i. e.*, the border into which the roots of my vines, &c., run, and in which they are planted, it will take two pounds of Guano, which I would powder and sift, and with an equal quantity (or three times as much) of sifted loam, I would sow over the border, taking care to do so very equally. I will feel very much obliged if some correspondent will, as early as may be (*viz.*, in your next number), inform me at what period I should apply this Guano. Secondly, how often to be repeated. Thirdly, how often should I apply liquid manure to plants in pots or to a flower-border? Plants in pots, in a greenhouse, will require water frequently. Are they to be always watered with liquid manure (Guano in water), or how often? Flower-borders may require no watering if there be rain; but, notwithstanding, how often will it do them good to have a little Guano-water? Fourthly, which is the best, Potter's or Peruvian Guano?

BURRIENSIS.

ON MANURE, &c., FOR FLOWER BORDERS.—I will thank you to inform me in your next valuable miscellany, what you consider as the best dressing for the common flower borders. Whether salt can be applied with advantage, if so, the quantity to use most proper, or whatever you may consider as the best ingredient at the period of forking over the borders.

Q.

January 8th.

* * * My garden is a light dry soil with a gravelly bottom.

[A free addition of fresh loam with a moderate mixture of well rotted leaf mould or well rotted hot-bed dung, if of cow-dung, is the best application that can be given. We have found the plants to grow freely and bloom much more profusely, than when a greater quantity of rotten dung was given and no fresh loam. When an addition of this dressing would raise a bed or border too high to retain the old soil, we had some of the latter removed in due proportion. We never tried salt, and we think it would not answer. Guano is spoken of as being beneficial.—CONDUCTOR.]

A LIST OF PENTSTEMONS.—A Constant Reader would be particularly obliged to see in the February Number, a descriptive list of Pentstemons, especially such as do not partake too much of the Foxglove character. A list was given in the December Number for 1843, but no doubt there has been valuable additions since that time. Will the kinds come true from seed?

[If the seed be collected from a plant that has been grown remote from any other kind, and thus be preserved from cross impregnation, it certainly will come true to kind. If new varieties are desired, by impregnation with bees, or otherwise effected, they are easily obtained.]

P. acuminatis, purple.
albidus, white.
angustifolium, lilac.
argutum, blue.
atropurpureum, purple.
attenuatum, cream.
Barclayanus, lilac.
br-viflorum, white and pink.
campanulatum, lilac purple.
 ————— violaceum.
 ————— rubrum.
Cobaea, pale purple and white
connatum, rose.
confertum, pale yellow.
crassifolium, blue.
diffusum, purple.
deustum, cream.
digitalis, white.
 ————— roseum, rose.
eriantherum, purple.
glabrum, dark purple.
glaberrimum, blue.
glandulosum, pale blue.
glaucum, pale lilac.
gracilis, blue.
gentianoides, dark purple.
 ————— coccineum, scarlet.
 ————— Morrisoni, rosy red.
 ————— roseum, rose.

P. gentianoides heterophyllum, red.
grandiflorum, rosy purple.
Harrisonii, bright scarlet.
hirsutum, pale purple.
Knightii, purple.
lanceolatum, lilac rose.
lævigatum, lilac.
Millerii, red.
Murrayanum, scarlet.
Mackayanum, purple yellow.
nitidum, lilac and white.
ovatum, blue
procerum, purple.
pruinosum, blue.
pubescens, pale purple.
pulchellum, lilac.
primulinum, blue and lilac.
punctatum, purple red.
perfoliatum, rosy purple.
Richardsonii, dark purple.
roseum, rose.
 ————— elegans, rosy red,
Scoulerii, light purple.
speciosum, blue.
splendens, lilac.
staticifolium, dark lilac.
triphylllum, pale red.
venustum, purple.
violaceum, violet blue.

The above are the best kinds we know, they partake in some degree of a similar form, and deserve a place in every flower garden, blooming for a long period, and being both interesting and showy. An additional recommendation is that they may be procured cheap. They are readily increased by slips of the young side shoots or by seeds.—CONDUCTOR.]

REMARKS.

ROSES INCREASED BY CUTTINGS.—Short shoots, cut off clean, and close to the parent stem, inserted in sand, and placed in a hot-bed frame, kept close and moist, pressing the sand close to the stem at the time of setting, will speedily strike root. I put off this year's shoots on the 1st of June, and now, out of 150 put off, I have 136 rooted plants. I shaded them from hot sun, and had the tops sprinkled over night, morning, and mid-day for the first ten days, applying finely over by means of the syringe. This tended to keep the foliage fresh, and materially assisted in rooting. I put in Bourbon, China, Moss, Damask, French, and Provence kinds. Rosa.

June 24th.

REMARKS ON THE CULTURE OF TROPICAL ORCHIDEOUS PLANTS.—Extract from a most splendid publication on the Tribe, with figures, &c., by James Bateman, Esq.

And now as respects the leading points in cultivation. Supposing the plants established in a suitable house—which is an indispensable preliminary—the

following rules will be found to contain all that is most essential for their successful management.

1st. The plants can scarcely have too much light or too little sun.

Light prevents mildew, strengthens the fibre, and checks the disposition to throw up a succession of weakly shoots, which are quite incompatible with the production of flowers. The sun, on the contrary, scorches and turns the leaves yellow, especially when it first begins to shine powerfully upon plants that have just left their winter quarters. In order to secure as much light as possible, many species should be suspended in the air from rafters or chains, some being placed on blocks of wood (Cork wood is the best), or fragments of Cocoa-nut husks, and others in baskets of wire or wicker-work filled with moss and broken peat, or in pots with pierced sides. The latter answer perfectly for plants (*e. g.*, the *Saccolabiums*), which are of slow growth, and thrust their roots into the air. Baskets answer best for *Stanhopeas* and the like. To prevent injury from the rays of the sun, shading is of course necessary, but this should be so arranged as to be easily removed, as it ought not to be continued for more than ten or twelve hours on the very longest summer's day. Exotic climbing plants introduced sparingly are advantageous, and have a good effect.

2nd. Take care of the roots.

On the health of the roots everything depends. The winter is with them the most critical season, for if suffered to grow too dry they shrivel up and perish; if too wet they rot. Much, of course, depends upon the mode in which the plants are potted, and which should be such as to admit of their readily parting with all superfluous moisture; and to secure this nothing is better than a plentiful admixture of broken potsherds. High-potting is now so generally practised in good collections, that it is needless to insist upon its importance. Rapidly-growing plants, such as the different species of *Phalus*, *Gongora*, *Peristeria*, *Stanhopea*, &c., require to be broken up and entirely repotted every second or third year; on the other hand, there are some Air-plants, &c., that may remain undisturbed for five or ten years together.

3rd. Beware of noxious insects.

Orchidaceæ are more particularly exposed to the attacks of the following insects:—woodlice, crickets, and cockroaches, the thrip, a minute woolly white scale, and a diminutive species of snail; the two last being infinitely the most pernicious. Woodlice are easily kept in check by placing the plants on saucers, or within troughs filled with water, especially if the valuable aid of a few loads be called in. The "Oniscamytic Epiphyte-stand," invented by Mr. Lyons, is an ingenious and, no doubt, effectual way of accomplishing the same end. It is made by merely fixing a forked branch, or block of wood to the raised centre of a massive saucer or feeder, which, being kept constantly full of water, forms a sort of fosse—impassable to vermin—round the plant it is intended to guard. Crickets and cockroaches are very fond of flower-scapes, and to be dreaded accordingly. Red wafers scattered over and among the pots are to them very tempting baits, and, if swallowed, the red lead they contain acts as a poison, but these pests are best destroyed by the mixture recommended for the white scale. The thrip does not do much mischief, except where plants are either neglected, or grown in too hot and dry a temperature. It usually first appears among the *Catseta*, and is to be removed by careful washing. Small snails abound in some collections, while in others they are unknown; it is difficult to conjecture whence they come, and all but impossible to eradicate them entirely. They batten upon the tenderest roots, such as plants put forth when they are just beginning to grow, and if not kept in check would speedily produce irretrievable mischief. Lettuce-leaves, slices of potatoe, turnip, &c., are very enticing; and while they divert the attention of the enemy from the roots, they also afford an opportunity of capturing him. The collections which are watered exclusively with rain-water are the least infested. But the worst plague of all is the small white scale, which, in its first insidious approaches, appears only as a white speck upon the leaves, then covers them with a soft whitish down, and finally kills them. For this the following remedy will be found efficacious; viz., dissolve half a pound of camphor in a pint of spirits of wine; the result will be an impalpable powder, to which add one pound of Scotch snuff; one ditto pepper; one ditto sulphur, and keep in a bottle (carefully stopped). This

mixture should be dusted over the infected parts, and repeated whenever or wherever the enemy shows itself. If persisted in for some time, the mixture rarely fails to effect a perfect cure; and it has the further good property of acting as a most deadly poison to cockroaches, &c., which have quite disappeared in the collection at Knypersey since this mixture came into frequent use. Besides the above annoyances, the red spider and the brown scale are frequently injurious, but never except in cases of gross neglect.

4th. Give the plants a season of rest.

Without a season of rest, most plants will not flower at all, and others do so very imperfectly. It is easily accomplished in a variety of ways, either by moving the plants from the warmer to the cooler end of the house; or by diminishing the quantity of water; or by placing them in a cooler house. Even exposure in a hot, dry atmosphere, although it scorches their leaves, not unfrequently throws them into vigorous flower. Plants from the East Indies and from other climates, where the extremes of drought and wet are not felt so severely as in Brazil or Hindostan, require a season of rest proportionably short, and of a less decided character.

5th. Attend to the condition of the air.

In winter 60° to 65° is a wholesome temperature for most of the species; in the summer it may rise to 70° or 75° , or even higher if derived from the heat of the sun. Where there are two houses, the warmer one should not be lower than 70° even in winter; but, fortunately, there are comparatively few kinds that insist upon so hot a berth. The air should always be soft, and nearly saturated with moisture. The latter should, however, be prevented from dripping upon the plants, as it condenses; and this is easily effected by fixing a small copper-pipe, or piece of channelled wood, under each rafter and sash-bar, to catch and carry off the water.

6th. Do not over-water.

This a beginner is very apt to do, and a grievous fault it is. When plants do not shrivel or flag, it is a sign that they are content with the humidity that the atmosphere of the house supplies. When watering is necessary, it should not be done indiscriminately, but according to the wants of particular plants. It is also of great importance to use rain-water only, which may be collected for the purpose in a tank, and which should not be applied of a temperature below 60° . Syringing in moderation may be had recourse to in hot weather. Some of the Sobralias, together with *Bromheadia palustris*, grow more vigorously if their pots are set in saucers of water during the summer months.

To the foregoing rules the following advice may be added:—"Do not aim at having too large a collection, but rather strive to grow a few good kinds in the best style." With moderate care and in a moderate-sized house, the whole of the plants enumerated in the subjoined "Century," will thrive apace, and bloom freely—and he whom such a brilliant assemblage fails to satisfy must be an ardent collector indeed.

ACHIMENES.—During the last summer I had a number of *Achimenes longifolia*, *grandiflora*, *hirsuta*, and *coccinea* plants, grown in baskets similar to Orchideous plants, [and suspended in my greenhouse, and some in my sitting-room. They bloomed very profusely, and hanging gracefully on every side, they had a very interesting and pleasing appearance.

CLERICUS.

ON CHARCOAL.—I have tried the effect of charcoal, mixed with some compost, in which I putted some *Pelargoniums*, and its good effect is very striking. Its open, porous nature renders it peculiarly useful when mixed with rich manures, abounding in ammonia, as it prevents the loss of that volatile substance. By the gradual action of the air it yields certain gaseous matters requisite to plants; and moreover contains all those substances which render wood-ashes valuable as manure. In general, charcoal is too dear to be used as a manure; but where it can be obtained at a cheap cost, there is little doubt it may be applied with great advantage, and especially in connexion with ammoniacal or strong animal manures.

CLERICUS.

ON SUCCULENTS.—To grow Succulents successfully in a greenhouse, they should be kept in the lightest possible situation, in order to have the foliage of a dark colour, and without which they never flower well. The soil that I find suits the best is equal parts of rich loam, leaf mould, and peat, and to have a very free drainage. Amongst the compost a few pieces of potsherds or broken stones and bits of charcoal should be scattered. The entire class so attended to will vigorously flourish. SENEX.

TO PREVENT BIRDS TAKING NEWLY-SOWN SEEDS, &c.—To gentlemen and market gardeners, who have been troubled with birds destroying early crops of vegetable or flower seeds, I beg to observe, that I prevent their depredations as follows:—I take a tablespoonful of rectified naphtha, and mix it with two gallons of water, and water my ground as soon as I sow my seeds. I water it again when the plants first appear out of ground, such as sweet peas, radish, cabbages, and early crops of peas, and whatever the birds attack so much. Another way I find is a good plan; that is, to take a ball of worsted, and steep it in the naphtha, and strain the same over the rows of seeds; this being done, they never come to attack the seeds. I find this an excellent thing for keeping the fly from eating my young plants, such as turnips, and all kinds of vegetable or flower seeds, by giving the plants a little water when they begin to come into rough leaf, whether the seeds were not even steeped as above stated. This may be done without the least danger of injuring the plants. J. R.

Grove House.

NEW VARIETIES OF INDIAN AZALEAS.

A. exquisite, deep pine, with a lighter margin, and spotted carmine; a fine flower.

A. carminata, flowers a rich deep carmine.

A. Emmelina, light red, the flowers large.

A. erecta, fine crimson red, brilliant.

A. exquisita, deep pink, light margin, spotted with scarlet.

A. formosa, rich bright red, with large flowers.

A. gloriosa, fine purple, with carmine spots.

A. laterita-pulchra, pale bright red, fine form.

A. King of Saxony, bright vermilion, fine form, and large size.

A. optima, orange red, with darker spots, fine shape.

A. præstantissima, light vermilion red, with dark spots.

A. refulgens, deep rich scarlet, very pretty.

A. splendida, rich purple, with deeper spots.

The above may be obtained of Mr. Smith, of Norbiton, near Kingston, or of the Trade in and around London.

(To be continued.)

FLORICULTURAL CALENDAR FOR FEBRUARY.

GREENHOUSE.—This department should have good attendance during this month.

The herbaceous kinds of plants will require occasional waterings, but less frequent and in less quantities than the woody kinds. Succulents, as Aloes, Sedums, &c., should be watered very sparingly, and only when the soil is very dry. When water is given it should be as much as will moisten ALL the soil, where water is only given to moisten the soil an inch or two at the top and the other kept quite dry, the result is generally certain, namely, the death of the plant. The plan to be attended to is, water only when necessary, but a full supply when it is done. Air should be admitted at all times when the weather is favourable, or the plants cannot be kept in a healthy state. When the weather is damp, foggy, &c., do not give air then, let a *dry* air only be admitted. If any of the Oranges, Lemons, &c., have naked or irregular heads, towards the end of the month, if fine mild weather occur, begin to reclaim them to some uniformity by shortening the branches and head shoots; by this attention they will break out new shoots upon the old wood, and form a regular head; be

re-potted in rich compost in April, reducing the old ball of earth carefully, and replacing with new soil. After shifting, it would be of great use to the plants if the convenience of a glass case could be had in which to make a dung-bed that the pots might be plunged in; this would cause the plants to shoot vigorously, both at the roots and tops. Repot *Amaryllis*, &c. Tender and small kinds of plants should frequently be examined, to have the surface of soil loosened, and a portion of fresh soil added to the surface, decayed leaves taken away; or if a portion of a branch be decaying, cut it off immediately, or the injury may extend to the entire plant and destroy it. *Gloxinias*, *Achimenes*, &c., now beginning to push, should be potted.

Auriculas should immediately be top-dressed, taking off old soil an inch deep, and replacing it with new rich compost; give air freely when dry weather.

Bulbs, as *Hyacinths*, &c., grown in water-glasses, require to be placed in an airy and light situation when coming into bloom. The water will require to be changed every three or four days. The flower-stem may be supported by splitting a stick at the bottom into four portions, so as it will fit tight round the edge of the glass at the top. Beds of *Hyacinth*, will require attention if severe weather occurs, also beds of *Tulips* must have the bulbs protected from the least touch of frost, as also the tender spike, or the bloom will be injured so as to be notched, &c. Water-proof cloth covers over hoops, &c., do best.

The seed of *Calcceolarias* should be sown at the end of the month, and be placed in a hot-bed frame, also cuttings or slips be struck, as they take root freely now.

Cuttings of *Salvias*, *Fuchsias*, *Heliotropes*, *Geraniums*, &c., desired for planting out in borders or beds during spring and summer, should be struck in moist heat at the end of the month, in order to get the plants tolerably strong by May, the season of planting out.

DAHLIAS.—*Dahlia* roots, where great increase is desired, should now be potted, or partly plunged into a little old tan in the stove, or a frame, to forward them for planting out in May. As shoots push, take them off when four or five inches long, and strike them in moist heat. Seed should be sown either in pots or upon a hot-bed. Pots or boxes with seed placed in a warm room near light, and admitting plenty of air to the plants when up, will succeed well.

Ranunculuses and *Anemones* should be planted by the end of the month. See articles in former numbers.

Herbaceous Perennials, Biennials, &c., may be divided about the end of the month, and planted out where required.

Mignonette, to bloom early in boxes or pots, or to turn out in the open borders, should now be sown.

Rose Trees, Lilacs, Pinks, *Hyacinths*, *Polyanthuses*, *Narcissus*, *Honeysuckles*, *Persian Lilacs*, *Primroses*, *Rhodoras*, *Persian Irises*, *Sweet Violets*, *Cinerarias*, *Heptacarys*, *Aconites*, *Jasmines*, *Azaleas*, *Lily of the Valley*, *Correns*, *Gardenias*, *Cyclamens*, *Guelder Roses*, &c., should regularly be brought in for forcing.

TENDER ANNUALS.—Some of the kinds, as *Cockscombs*, *Amaranthuses*, &c., for adorning the greenhouse in summer, should be sown immediately.

Ten-week Stocks, Russian and Prussian Stocks, &c., to bloom early, should be sown immediately in pots, placed in a hot-bed frame, or be sown upon a slight hot-bed, also some other of the tender kinds, to prepare them strong for early summer blooming, and for entire beds of a sort.

Protect the stems of tender plants with Furze branches, &c. The stems of tender climbing *Roses* are screened by such precaution.

Chrysanthemums must be kept in a cool frame, free from frost, but admit air to prevent them drawing up.

Cineraria seed should now be sown.

Carnations, &c., may now be potted singly; they must be protected from severe frost, and from damp; admit dry air, &c. Pinks are liable to injury from worms, to prevent it, make the soil firm round the stems.

Parrotuliums, for showing, &c., should now have a final repot. (See articles in previous numbers.)

Lobelias, forward the old plants, and as early as consistent pot suckers singly into pots for beds, specimens, &c.

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1. *Phlox Captivation*; 2. *Luculia Finciana*.

Floricultural Cabinet, March, 1845.

THE
FLORICULTURAL CABINET,
MARCH 1st, 1845.

PART I.
EMBELLISHMENTS.

ARTICLE I.

1. PHLOX, VAR. CAPTIVATION (HARRISON'S).

THIS very handsome variety is one, out of a vast number, that we have raised from seed, and which bloomed for the first time last year. During the two previous years, we paid particular attention to the impregnation of all the finest-formed flowers, and of the most dissimilar colours, both in early and late blooming kinds, especially to obtain the beautiful ones growing from one and a half to two feet high, and having a striking centre; and the results far exceeded our expectation. We have many thousands to bloom the coming season, and calculate on a valuable addition to this lovely tribe of hardy plants. The entire tribe are deserving a place in the flower border, and a selection of the best ought to be in every flower-garden.

All are quite hardy, increase freely, and easy to cultivate, and a succession of bloom in Phloxes may be had from April to November.

2. LUCULIA PINCIANA.

Beautiful as is the *L. gratissima*, when producing its fine clusters of fragrant and soft looking pink-coloured blossoms, yet this new species is said very far to excel it in the magnitude of its flowers, and the fine terminal heads in which they are congregated, each head being a foot or more in diameter, and these

produced in profusion. The flowers at the upper side are at first white, then change to a cream colour tinged with blush, the outer surface is a deep blush, and the tube almost red. These beautiful heads of flowers make a fine contrast with the noble velvety-green foliage. The blossoms are highly fragrant, and perfume the air around to some distance with their delicious fragrance. The plant is about the same in vigour as *L. gratissima*, and appears to flourish admirably in the greenhouse. It deserves to be in every one, being so fine a plant, and blooming in the autumn and winter months.

ARTICLE II.

FURTHER REMARKS ON LANDSCAPE GARDENING,

BY A LANDSCAPE GARDENER.

IN the late numbers of the previous volume of this Magazine, I gave some hints on the formation of walks, &c. I here forward a few more on the mode of producing the most harmonious effects under existing circumstances.

All the most beautiful objects or scenes in nature are symmetrical, forming a centre and two sides, thus together composing a whole, which has a beginning, a middle, and an end.

Now, in this centre, whether visible, or supplied by the imagination, is the axis of symmetry. In the simplest kind of symmetry, the two sides are equal and alike, and the axis is, of course, easily discovered; but in cultivated and refined symmetry, the sides are unequal, and so combined and varied with the centre, that it requires the eye of a philosophical artist to detect the axis; which, in other words is called the axis of the composition. If it is once admitted that no scene can be truly beautiful or satisfactory that is not more or less symmetrical, then we have only to search for this quality in every building or landscape presented for examination, for the purpose of supplying it where it is wanting, either by abstracting what interferes with it, or by the addition of what is necessary to render it effective or obvious: But, though every artist will allow this to be theoretically true, yet he will also allow that it requires great practical experience to be able to carry the idea into effect, especially in general scenery. In the case of a house, or a group of buildings, the difficulty is not great, because all the forms in build-

ings are definite and permanent ; but in landscape, all the forms are indefinite, and continually changing by growth, by decay, and even by the seasons of the year. Those who have thought much on this subject, will discover that the idea of rendering every object or scene symmetrical, is but a more accurate and detailed analysis of the expression, "rendering any object or scene a whole." The advantage of treating the subject in this manner is like that of presenting the same object, under different points of view ; we become better acquainted with it.

Breadth of effect has also been touched on before, because without it, that is, in common language, without broad naked surfaces or glades of turf among trees and shrubs, there must either be monotony or confusion in either a park or a pleasure-ground ; monotony if the ground is uniformly covered with trees or shrubs, and confusion if it is covered a little more in some places than in others, but not sufficiently uncovered in any place to produce repose or breadth of effect, that is, masses of light or masses of shade. The use of these naked places in parks and pleasure-grounds, is, to contrast with the covered places ; because it is, by this contrast, that what is called the effect is produced. In other words, a thing is what it is only by comparison with some other thing. If there were only one colour, there could be no such distinction of colours as red, blue, &c. ; and if there were no light, there could have been no such thing as darkness. Every large object looks still larger when a small object of the same kind is placed near it ; every particular form, such as a cube, appears still more definite or particular when it is opposed to a form of an opposite kind, such as a globe ; and every colour appears more intense when it is placed adjoining its contrasting or complementary colour. In short, there is not a principle in the whole art of composition, whether of architecture or landscape-gardening, or, indeed, of any of the fine or mixed arts, so constantly brought into requisition as that of contrast, unless, indeed, it be that of connexion. The whole art of landscape-gardening, landscape-painting, and architecture, with reference to effect, may, indeed, be resolved into the exercise of these two principles.

There is one prevailing error which belongs to the department of landscape-gardening, which I have noticed, viz., the acute-angular forms of dug beds for flowers and flowering shrubs, which are com-

monly to be found on lawns. Beds, the outlines of which form acute angles, are bad in themselves, because they never can be completely covered with flowers or shrubs at the angles, and because if the eye of the spectator who observes them is not on a much higher level, the shape of the bed, of which the angle forms so conspicuous a feature when near, is not recognized. For all ordinary purposes, therefore, I consider acute-angled beds as ineligible; though, for symmetrical designs, in situations where the design is commanded by an elevated walk, or surrounding terrace, they may, with propriety, be introduced; because, in such situations, their forms and combinations display them to almost all the advantage of which they are susceptible. It is lamentable to see the pleasure-grounds of some of the finest old places in England spoiled by the introduction of these angular beds, in the most romantic or otherwise strongly marked scenes, that no man of taste would dare to touch; the beds perhaps planted with dahlias, hollyhocks, or China roses.

I wish I could strongly impress on the mind of every amateur, and of every gardener, that, for all general purposes of planting beds of shrubs, or beds of flowers on a lawn, to be laid out in the modern style, the best form is the circle, provided that it be always kept of small size, say from two to six feet in diameter, one circle never placed nearer to another than two feet, and that these beds be thrown together in groups or constellations, as stars are in the firmament, or single trees and single shrubs in a well planted park.

I do not say that there are not cases where large angular masses, or long variously outlined shapes, may not be preferable to circles, or ought not to be introduced along with them. On the contrary, though in a park, I would effect the great part of the planting by single trees, and small groups, as I would on a lawn by circular beds of different sizes, yet there may be cases in both where a particular practice requires to take the place of a general one. The principles, indeed which guide the disposition of the kind of circular beds that I recommend, are exactly the same as those which guide the disposition and grouping of single trees. Wherever large masses of shrubs or flowers are wanted, there a greater number of circles of different sizes are to be brought together; and wherever any particular general form is to be produced, the body of that form may consist of beds in the form of circles, the general outline of

which will constitute the form required. In short, as every mass of wood is composed of single trees, so every mass of shrubbery, or of flowers on a lawn, should or might be composed of single circular beds of different sizes.

Some persons who do not understand the difference between the effects of shapes on paper and shapes on ground, and between looking down on a lawn or flower-garden, and looking at it sideways, will object to having nothing but circles, as wanting in variety: but, in practice, it is found that, by combinations of circles of different sizes, more variety is produced than can be effected by the use of any other form whatever, unless we except small squares or small polygons, to which I have no objection except that the angles are not so easily filled up with flowers as circles. To show that combinations of circles are productive of more variety than any other form, I observe, first, that the circles, being always seen from the side of the combination, change their apparent position with every change in the position of the spectator; and secondly, that when the circles are planted with flowers, one or more of which in every bed rise to the height of two or three feet, the shape of the bed, whatever it may be, can never be recognised by the spectator from a side view. The size and the connexion, therefore, in this case, is of much more importance than the shape. As well might combination of single trees be objected to in a park, as combinations of small circular beds on a lawn; for, as a single tree, in combination with other single trees, is no longer a detached object, but forms a part of the whole to which it belongs, so a single circular bed, in combination with other circular beds, is no longer to be considered as a circle, but as the element of a combination which may form a varied and extensive figure, according to the circumstances of the situation and the object in view.

The only fear that I have in recommending circles is, least doing so I should be aiding the old system of clumping in parks; but I hope it will be borne in mind that I recommend no circles larger than five or six feet in diameter, and none to be placed in such an isolated position as to be unconnected with anything else, or to attract attention as single and detached objects.

(To be continued.)

ARTICLE III.

REMARKS ON OBTAINING HYBRID CORRÆAS, &c.,

BY AN AMATEUR CULTIVATOR.

THE beautiful *Corræa speciosa* I obtained about twenty years back, and have grown it ever since, considering it one of the most neat and beautiful winter and early spring flowering plants. The other species introduced, and hybrid varieties that have been raised, since the former period named, I have obtained as soon as I could. I now possess twenty-six different kinds, and have had them in fine bloom since the beginning of November in my greenhouse, and I expect them to continue till May. Their beautiful tubular-formed flowers of varied colours, producing a pleasing contrast, render the entire family one of much interest. Four years back I commenced hybridizing, with a view to obtain other distinctive varieties between the best species I had, as *C. speciosa*, *pulchella*, &c. I have since raised a considerable number of varieties, and not two of them alike, varying either in colour, form, habit, or size. I was much astonished with the result, that from the same parent, there was such a dissimilarity after the process of an artificial impregnation. It is, however, well known that artificial or natural peculiarities can be, and are, transmitted from parent to offspring, in the vegetable as well as in the animal kingdom, although we cannot yet, and, perhaps, may never be able to account why such constitutional peculiarities are so transferred. Let us, then, be content with knowing that these peculiarities do exist; let us, likewise, multiply and register as many facts as bear directly or indirectly on the subject; and, from an accumulated store of this nature, something tangible may yet be deduced for future guidance. To know when the stigma is ready for dusting with pollen, to extract unripe anthers from an intended female parent, is so simple that it might be taught to a child in a few minutes; not so the means by which certain properties may be produced, and ultimately will probably be produced at pleasure, by cross fertilization: say, cross offspring with very dwarf and fruitful habits, or the reverse; very luxuriant habit with double flowers, or the contrary; and many other peculiarities, needless to mention here. Yet we have presumptive evidence already that all these states of existence are guided by certain fixed laws, and, perhaps, depend on

the different states of development of the vital principle in the parents. Any facts, therefore, tending to elucidate such laws or states of development, cannot be but interesting to the physiologist, and of the greatest use to the hybridist. In the attention I have paid to this interesting pursuit, I have found that *C. speciosa* or *C. pulchella* may be both used for female parents: either of them may be tried with *virens*; but clear clean colours in the flowers of this cross cannot be expected, the thing being as much a matter of curiosity to ascertain the powers of crossing in this very interesting genus, which, like the fuchsia, is a favourite with every one. *Virens* and *rufa* will cross; but, in this case, *virens* alone has been used as the female parent, *rufa* being so insignificant a flower, it would be likely soon to reduce the flowers of *virens* in the offspring. From this cross, by breeding in and in, as the farmers say, a clear white flowering offspring may reasonably be expected in the third generation; while, by crossing in and in the highest-coloured varieties from *speciosa* and *pulchella*, I have obtained some deep crimson flowers. I have crossed a pure white seedling from *virens* and *rufa*, with a deep crimson variety, and procured clear intermediate colours. All the species and varieties I have tried with *alba*, and have raised some, but they have not yet bloomed.

The manner of conducting these experiments, may be useful to amateurs and young beginners. Take the healthiest plants you can procure; and, unless you have very healthy vigorous plants, go directly to the nursery, and procure a few of each sort, with plenty of blossom buds on the strongest leading shoots; this is the grand secret of the whole business. A practical gardener may take these from the greenhouse, or even cold frame, into 75 degrees of heat at once; but those not conversant with the treatment of plants would soon kill any plant by such a sudden transition. From the middle of February to the end of March is the best time to take the plants into the stove. Pinch off all the leading buds on the lateral shoots, but not on the leading shoots. As soon as the flower expands, extract the anthers from the intended female parent; and next day, or as soon as you perceive the pistils getting moist, apply the pollen, at the same time making two or three slits in the whole length of the corolla, to let out the sweet secretion often lodging on the germen. See that the decaying corolla does not damp off the style, which

ought to be preserved till it dries off itself. As soon as you perceive the germen swelling, stop the leading shoots. Apply all safe stimulants till the seeds are ripe, but do not let the plant expend its energies in the production of young wood. Pinch off every bud as it offers to expand. Keep the plant or plants as near the glass as possible all the time, and sow the seeds as soon as ripe. Seedlings produced in the greenhouse will not be near so vigorous as those in the stove; and their being originated in heat does not alter their hardiness in the least.

ARTICLE IV.

THE HISTORY OF GARDENING.

BY CLERICUS.

(Continued from page 40.)

ONE man, one great man we had, on whom nor education nor custom could impose their prejudices; who, "on evil days though fallen, and with darkness and solitude compassed round," judged that the mistaken and fantastic ornaments he had seen in gardens, were unworthy of the Almighty Hand that planted the delights of Paradise. He seems, with the prophetic eye of taste, to have conceived, to have foreseen modern gardening; as Lord Bacon announced the discoveries since made by experimental philosophy. The description of Eden is a warmer and more just picture of the present style than Claude Lorraine could have painted from Hagley or Stourhead. The first lines I shall quote exhibit Stourhead on a more magnificent scale:—

Thro' Eden went a river large,
Nor chang'd his course, but through the shaggy hill
Pass'd underneath'd ingulph'd, for God had thrown
That mountain as his garden mound, high rais'd
Upon the rapid current.

Hagley seems pictured in what follows:—

Which through veins
Of porous earth with kindly thirst updrawn,
Rose a fresh fountain, and with many a rill
Water'd the garden.

What colouring, what freedom of pencil, what landscape in these lines!

From that sapphire fount the crisped brooks,
 Rolling on orient pearl and sands of gold,
 With mazy error under pendent shades
 Ran nectar, visiting each plant, and fed
 Flow'rs worthy of Paradise, which not nice art
 In beds and curious knots but nature boon
 Pour'd furth on hill, and dale, and plain,
 Both where the morning sun first warmly smote
 The open field, and where the unpierc'd shad
 Imbrown'd the noon-tide bow'rs. Thus was this place
 A happy rural seat of various view.

Read this transporting description, paint to your mind the scenes that follow, contrast them with the savage but respectable terror with which the poet guards the bounds of his Paradise, fenced

With the champaign head
 Of a deep wilderness, whose hairy sides
 With thicket overgrown, grotesque and wild,
 Access denied; and overhead upgrew
 Insuperable height of loftiest shade,
 Cedar and pine, and fir and branching palm,
 A sylvan scene, and, as the ranks ascend,
 Shade above shade a woody theatre
 Of stateliest view;—

And then recollect that the author of this sublime vision had never seen a glimpse of anything like what he has imagined, that his favourite ancients had dropped not a hint of such divine scenery, and that the conceits in Italian gardens, and Theobalds and Nonsuch, were the brightest originals that his memory could furnish. His intellectual eye saw a nobler plan, so little did he suffer by the loss of sight. It sufficed him to have seen the materials with which he could work. The vigour of a boundless imagination told him how a plan might be disposed, that would embellish nature, and restore art to its proper office, the just improvement or imitation of it.

It is necessary that the concurrent testimony of that age should swear to posterity that the description above quoted was written above half a century before the introduction of modern gardening, or our incredulous descendants will defraud the poet of half his glory, by being persuaded that he copied some garden or gardens he had seen—so minutely do his ideas correspond with the present standard. But what shall we say for that intervening half century who could read that plan, and never attempt to put it in execution?

Now let us turn to an admired writer, posterior to Milton, and see

how cold, how insipid, how tasteless, is his account of what he pronounced a perfect garden. I speak not of his style, which it was not necessary for him to animate with the colouring and glow of poetry. It is his want of ideas, of imagination, of taste, that I censure, when he dictated on a subject that is capable of all the graces that a knowledge of beautiful nature can bestow. Sir William Temple was an excellent man; Milton a genius of the first order.

We cannot wonder that Sir William declares in favour of parterres, fountains, and statues, as necessary to break the sameness of large grass-plats, which he thinks have an ill effect upon the eye, when he acknowledges that he discovers fancy in the gardens of Alcinous. Milton studied the ancients with equal enthusiasm, but no bigotry, and had judgment to distinguish between the want of invention and the beauties of poetry. Compare his Paradise with Homer's Garden, both ascribed to a celestial design. For of Sir William, it is just to observe, that his ideas centered in a fruit garden. He had the honour of giving to his country many delicate fruits, and he thought of little else than disposing them to the best advantage. Here is the passage I proposed to quote; it is long, but I need not make an apology to the reader for entertaining him with any other words instead of my own:—

“The best figure of a garden is either a square or an oblong, and either upon a flat or a descent: they have all their beauties, but the best I esteem an oblong upon a descent. The beauty, the air, the view, makes amends for the expense, which is very great, in finishing and supporting the terrace walks, in levelling the parterres, and the stone stairs that are necessary from one to the other.

“The most perfect figure of a garden I ever saw, either at home or abroad, was that of Moor Park, in Hertfordshire, when I knew it about thirty years ago. It was made by the Countess of Bedford, esteemed among the greatest wits of her time, and celebrated by Doctor Donne; and with very great care, excellent contrivance, and much cost; but greater sums may be thrown away without effect or honour, if there want sense in proportion to money, or if nature be not followed, which I take to be the great rule in this, and perhaps in every thing else, as far as the conduct not only of our lives, but our governments.”

We shall see how natural that admired gardener was:—

“Because I take the garden I have named to have been in all kinds the most beautiful and perfect, at least in the figure and disposition, that I have ever seen, I will describe it for a model to those that meet with such a situation, and are above the regards of common expense. It lies on the side of a hill, upon which the house stands, but not very steep. The length of the house, where the best rooms and of most use or pleasure are, lies upon the breadth of the garden; the great parlour opens into the middle of a terrace gravel walk that lies even with it, and which may lie, as I remember, about three hundred paces long, and broad in proportion; the border set with standard laurels, and at large distances, which have the beauty of orange trees out of flower and fruit. From this walk are three descents by many stone steps, in the middle and at each end, into a very large parterre. This is divided into quarters by gravel-walks, and adorned with two fountains and eight statues in the several quarters. At the end of the terrace-walk are two summer-houses, and the sides of the parterre are ranged with two large cloisters open to the garden, upon arches of stone, and ending with two other summer-houses even with the cloisters, which are paved with stone, and designed for walks of shade, there being none other in the whole parterre. Over these two cloisters are two terraces covered with lead and fenced with balusters; and the passage into these airy walks is out of the two summer-houses at the end of the first terrace-walk. The cloister facing the south is covered with vines, and would have been proper for an orange-house, and the other for myrtles or other more common greens, and had, I doubt not, been cast for that purpose, if this piece of gardening had been then in as much vogue as it is now.

“From the middle of this parterre is a descent by many steps flying on each side of a grotto that lies between them, covered with lead and flat, into the lower garden, which is all fruit-trees ranged about the several quarters of a wilderness, which is very shady; the walks here are all green, the grotto embellished with figures of shell rock-work, fountains, and water-works. If the hill had not ended with the lower garden, and the wall were not bounded by a common way that goes through the park, they might have added a third quarter of all greens; but this want is supplied by a garden on the other side of the house, which is all of that sort, very wild, shady, and adorned with rough rock-work and fountains.

“This was Moor Park when I was acquainted with it, and the sweetest place, I think, that I have seen in my life, either before or since, at home or abroad.”

I will make no further remarks on this description. Any man might design and build as sweet a garden, who had been born in and never stirred out of Holborn. It was not peculiar to Sir William Temple to think in that manner. How many Frenchmen are there who have seen our gardens, and still prefer natural flights of steps and shady cloisters covered with lead.

Fortunately Kent, and a few others, were not quite so timid, or we might still be going up and down stairs in the open air.

(To be continued.)

ARTICLE V.

OBSERVATIONS ON THE ERANTHEMUM PULCHELLUM.

BY A PRACTICAL GARDENER.

I OBSERVE in two or three of the late numbers of the CABINET that you recommend the forcing of several old and beautiful flowering plants for adorning the sitting-room, conservatory, greenhouse, &c., during the winter months. One amongst the others is that fine old plant *Eranthemum pulchellum*, its lovely rich blue flowers, produced in profusion, being one of the most attractive which can be grown.

I am a practical gardener, of twenty years experience therein, more especially, too, in plant growing in a nobleman's establishment, where forcing is carried on to a large extent. The plant in question is one of my favourites, and I now have (January 29th) six fine plants in profuse bloom, and six more the flowers of which are just peeping. The mode of treatment is as follows:—

As soon as the plants have ceased blooming, I have them repotted, taking away all the old compost I can without injury to the plants. This operation usually takes place by the end of May or in June, replace them in warmth, and they become well established by August or September. As I take care not to have the pots too large, they are generally well filled with roots by that period. I then remove them into a cooler but light situation, and only just give water to keep them alive. This tends to check growth, and induces

the formation of flower buds. When this is accomplished, I have plants, as required, successively introduced into the *moist* atmosphere of the plant-stove, forcing-house, &c.; and a continuous succession of plants, in beautiful bloom, is kept up through the entire of winter and early spring months.

Whilst on this subject, I take the opportunity to recommend the culture of Cinerarias for affording a splendid and pleasing variety of interesting flowers for winter and spring blooming. They are very easy of cultivation, and very prolific in a great variety of floral beauty. An additional recommendation is, they are to be procured at a very reasonable price, and easily increased either by offsets or seed.

The Indian Azaleas, and both single and double kinds of Chinese Primroses, are also well deserving attention, all equally easy of successful cultivation. Where there is not the facility of a forcing-house, plant-stove, &c., a small brick pit, heated by hot water, in the tank system, or in close pipes having troughs upon the upper side, in which water can be kept to moisten the air in a due degree, or brick flues, with tin or zinc pans to hold water, over the surface to afford the like advantage, may be erected in a very simple, cheap, and effective manner, at a trifling cost. The pleasure the productions would afford would most amply repay. When plant forcing ceased in such an erection, it would be found serviceable to force any vegetable, fruit, &c.

REVIEW.

Observations on the Cultivation of Roses in Pots, by W. Paul; Nurseries, Cheshunt, Herts. Published by Sherwood, Gilbert, and Piper, Paternoster-row, London. pp. 32.

(Continued from page 17.)

Classes preferred.—The classes of Roses that can be practically recommended for growing in pots, are, Moss, Provence, Alba, Gallica, Hybrid, Perpetual, Hybrids of the Chinese and Bourbon, Noyette, Bourbon, Chinese, and Tea-scented. The Boursault, Ayrshire, and Sempervirens, are pretty, grown as climbers, but are not fitted for exhibition.

(S.) *Moss.*—There are but few varieties of Moss Roses that can be

recommended for pot-culture; still, these few, cast among the many, give a great degree of distinctness to a collection; and they certainly cannot be dispensed with anywhere:—Blush, blush pink. Belina, rich crimson, shot with purple. Cristata, bright rose. Du Luxembourg,* fine crimson purple. Lancel, bright rosy purple. Prolific, rose. Unique, pure white. Veillards, pale rose.

(S.) *Provence*.—This is an excellent class of Roses for growing in pots; and the old Cabbage Rose must be excluded. The whole of them are sweet—very sweet; and their pendulous growth gives them a very graceful appearance. The flowers are large, well formed, and, in shape, mostly globular:—Anais Ségalas, rosy lilac. Angers, fine bright rose. *D'Abbeville, cherry rose, vivid. D'Aranches, blush pink. La Fiancée, pale flesh. Laura, rosy lilac. Pompon de Laqueue, flesh. Queen of the Provence, blush lilac. Sylvain, brilliant rose.

(S.) *Alba*.—It is here we find that beautiful style of Rose, the edges of which are white, with pink centre, in the greatest perfection. The flowers are not of the largest dimensions; but the fine shape and elegant arrangement of the petals more than compensate for the slight deficiency in size. The Albas are bold, but not rampant growers:—Belle de Segur, fine blush. Blush Hip, blush, rose centre. Félicité Parmentier, beautiful blush. Henriette Campan, light rosy purple. La Séduisante, pink, edges pale. Princess Lamballe, pure white. Sophie de Bavière, clear light rose. Sophie de Marcilly, flesh, edges pale.

(S.) *Gallica*.—These are of first merit as show Roses: they are of compact growth, particular regularity of petal, and fine outline. There is also a great variety and richness of colour among them; and they are, for the most part, very fragrant:—Adèle Prevost, silvery blush, fine form. Aurelie Lemaire, pale rose. Arthemise, deep crimson purple. Beauté Vive, bright crimson. Belle Satinée, rosy pink. Bizarre Marbrée, rose, marbled with white. Blanch Fleur, fine flesh white. Boula de Nanteuil, brilliant crimson and purple. Comte de Murinais, purple, spotted with red. Cynthie, beautiful silvery blush. D'Aguessau, deep bright crimson. *Duc de Bassano, dark red, spotted with white, distinct. *Duc de Trevis, crimson purple. Duchesse d'Abrantes, pale rose. Docteur Dielthem, bright shaded rose. Dumont d'Urville, deep red, fine. En-

chantress, pale rose. Fleur d'Amour, bright crimson changing to purple. Grain Dok, crimson and purple shaded. Grain d'Or, bright rose, marbled with purple. Grandissima, bright purplish crimson, beautiful. Jeanne d'Urfé, crimson and lilac. Julie d'Etanges, pale rose. Kean, scarlet and crimson, fine. Latone, pale rose. La Volupté, bright deep rose. Leo the Tenth, large rose, blush edges. Louis Philippe, superb dark rose. Melanie, fine crimson. Nero, violet crimson, spotted. Nouvelle Provins, deep crimson purple. Omphale, rose, finely spotted. Oracle du Siècle, dark crimson, shaded with purple. Pergolise, fine crimson. Pharericus, beautiful deep rose. Shakspeare, rose, scarlet centre. Surpassé tout, cherry.

Hybrid Perpetual.—These Roses have become universal favourites, and deservedly so. Their foliage is grand, and the flowers of some kinds are finely shaped. The rapid influx of new varieties has increased and improved this class surprisingly within the last three or four years. They have hitherto run too much on one colour—crimson purple; but this is every season being remedied, and there doubtless will soon be as great a variety as in other classes. Some of these will be given as Pyramid Roses, for which they are well suited, blooming fine both in summer and autumn. They are excellent forcing Roses, and very sweet:—Aricie, large rosy lilac. Aubernon, beautiful rosy crimson. Baronne Prevost, large pale rose. Clementine Duval, rose and lilac. Comte de Paris, superb purple and crimson. Coquette de Montmorency, brilliant cherry. Dr. Marjolin, beautiful light red. Duc d'Aumale, deep crimson. General Merlin, light rose, shaded. Lady Alice Peel, deep rose. Lady Elphinstone, rose blooming in clusters. La Reine, large lilac, satin-like, superb. Marquise Boccella, fine blush, very sweet. Mrs. Eliot, deep rosy lilac. Princesse Hélène, bright rosy purple. Rivers, red, sometimes carmine. William Jesse, large crimson, tinged with lilac. The Damask Perpetuals are fine Roses, but few of them appear adapted for pot culture.

Damask Perpetual.—Du Roi, of Crimson, bright crimson. Josephine Antoinette, clear blush.

(S.) *Hybrids of the Chinese and Bourbon.*—Many of this class are profuse bloomers, and some perfect models in form. There are also to be found here some brilliant-coloured Roses. The Hybrid

Bourbons are remarkable for their robust habit and bold foliage. Many of them form fine Pyramid Roses in pots:—Belle de St. Cyr, pretty bright rose. Briseis, fine rosy blush. Camuzet Carné, delicate peach, very distinct. Coupe d'Amour, bright rose. Coupe d'Hebe, beautiful deep pink. General Allard, full deep rose. La Colombienne, lilac rose, satin-like. Lady Stuart, fine full blush. Madeleine, pale flesh, edged with crimson. Marie de Nerroea, light pink blush. Velours Episcopal, violet purple. Triomphe de Guerian, large blush, rose centre.

Noisette.—On account of blooming fine so late in the season, the *Noisettes* form a very valuable class of Roses. The most of them are better trained as climbers: in which way their large trusses of bloom produce a very pleasing effect. Under this method of growth, then, we shall class the most of them, but a very few may be retained here:—Aimée Vibert, pure white. Comtesse de Tolozan, white, sometimes flesh. La Victorieuse, white, finely shaded with rose. Le Pactole, fine yellow. Miss Glegg, beautiful pure white. Solfatare, large sulphur. Vitellina, flesh centre, whitish yellow, tender.

(We shall give in a future number the other varieties Mr. Paul recommends, but in the mean time, advise Rose fanciers to procure the pamphlet.)

PART II.

LIST OF NEW AND RARE PLANTS.

ARRIDES ODORATUM. FRAGRANT AIR-PLANT. (Bot. Mag. 4139.) Orchidæ. Gynandria Monandria. One of the most lovely Orchideous Epiphytes. Introduced from the East Indies. The beautiful, delicate, and highly fragrant flowers are produced in pendant spikes, eight or ten inches long. Each blossom is an inch across, of a delicate cream colour, fleshy, spotted and blotched with purple. It blooms during the summer months. It is a pretty and highly interesting species.

BERBERIS TRIFOLIATA. THREE-LEAVED BARBERRY. (Bot. Reg. 10.) Berberaceæ. Hexandria Monogynia. Mr. Hartweg discovered this rare and handsome species in Mexico, on an immense plain, occupied chiefly by *Opuntia*, stunted plants of *Prosopis*, and *Yuccas*. The fruit is much eaten by children. It is a dwarf-spreading evergreen shrub, growing very freely. It has stood two winters against a south wall in the London Horticultural Society's Garden. The leaves are trifoliate, about three inches long, much scalloped at the edges, and spiny. The flowers are yellow, each being about three quarters of an inch across, blooming in April and May.

CRYPTADENIA UNIFLORA. SOLITARY-FLOWERED. (Bot. Mag. 4143.) Thymelææ. Octandria Monogynia. (Synonym, *Passerina uniflora*.) It is a native

of the Cape, forming a neat and pretty Heath-like greenhouse plant. The flowers are solitary, terminal, and, having numerous shoots, produce a showy appearance. Each blossom (star-shaped) is near an inch across, of a pretty pink, with a streak of deep rosy-red down the middle of each petal.

DISOCTOYS BIFORMIS. TWO-SHAPED TORCH-THISTLE. (Bot. Reg. 9.) Cactaceæ. Polyandria Monogynia. Sent from Honduras to the collection of Sir Charles Lemon, Bart., M.P. It forms a graceful bush, from two to three feet high. The flowers are solitary, drooping, of a deep pink, each blossom being near three inches long. Early in September the plant produces a profusion of beautiful berries, shaped like a small egg, about the size of a common sloe. They are of a pretty purple-crimson. One plant at Carelew produced eight dozen fruit. It has a very pretty appearance, and especially ornamental when in its ripe-fruit state. It does well in a warm greenhouse, and well merits a situation there.

MILTONIA CUNEATA. WEDGE-LIPPED. (Bot. Reg. 8.) Orchideæ. Gynandria Monandria. It is a very beautiful flowering Orchideous Epiphyte, which has bloomed in the collection of Messrs. Rollisson's. The flowers are produced in fine racemes. Each blossom is near four inches across. Sepals and petals a rich brown, tipped with green. Lip pure white, with a tinge of pink near the base. It deserves a place in every collection.

SOLANUM MACRANTHUM. LARGE-FLOWERED. (Bot. Mag. 4138.) Solanæ. Pentandria Monogynia. A native of Brazil, a tree-like plant, growing to the height of twelve or fourteen feet. The flowers are of a fine blue-lilac colour. Each blossom is about two inches and a-half across. The leaves are large, and the veins on either side are studded with prickles. It is in the stove of the Royal Botanic Gardens of Kew.

LÆLIA MAJALIS. THE MAY-FLOWER LÆLIA. (Pax. Mag. Bot.) Orchideæ. Gynandria Monandria. From the more temperate parts of Mexico. The flower scape is from six inches to a foot long. Each blossom is six or seven inches across. Sepals and petals of a beautiful deep lilac. Lip a rich purple, with a lilac tinge at the centre, and a yellow streak towards the base.

ACANTHOPHIPIUM JAVANESE. A beautiful Orchideous plant from Batavia; it has bloomed in the collection of Messrs. Loddiges. The flowers are produced at the top of the scape to the extent of about six inches. The sepals and petals are of a very pale buff colour, tinged with purple. Lip pale yellow, with blotches of purple along the margins.

PLANTS NOTICED IN BOTANICAL REGISTER, NOT FIGURED.

MAXILLARIA TRIANGULARIS.—From Guatemala. The flowers are of a rich cinnamon-brown, beautifully mottled, with crimson marks. In the collection of the London Horticultural Society.

EPIDENDRUM ÆRIDIFORME.—From Rio, and is in the collection of Sir Charles Lemon, Bart. Flowers produced in panicles. Sepals and petals of a dull green, tinged with brown. Labellum white, with a flesh-coloured tinge.

CERADIA FURCATA.—It has bloomed in the collection of Messrs. Rollisson, of Tooting. It has a relation to the formerly called *Cacalias*. At the summit of the branches grows a cluster of succulent leaves, and a few solitary flower-heads of a pale yellow colour.

PITCAIRNIA RINGENS.—From Demerara. It is in the collection of the Duke of Bedford. It is a stove plant, produces long spikes of fine crimson flowers.

LENNEA ROBINIODES.—A greenhouse shrubby plant, of the Lotus tribe. It has small pinnated leaves, and clusters of pretty drooping crimson flowers. It blooms during the spring months, and is a very interesting object.

SALVIA TUBIFORMIS.—An evergreen greenhouse plant, producing spikes of scarlet flowers. It is a native of Mexico, and is a very showy species for outdoors during summer, being very ornamental.

OXALIS DISCOLOR.—From Mexico, and has bloomed in the Berlin Botanic Garden. The flowers are of a violet-crimson, about an inch across.

SCLOCHILUS OTTONIS.—An Orchidæa Epiphyte, from the Caraccas. It has bloomed in the Berlin Garden. It has the habit of Burlingtonia. The flowers are about half an inch across, of a pretty yellow colour.

TILLANDSIA VITELLINA.—From Venezuela, having the habit of a Pine-Apple plant, with small yellow flowers.

TIGRIDIA LUTEA.—Flowers yellow, but has not the beauty of the common Tigridias.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON DESTROYING SLUGS.—If some correspondent would inform me the best method of destroying slugs, by which I am much annoyed, I should feel greatly obliged.
A BEGINNER.

A LIST OF PERPETUAL ROSES.—I am desirous, in the March CABINET, to have a list of ten of the best kinds of Perpetual Roses.
P.

Damask Perpetuals, having the fragrance of the Damask Rose.

Antinous, dark crimson purple.
Bernard, rich carmine-salmon.
Carmin Royal, light showy crimson.
Du Roi, or Perpetual Crimson, deep.
Siamwell's Perpetual, delicate flesh.
Louis Phillippe, dark purple crimson.
Madame Thelier, fine pale pink.
Minerva, beautiful blush.
Portland Blanc, pure white
Laurence de Montmorency, shaded carmine,

Hybrid Perpetuals, partaking of the fragrance of the Damask, but more showy.

Clementine Seringe, fine pale rose, very large.
Fulgore, deep rosy-crimson.
Coquette de Montmorency, beautiful rosy-cherry colour.
Madame Laffay, deep rich, fine rosy-crimson.
Prudence, centre deep rose, edges light.
Robin Hood, bright cherry-red.
William Jesse, bright pink.
Reins de Lyon, brilliant crimson.
Louis Buonaparte, deep crimson-red.
Lady Fordwich, rich beautiful rose.

Bourbons (Perpetual).

Augustine Lelieur, beautiful bright fulgent rose.
Acidalie, delicate blush-white, beautiful.
Charles Souchet, de. p crimson-violet.
Comice de Seine, very rich crimson.
Gloire de Rosomane, splendid carmine-crimson.
Dumont de Courset, rich velvet-purple.
Glorie de Paris (Souchet's), bright red, shaded with crimson.
Madame Lacharme, beautiful white.
Proserpine, rich deep red.
Le Grand Capitaine, crimson-scarlet, fine.

ON AUSTRALIAN SEEDS.—I enclose a specimen of some seeds I received from Australia. Can you inform me what they are, as, unfortunately, the name did not come with them? I have sown some twenty seeds, and am afraid to remove weeds, &c., not knowing what to expect; consequently, I cannot tell whether they really have come up or not. Perhaps you will try them.

Can you also inform me what the *Sparaxis grandiflorus* is?

Once more,—What is the Raspberry Jam Tree (Swan River)? It appears to be a species of *Acacia*. Three plants have come up, and appear to be doing well.

I cannot lay down my pen without paying a well-deserved compliment to the untiring energy of the Conductor of the FLORICULTURAL CABINET, and the liberality of those persons who from time to time have favoured us with details of successful modes of cultivation of our choicest flowers.

SUBURBANUS NORWICHENSIS.

[The seeds are from a plant of the *Syngenesiarus* class, probably one of the *Helianthus*, or some other of that class. The *Sparaxis* is allied to the *Ixia* tribe; it is a very beautiful flowering species. We will give the particular account of the Swan River Tree, from a resident there, in our next.—CONDUCTOR.]

ON MANDEVILLIA SUAVEOLENS.—How am I to raise plants of *Mandevilla suaveolens*? An early reply will oblige,
Lucy.

[If there be any short shoots, say six inches long, cut them close to the mother branch, and insert them in sand; place them where they will have bottom heat, cover the pot with a bell-glass, and they will readily root. Water, of course, must be given as requisite, &c. If there be no short shoots, cut the leading portions of others, close under a joint, horizontally through, and insert firmly such, which, though not to be depended upon as the others, nevertheless they succeed tolerably well.—CONDUCTOR.]

REMARKS.

ON A LIST OF FLOWERING, CLIMBING, SHRUBBY PLANTS TO COVER A SOUTH WALL.—Twelve months back I planted an open south-aspected wall with the following kinds of training plants. They grew admirably last summer; and now, although the frost has been very severe, they do not appear to have suffered in any degree. I send the list, as it may be a guide to others.
Berkshire.

AN AMATEUR.

- Acacia dealbata*
- Alstromeria acutifolia*
- *hirtella*
- Ampelopsis hederacea*
- Apios tuberosa*
- Aristolochia Sipo*
- Caprifolium dioicum*
- *etruscum*
- *pubescens*
- *sempervirens* and its varieties
- Ceanothus azureus*
- *collinus*
- Cercis Siliquastrum*
- Ghimonanthus fragrans* and its varieties
- Clematis azurea*
- *florida*
- *montana*
- *Sieboldii*
- *viticella*
- *plena*
- Convolvulus bryoniæfolius*
- Cratægus Pyracantha*
- Cydonia japonica* and its varieties

- Deutzia scabra*
- Eriobotrya japonica*
- Erythrina Crista-galli*
- Grevillea rosmarinifolia*
- Jasminum officinale* and varieties
- Kerrya japonica flore-pleno*
- Leycesteria formosa*
- Magnolia conspicua*
- *grandiflora*
- Mahonia aquifolium*
- Mimosa marginata*
- Mutisia ilicifolia*
- Myrtus communis* and varieties
- Passiflora cœrulea* and varieties
- Punica granatum* and varieties
- Ribes sanguineum*
- Solanum crispum*
- Sollya heterophylla*
- Tecoma radicans*
- *major*
- *grandiflora*
- Wistaria sinensis*

With roses of various kinds.

ON PRESERVING PINKS, CARNATIONS, &c., FROM RABBITS.—Last year my Pinks and Carnations were almost entirely destroyed by rabbits during a storm, and all means I could devise proved a failure. I was advised this winter to take some strips of rags as broad as my hand and about a foot long, and dip them into melted sulphur, and then fix them into clefted sticks about half a yard high, allowing the rags to dangle about as flags, these I was to place in, and around the beds at about four feet apart. I adopted the plan, and though the temptation has been great during the last few weeks of storm, not one has ventured to touch the Pink or Carnation-beds, nor where I had placed a prepared flag at the side of a single plant in the border.

February 3, 1845.

A NORTHERN FLORIST.

ON GUANO FOR POT PLANTS, &c.—In reply to A. B., in a former number, on Guano, I beg to inform him, that it should be mixed with about five times its bulk of earth, and pot in the same any strong growing plants, as Pelargoniums, &c. On the open border it should be given about the same strength, applying it in wet weather. When the Guano comes into immediate contact with seeds it is injurious to them, so that it is best to carefully mix up the same with a proper quantity of soil before spreading upon the ground, afterwards dig it in. When applied in a liquid state do it weakly to commence with, and as its effects are soon visible, it may be regulated as appearances suggest. So very different are the constitutions of plants that no exact standard can be arranged, and experience will dictate the best. A.

ON DESTROYING THRIP.—Mr. J. Barnes, of Bictou, says, "I take a peck and a half of soot, and put it into one hogshead of soft water, stirring it well with an old broom or batten, every day for ten days or a fortnight. I then strain off the water through a fine sieve, or piece of canvass, into another tub, on a peck of charcoal, and drop into it afterwards one or two lumps, or about three pounds of fresh lime; in about two days after I strain it again, and it is then clear enough to syringe any plant or plants with. It will not only extirpate thrip, but many other troublesome insects also; and it is famous liquor to syringe with, whether for destroying insects or not, as it induces general vigour and healthiness amongst plants of all kinds."

MOSS A PROTECTIVE MATERIAL FROM FROST.—For several years I have used moss, gathered from the woods, to protect my China, Bourbon, and other Roses, from frost; and, from recent experience, am so firmly convinced of its beneficial effects, that I feel the information cannot be too widely spread. My practice has been to place round each plant a quantity of moss, in the shape of a cone, averaging fifteen to eighteen inches in width at its base, nine inches at its summit, and from twelve to fifteen inches in depth. We have had scarcely any snow here, so that, in the night of Tuesday, the 11th instant, the ground was nearly bare of snow; on Wednesday morning, observing that my thermometer, placed on the northern side of a tree, about six feet from the ground, in an exposed situation, registered 26° of frost, I felt curious respecting the efficacy of my moss protectives. To my agreeable surprise I found, that under cones of moss not more than nine inches deep, owing to their settlement from the rains of winter, the soil was not frozen in the least degree, and the young shoots and buds of the Roses, at the bases of the plants, fresh and vigorous as in the mildest weather. I have hitherto recommended moss, when used as a protective for Roses—not to be placed in contact with the branches of the plants, fearing the effects of damp during the humid weather of a great portion of our winters; but, owing to my men not exactly going according to orders, many of my protective cones have been placed closely round the plants: no injury from damp has resulted, and their appearance is highly promising. From having thus so recently experienced the sure and certain protection from frost that moss gives, my ideas have taken a wider range, and I feel convinced that Pelargoniums, by having their leaves taken off from the bases of their shoots towards the end of October, and a cone of moss placed round each plant, may be pre-

served in our open borders during our severest winters, without injury. Fuchsias, hardy greenhouse plants, half-hardy evergreens, and many other desirable plants, may also be preserved in our open borders. We may thus be able to have them established, and of many years' growth, in our gardens, instead of transplanting them annually, as at present in May; for by the time their roots are well established, frost comes and obliges us to remove them into winter quarters. By protecting them with moss, the lower parts of Pelargoniums and Fuchsias will alone be preserved; but these, as is well known, are full of buds, and their roots being perfect, the plants, after being headed down, will shoot most vigorously, far beyond plants only recently transplanted. It is not, perhaps, generally known that many tender evergreens will suffer but little in their branches from severe frost, if their roots are well protected. To such moss may be applied unsparingly, with the certainty of pleasing results.—*Thos. Rivers, (Gardeners' Chronicle.)*

REMARKS ON CHARCOAL USED IN COMPOST FOR POT PLANTS, BY MR. JAMES BARNES.—It has been said that the fertilising properties of charcoal, as a manure, have been long known, although it was merely by accidental observation I first discovered its value in horticulture: in my opinion it has not yet met with that attention which its merits deserve. Since my application and use of charcoal have been made known, I have received many interesting communications from practical gardeners and amateurs, expressing their conviction of its valuable properties; in other cases there seems to have been some mystery or uncertainty attending its application, for the result has not been so successful: such always has been the case in similar matters, and, doubtless, will continue to be.

I will here attempt to explain, or rather state, the principal object that must be kept in view, by all those who would wish to avail themselves fully of the fertilising qualities of charcoal, when applied as a manure; one of its most useful qualities, then, consists in its affording thorough drainage, and thereby maintaining a kindly communication between the atmosphere and the earth, without which but a trifling degree of benefit will be derived from its fertilising properties. Other good qualities consist in its absorbing and condensing powers, and in its giving off slowly and permanently, so long as in communication with the atmosphere, those natural gasses which are most fitted for promoting the growth of vegetation. To these qualities I attribute its excellence. I have invariably found that plants to which charcoal have been applied, and which have thus had thorough drainage of the soil secured, have continued in the most luxuriant condition, the roots not only numerous, but also in high vigour, and clinging around it, and penetrating the cracks and fissures; whereas in cases of slovenly or imperfect drainage, quite another effect has been produced, and but trifling benefit realised from its application.

Thorough drainage should certainly, for all purposes of cultivation, be the first consideration—the standing rule and foundation stone with all cultivators of the soil. Its effect is to admit the natural gasses of the atmosphere to act in combination with the salts and bases of the earth; thus securing the most natural and perfect results.

DESTRUCTION OF RED SPIDER, THRIP, &c.—“Delta,” at p. 749, mentions the circumstance of a paper having been read before the Horticultural Society of London, August 2, 1837, respecting Laurel leaves being used, when bruised, for destroying these pests. As a practical man I can speak from experience on this subject. Being in the habit of growing Melons and Cucumbers rather extensively for some years, of course I have been troubled with these insects as well as my brother gardeners, and this year rather more than usual. The method that I have adopted for many years for killing the red spider, thrip, and green-fly, is as follows:—When the plants appear attacked with these insects, I get a quantity of Laurel bruised, and put it into the frame or frames, as it may be, about 3 o'clock P.M. It should be dispersed all over the frame, but by no means allowed to touch the leaves of the plants—for, if you do, it is sure to affect them very materially; then shut down the lights as closely as you possibly can; and

should the sun be very fervent at the time, I always throw a single mat over the frame, in order to prevent the leaves of the plants from being burnt. The heat to which I allow the frame to rise is from 90° to 100° ; never allow it to rise above that point, or you will be sure to lose plants, crop, and all. The length of time that I allow this heat to remain in the frame is two hours only; this time may perhaps appear short, but such is the fact. About 6 o'clock the mat is taken off, and a little more air is admitted to the plants. On the next morning, the Laurel is all taken out, and the plants are well syringed with warm water, and of course shaded during the day. I am certain that, by the evening of the second day, there is not the slightest appearance of thrip or spider. If "Delta" will try this plan, he may be sure of success.—*Devonensis*, (*Gardeners' Chronicle*.)

ON A SUBSTITUTE FOR GLASS.—Whitney's prepared calico has wholly failed with me, as well as with numerous other persons. I prepared a covering as follows, last April, and it has answered every desired expectation. "Three pints of old pale linseed-oil, one ounce of sugar of lead, and four ounces of white resin. The sugar of lead must be ground with a small quantity of the oil, and added to the remainder, incorporated with the resin by means of gentle heat. The composition is to be laid on by a brush, after the calico is nailed to the frames. One coat annually is sufficient. It dries in a short time when exposed to the air; and excludes as little light and heat as anything, except glass, and does not become mildewed."

HYACINTH STANDS.—Instead of glasses, China stands are now used in many instances and found to answer better. The roots are kept in the dark, which is more congenial to their growth. They have proper wire supports made to suit. They are as cheap as the glass ones. They can be had in London, or soon made to order.

FUCHSIAS FOR BORDERS.—Several correspondents have requested us to give a list of the best kinds of Fuchsias, being the most capable to endure the open air in this country. We have many hundreds growing in beds, and along borders by the sides of walks, &c., and find that nearly every one will succeed well with the exception of Fulgens and Corymbiflora, though both kinds, even when cut down to the ground in winter, have pushed up again in spring. We find that the hard wooded kinds do the best, such as Baxteri, elegans, virgata, formosa elegans, globosa major, globosa rosea, and those of a similar habit. There are many splendid hybrids raised between the soft wooded and hard wooded kinds, which we find do admirably well; most of the recent new kinds are of that class. The nearer they approximate to fulgens and corymbiflora, the less hardy. We could give a long list of the new sorts that we have found to do well, but there being so few that do not, we deem it unnecessary. If persons who have not such kinds, and request sorts that will do, if that was mentioned in the order they gave to a nurseryman, the object could be accomplished. They are so ornamental, keep so many months in bloom, either in or out doors, as to deserve growing wherever they come. CONDUCTOR.

TROPEOLUM TRICOLORUM, &c.—It occasionally happens that a tuber of the *Tropeolum tricolorum*, &c., will push roots freely, but not a shoot. When this occurs, if a shoot can be obtained, cut it close under a joint, make an incision in the side of the tuber, and put in the cutting (or graft) in the same way grafting is usually done, cover it with a bell-glass, and place it where there is gentle moist temperature, and very soon it will unite, and grow vigorously, if otherwise properly treated. The same plan is applicable to other kinds.

ON DESTROYING A WASP'S NEST.—Having the misfortune of a wasp's nest in my flower-garden, immediately under the root of a double-flowered white Clematis, I was anxious to destroy the wasps, and not injure the plant. This I

succeeded in by taking some spirit of turpentine, and pouring a portion into a glass bottle, taking care the spirit was smeared all over the inside of the bottle. I then turned the bottle upside down, and put the neck of the bottle in the hole leading to the nest, doing so after dusk. The next morning I found every wasp dead.

MARY.

Evesham, July 20th, 1844.

GLYCINE SINENSIS.—Last year, in August, I had a number of shoots of a *Glycine sinensis* thinned out of a plant growing against a south-aspected wall, and I cut up a quantity into short pieces, having three or four buds in each, cutting straight through close under a joint; these were inserted firm in pots of fine yellow pit-sand, and were plunged in a hot-bed frame, where had been a crop of melons. By the early part of October I found nearly every cutting had rooted; and now I have plants enough to serve a nurseryman. This lovely flowering plant deserves to be grown wherever it can.

A CURATE.

ON BOUVARDIA TRIPHYLIA.—This very interesting scarlet trumpet honey-suckle like beautiful flower, becomes one of the prettiest objects grown in the greenhouse, when trained up to a single stem, and a head is formed similar to a dwarf standard Rose. So treated, it blooms most profusely, and the numerous heads of fine scarlet flowers, slightly drooping, and in bloom from May to November, renders the plant one of the most ornamental, and deserving a place in every greenhouse. The same method of treatment is equally successful with *B. Jacquinii*, *B. versicolor*, &c.

CONDUCTOR.

FLORICULTURAL CALENDAR FOR MARCH.

AMARYLLISES, and other liliaceous bulbous plants which have been kept dormant, may now be re-potted, and put into an increased temperature.

ANNUALS, HARDY, such as *Clarkias*, *Nemophilas*, *Larkspurs*, &c.—If the soil be moderately dry, some of the most hardy kinds, to bloom early in the summer, may be sown in warm parts of the country, or situations well protected, but in cold places not until the end of the month; for if the seeds of many sorts begin to vegetate, and frost operate upon them, they are often destroyed. The best method of sowing the small seeds in patches is to have a quantity of finely sifted soil; spread a portion where desired; after scattering the seed, sprinkle a little more soil over them, and then press it closely upon the seeds, which will assist them in vegetating properly.

ANNUALS, TENDER, such as *Cockscombs*, *Balsams*, *Stocks*, &c.—Such as have been sown, and may be up, should have all possible air given to prevent their being drawn up weakly. In watering those in pots they must not be watered over the tops, or many of the sorts will be rotted by it. The best method is to flood over the surface of each pot, always using water that is new-milk warm. Those annuals sown in frames must be watered (when requisite) with a very fine syringe, or pan-rose to sprinkle with; but the best plan is to take advantage of gentle rains. For any seeds yet requiring to be sown, use fine soil pressed to the seeds; and, when convenient, place the pots (if used) in moist heat till the plants are up. *Cockscombs*, *Amaranthus*, *Balsam*, *Browallia*, *Brachycoma*, *Thunbergias*, *Maurandias*, &c., if large enough to pot, should be done in sixty-sized pots.

AURICULAS.—Those requiring top-dressing should be done immediately, by taking off about two inches deep of the top-soil, replacing it with some very rich; more than one-half of it should be rotten cow-dung two years old, and the rest loam and sand. Immediately after this dressing, let the soil be well settled by a free watering. By the end of the month the unexpanded blossoms will be nearly full grown; no water must be allowed to fall on them, or the blossoms would be liable to suffer injury by it. All possible air may be admitted to the plants during the day, only screen from cutting frosty winds.

CAMPANULA PYRAMIDALIS—to have fine pot specimens, should be potted, if not before done, and encouraged to grow.

CARNATIONS—at the end of the month, the last year's layers kept in pots or beds during the winter should be planted off into large pots 12 inches wide at the top, 6 at the bottom, and 10 deep. In each pot three plants may be placed triangularly, not planting deeper than to fix them securely. The following compost is most suitable:—Two barrows full of fresh yellow loam, three of well-rotted horse-dung, and half a barrowful of river-sand, well mixed; plant in it *without sifting*, but breaking very well with the spade, and have a free drainage of rough turf, &c.; place the plants in a sheltered situation out of doors.

CREEPERS—and twining greenhouse or hardy plants, should be pruned and regulated before they begin to grow.

CALCEOLARIA SEED—should be sown early in the month, having the finest sifted soil for the surface.

CHRYSANTHEMUMS—sow seed of, and raise in moist heat. Mind the suckers of old plants are not drawn up; admit duly of air.

COMMELINA TUBERS and *Tigridia* bulbs should now be planted.

CUTTINGS of *Talvias*, *Fuchsias*, *Heliotropes*, *Geraniums*, *Celsias*, *Alonsoas*, *Lotuses*, *Senecios*, &c., where it is desired to plant such out in beds, should be struck in moist heat as early as possible. Young shoots, cut off clean, strike readily. (See kinds of plants suitable, in vol. i., p. 38; and for additional kinds, subsequent vols.)

DAHLIAS—if not already put into excitement, should be done as early as possible. Seeds should also be sown, placing them in a hot-bed frame till up. Cuttings be taken off and struck in heat.

ACHIMENES, *Gesueria*, *Gloxinia*, and *Tropæolum* bulbs, &c., that have been kept dry during winter, should now be potted, and gently brought forward in heat.

HERBACEOUS perennials, biennials, &c., should now be divided, if required.

PELARGONIUMS.—Cuttings now put in, struck in a hot-bed frame, and potted off as soon as they have taken root, will bloom during autumn.

POLYANTHUSES—should now be top-dressed, as directed for *Auriculas*, only the soil need not be so rich. Seed may now be sown; the best method is to raise it in heat, harden gradually, and transplant when large enough.

RANUNCULUSES and **ANEMONES**—should now be planted, taking care no fresh applied dung is in the soil, nor should the ground to plant in be lightened up more than two inches deep. The soil of the bed should be half a yard deep at the least. The best roots for flowering are such as have the crowns high and firm, with regular placed claws. Another bed, planted a fortnight later, brings them into bloom, so as to assist a florist to select for a show.

ROSE TREES—not yet pruned, if allowed to remain untouched till the shoots of the present coming season be about an inch long, and be then shortened by cutting back all the old wood to below where the new shoots had pushed, the dormant buds will then be excited, and roses will be produced some weeks later than if pruned at a much earlier season. Plants in pots now put into heat will come into bloom in May.

Rose Trees, *Lilacs*, *Pinks*, *Hyacinths*, *Narcissuses*, *Honeysuckles*, *Primroses*, *Double Furze*, *Dwarf Almonds*, *Rhodoras*, *Persian Irises*, *Sweet Violets*, *Cucurariars*, *Azaleas*, *Hepaticas*, *Lily of the Valley*, *Jasmines*, &c., should still be brought in for forcing.

TUBEROSSES—should be planted, one root in a small pot, using very rich sandy soil; the pots should be placed in moist heat till the plants are up a few inches; then they may be planted into larger pots, and taken into a stove, and finally into a greenhouse.

TULIPS.—At this season, such as happen to be affected with canker will appear sickly; the roots should be examined, and the damaged part be cut clean out. If left exposed to sun and air, the parts will soon dry and heal. Avoid frosty air getting to the wound by exposure.

SEEDS—of greenhouse and similar plants may now successfully be sown, raised in moist temperature.



Sucaranda Hemisphaerica & *Silimanella tuberosa*
Herbarium, Harvard, April 1846.

THE
FLORICULTURAL CABINET,

APRIL 1st, 1845.

PART I.
EMBELLISHMENTS.

ARTICLE I.

1. JACARANDA MIMOSAFOLIA.

THIS very interesting and beautiful flowering plant is a native of Brazil, and requires to be grown, in this country, in a warm conservatory, greenhouse, or moderate plant stove. It requires to have a gentle bottom heat to push its flowers vigorously, so that being placed over, or near, to a flue is necessary, if there be no other provision. It must have a *liberal* drainage, and to be grown in equal portions of rich turfy loam and turfy sandy peat. Plants about half a yard high, bloom very freely, and with the fine panicles of flowers produce a very showy appearance, especially interesting, too, in contrast with the beautiful Mimosa-like foliage. It may be had cheap at the public nurseries.

2. ALLAMANDA CATHARTICA.

This very beautiful and profuse flowering climbing plant is a native of Cayenne and Guiana in South America, where it flourishes in the neighbourhood of rivers. It requires a *warm* conservatory or greenhouse, not of less temperature than what is usually termed half-stove.

In such a situation we have seen it flourish and bloom very freely. It is a handsome looking plant, the leaves being large, of a dark glossy-green, and evergreen. It is of vigorous growth, and yet very

readily kept in proper bounds. The flowers are produced in clusters at the sides of the shoots, they are exceedingly showy, generally each blossom is near double the size of those in our present plate, as we were obliged to reduce the size in order to conform to the usual extent. It thrives best when turned out in the open border, or pit, elevated above the floor of the house, so the sides may be warmed by the heated air. A free drainage of about a foot deep is essential, so that the plant may never be drenched at the roots.

In a rich turfy loam and turfy peat chopped, not sifted, with some pieces of charcoal sprinkled among, it grows luxuriantly.

It is easily increased by cuttings of the young shoots. The plant can be had at the nurseries at about half-a-crown each, and it well merits a place wherever a fine showy climber is desired. It blooms nearly all the season, from May to November.

ARTICLE II.

REMARKS ON PLANTING FLOWERS IN MASSES,

BY FLORA.

MUCH has been said in commendation of the modern fashion of planting the flower-clumps of the garden and pleasure ground with but one kind of flower. The effect, in my opinion, is almost always bad; there is as much glare and want of relief in a great bed of Roses, Geraniums, Irises, &c., as in the old plan of indiscriminate mixture of small patches of many species, and with less variety. A collection of mere Roses is doubtless highly interesting when judiciously arranged by a mixture of tall and low growing species of various tints of colour, and the whole set off by the dark green of trees and shrubs in the back ground, and which I had the high gratification of seeing in full splendour in July last; but a clump solely of the China, or any other kind of Rose, as is often seen in the midst of a grass plot, seems to me as glaring as would be a nosegay wholly of Roses; and, in the case of Irises, &c., there is the further great objection, that a week's display in spring is purchased with months of subsequent barrenness and deformity. Two points seem clearly required in a flower-clump; first, that it should present a succession of flowers; and, secondly, that these should be contrasted and relieved by a due intermixture of green, just as the native taste of the veriest peasant

tells him is requisite in the bouquet which he offers his mistress. On this principle were formed the flower-clumps in the pleasure-grounds which I saw last June, and the beautiful effect of which it was impossible not to admire. The centre of each was occupied by tall-growing plants, not yet in flower, and other portions of the surface by smaller ones; and between these were planted double stocks, purple, scarlet, and white, in considerable masses of each colour, and other flowers (of which I forget the sorts) of higher growth above them, and of lower growth beneath them, all in pretty large patches of each, the whole being set off in tenfold beauty by the happy intermixture, in every part, of the green leaves of the plants which were next to flower.

To obviate the bad effects of decayed flowers, perhaps the best plan of ornamental flower-clumps, where expense is not regarded, would be to have them partly planted with evergreens of low growth, or kept low by pruning; and, between these, to transfer from the pots in which they had been raised the finest flowers of each season, just taken on the point of flowering, in sufficient masses of each colour, and to be removed and replaced with others as soon as they had done flowering, so as always to have a new and brilliant display at all periods of the year, and at the same time a due contrast of a more sober colour from the intermixed evergreens.

In the new plan of planting flowers as of shrubs, the professed object is a more close imitation of nature; but it may be doubted whether the object is better attained in one case than the other. It is true that we more frequently see wild flowers growing in masses than singly; but these masses are seldom large, and are almost constantly more or less intermixed with or skirted by other plants. Take, for example, the common starwort (*Stellaria Holostea*), which is so great an ornament of our hedge-banks in spring. The tufts in which it grows rarely exceed a square foot or two in extent, and have almost always a border of *Lychnis*, *Erysimum*, or other plants with abundant foliage, besides the shrubs of the hedge and bank as a background, to contrast with and set off the beauties of its flowers, which, thus half displayed, it will scarcely be denied are far more attractive than if crowded into one large staring mass, in a single bed, as in the modern fashion. In like manner, how rarely do we see the fox-glove, when adorning our heaths in its utmost profusion, collected

into large unvaried masses; and, if such accidentally occur, though we may for a moment be attracted by their brilliant singularity, it is not on them that the eye delights to dwell, but on the smaller groups of various heights, half concealed by the ferns or brambles from amidst which they spring, and which, like the frame of a picture, enhance their natural beauty. Where the beds of one sort are small, and others near them, then variety in colour, duration, &c., may be better effected and not so liable to the objections which glaringly apply to large ones in every instance. Beds so formed as to be divided into compartments, or strips, planted with several kinds, also form beds which are less objectionable.

ARTICLE III.

ON PENTAS CARNEA,

BY AN AMATEUR PLANT GROWER.

A RECENT number of the FLORICULTURAL CABINET contained a figure of the new and delicately beautiful *Pentas carnea*. One of the specimens exhibited at Chiswick, and far the best there, was mine; and by the following mode of treatment had been produced so handsome a specimen.

I had the plant in a sixty-sized pot in January last, and, having a moist plant-stove, I placed it there, repotting it in a twenty-four, well drained, in a mixture of loam and peat, with half a pint of bits of charcoal intermixed. In this it grew rapidly, and in March I repotted into a twelve, in similar compost; the plant had then grown to two feet high. I pinched off the lead of the upright stem, which caused the production of lateral shoots, which in due course grew vigorously. The flowers being produced in terminal heads, each lateral branch produced a corymb of flowers, and the result was twelve fine heads of bloom.

Although the plant will do tolerably well in a warm greenhouse, it does much better in a plant-stove. It might be forwarded so as to form its heads of bloom in a hotbed frame, vinery, &c., and then be removed to bloom in the greenhouse or conservatory, and succeed to satisfaction. Its beautifully delicate flowers, produced numerously, and for so lengthened a period, renders the plant worth any attention being paid to it.

ARTICLE IV.

ON BOUVIARDIAS FOR BEDS,

BY AMICUS.

IN a former volume of the *CABINET*, I saw the remarks on this beautiful tribe of trumpet flowering plants, and that they readily increased by the roots being cut up into lengths of two inches each, struck in heat, potted off singly into small pots, and, towards the end of May, planted out in the open flower-beds, in a soil of equal parts of sandy peat, loam, and leaf-mould, and that they would form a beautiful bed of lovely flowers. I followed the plan, but found the plants rather weakly to produce a vigorous bloom. At the end of the season, before severe frost, I took them up with as much soil adhering as I could, placed them erect, as close as possible, in an old mignonette-box, watered them immediately, and placed the box under the stage in the greenhouse, letting it be nearly dry through winter. Early in March I took the box and placed it where it had more light, and watered the plants. They soon began to grow, and about the middle of May I planted them out in the beds, and the show was splendid, a mass of Trumpet Honeysuckle-like flowers adorning the bed from the middle of June to the end of October. When I took the plants out of the box, in May, I cut away straggling roots, and potted them in lengths for an increase of stock. A bed of these neat and beautiful flowering plants, from a foot to half a yard, is one of the prettiest ornaments in a flower-garden.

ARTICLE V.

REMARKS ON POTTING PLANTS,

BY AN ARDENT AMATEUR FLORIST.

IT is well known, by all plant growers, that there are tribes which require a very different soil from others, some flourishing in loam or sandy loam, and of a similar nature; whilst others require bog peat, sandy peat, &c. To particularise what kind of soil would suit best is not in my power, nor could space be allowed in the magazine.

There is, however a general knowledge now abroad, as to what habit the plant is of, and which suggests the nature of the soil most likely to suit.

The general skill of the nurserymen and gardeners of the present age, in plant growing, is such that it is soon ascertained what suits best; and purchasers of plants, observing in what kind of compost they are in, will discover what will usually be a guide for future, as it relates to its nature. What I am desirous to make some remarks on, in this place, is the condition in which the soil, &c., should be when used for potting the plants in.

The first attention is required to have a suitable-sized pot. For those plants whose roots proceed rapidly, as vigorous-growing plants, a larger pot may be used at once; but where the fibrous roots are few, or very delicate, one of proportionate less dimensions.

A free drainage of broken pots, Sphagnum moss, chopped turf, &c., to a good depth, is an essential thing to success; for, if water is not allowed to pass off with freedom, the soil at the lower part of the ball soon becomes soddened and sour, and each application of water afterwards only tends to promote the saturation of a layer higher up the ball, and increase the evil; and thus preventing the water filtering away hastens on the death of the plant.

The compost itself, too, should be of an open texture, so that not only the water may freely filter through, but to admit air in a due degree to pervade amongst the roots in an equal degree in every part, and this latter is a most essential thing to fertility. When the ball of compost becomes of a close texture, and allowed to dry, it bakes so hard as thus to prevent a regular diffusion of moisture or air; and if kept saturated, becomes of so close a texture as to be equally injurious.

The application of bits of charcoal scattered amongst the soil I find very beneficial; it not only tends to keep the soil open, but at the same time absorbs moisture and retains a degree thereof which contributes to supply sustenance when the soil even becomes somewhat dry. So, in some degree, I find broken bits of porous stone, or potsherds, beneficial when scattered in a moderate degree.

The surface of the ball should be carefully attended to, especially in the case of delicate plants, to have it kept so even as that the water given may descend as regularly as desired in every part. When (as it is liable thereto) the application of water is given so that a hollow around the stem of a delicate plant is formed, and a continuous supply is poured in and sinks mostly there, the death of the plant is

soon the result; and, on the other hand, when the water only sinks at the sides of the pot, then the interior of the ball becomes so dry as not to be able to sustain whatever fibrous roots may be therein. From these observations it will be perceived that attention to the surface of the compost is necessary. Without attention to the above-named principles, in application to plant culture, when grown in pots, plants will not long be in a healthy condition; but if duly attended to, with all plants of the class this mode of culture applies to (as I exempt many of the orchidæ, water plants, &c.), they will be uniformly vigorous and healthy; and, being repotted as required, may uniformly be kept so.

ARTICLE VI.

ON THE CULTURE OF LUCULIA GRATISSIMA,

BY OLERICUS.

A CORRESPONDENT writes, in the "Gardeners' Chronicle," on *Luculia gratissima*, that although it has been in this country for a number of years, still its cultivation is but in its infancy, both as to extent and mode of culture, in order to have it in the splendour it can be brought to. It has been considered a beautiful specimen to grow it so as to have half a dozen heads of blossoms to a plant, but that those eminent plant growers, Mr. J. Barnes, of Lady Rolle's, at Bicton, and Mr. William Barnes, of Shropshire, grow it with from 50 to 100 heads, as large as *Hydrangeas*, on each plant. The compost the writer mentions he uses is four parts turfy loam, two parts turfy peat, two parts half-decomposed leaf-mould, one part charcoal broken to the size of garden beans, using the dust as well, with sufficient Barwell sand, broken potsherds, and flinty pebbles, to make and keep the soil thoroughly porous, using it in as rough a state as possible, in which the plants grow vigorously. It is not, however, when in such vigorous growth that the plants produce the greatest quantity of bloom, but it is when they produce a great quantity of moderate-sized branches that they become so beautifully studded with flowers, and that an old stump plant will continue to produce abundance of flowers for years, and requires little more attention than a common *Pelargonium*. Young plants, on becoming half a yard high, have the lead stopped to induce the production of lateral shoots. The

plants are encouraged by applying liquid manure water occasionally, repotting, &c. It is not advisable to stop the plant later than the middle of July, or the lateral shoots will scarcely be firm enough to endure the effect of winter. Plants to bloom are placed out of doors in August, and kept there till October, giving them shelter only when nights were cold or the day stormy. From the middle of October to the close of November they were kept in the greenhouse, then removed to a house kept at from 45 to 60 degrees, and early in December they show for bloom, and by Christmas be in splendour, and so continue for a long period.

In order to have dwarf plants, the same mode of treatment as the Hydrangea often receives may be successfully pursued; viz., after the flower-buds are formed they may be cut off and be potted singly, plunging them into a good bottom heat; they soon strike root, and bloom when the plants are not more than six inches high. The plant ought never to be checked when in a growing state. It is so beautiful, noble flowering, and deliciously fragrant, that it is worth growing in every warm greenhouse or conservatory.

ARTICLE VII.

ON THE PARTS OF A FLOWER NECESSARY FOR THE PRODUCTION OF PERFECT SEEDS.

HAVING lately noticed with pleasure the encouragement you give to promote the production of hybrid plants, and that, in consequence of your remarks, correspondents who are desirous of pursuing it, but are ignorant of the process requisite to success, have sent queries on the subject, I am therefore induced to forward the following descriptive particulars of the various parts of the flower for early insertion in the CABINET.

A flower is divisible into seven parts; viz., the calyx, or flower-cup; the corolla, or blossom; the stamina, or male organs; the pistillum, or pointal; the pericarpium, or seed-vessel; the semen, or seed; and the receptaculum, or receptacle. These parts admit of several divisions, which will now be concisely described.

Calyx (from Καλύξ, kalux, the case of a flower).—The flower-cup is that external covering, usually of a greenish colour, which invests and protects the coloured floral leaves, or corolla, where that is

present; or those principal and most important organs of fructification, the stamens and seed-vessel, where the corolla is wanting.

Corolla (from *coronella*, a little crown).—The corolla is that part of the fructification which is universally admired on account of the beautiful colours it displays and the fragrance it exhales. Like the calyx, the corolla is not absolutely essential to the perfecting of the fruit.

Stamina (from *στρίμων*, *stamon*, yarn or spun wool; a term intended, most likely, to express the capillary, hair-like, or woolly appearance of this part of the flower; or it may be derived from *Σταμινες*, *stamines*, erect pieces of wood).—The stamens, formerly called the chives, vary in number, in different flowers, from one to some hundreds. Their situation is internal with respect to the parts we have been describing; external to the pistils, at least in simple flowers; and so it is in compound flowers of the class *syngenesia*, inasmuch as concerns the florets of the disk (that part which is commonly of a yellow colour, as in daisy, camomile, &c), each separable portion of which is a true and perfect flower, consisting of a tubular corolla, divided at the top into five segments, five stamina, a pistillum, and a perfect seed; unless where nature sports, and changes the fertilizing organs into strap-shaped petals, in which case the flower becomes double and barren.

The stamina are essential, there being no plant hitherto discovered, after the most careful research, that is destitute of them, either in the same flower with the pistils, or in a separate one of the same species. A stamen commonly consists of two parts, the filament, *filamentum*, and anther, *anthera*, the former being merely what supports the latter, which is the only essential part. The filaments are threads, those taper bodies which usually are immediately within the flower-leaves. These threads support the antheræ (tips or summits), the only essential parts of a stamen; they are generally of a membranous texture, consisting of two cells or cavities, bursting longitudinally at their outer edges, as in the tulip, and then becoming so changed in figure as scarcely to be recognised for the same plump and well-defined bodies which formed the summit of the stamina.

The *pollen*, *farina* or dust (from *pello*, to drive away), is contained in the anther, from which it is thrown out chiefly in warm dry weather, when the coat of the latter contracts and bursts. The pollen,

though to the naked eye a fine powder, and light enough to be wafted along by the air, is so curiously formed, and so various in different plants, as to be an interesting and popular object for the microscope. Each grain of it is commonly a membranous bag, round or angular, rough or smooth, which remaining entire till it meets with any moisture (being contrary, in this respect, to the anther), then it bursts with great force, discharging a most subtle vapour.

It is said that the pollen contains hydrogen gas; and, being thus rendered specifically lighter than atmospheric air, it floats therein till it lights on the medium which it is prepared to impregnate. If this be the fact, it will be interesting to investigate it as a phenomenon of attraction, and subject to the influence of that law by which bodies in opposite states of electricity tend to form a union one with the other. In this view of the subject, the pollen, it is probable, will never explode, and, consequently, will fail to impregnate the organs of any germen which does not attract it by the agency of a gas or fluid in a specifically opposite state of electricity. But should the dust approach an organ possessing and exerting such a specific energy on the gas contained in the membranous bag, it will burst, and produce a new arrangement of the chemical elements of the embryo seed in the germen. The gaseous theory will throw some light upon the phenomenon of the mixtures and crossings which take place in the cabbage tribe, and among individuals of congenerous species; and, by assuming that specific attractions must take place before any impregnation can be effected, it will evince the utter impossibility of a general and promiscuous fertilisation, which, were it not provided against, would produce the utmost confusion among the genera and species of plants. The theory and the fact bear out each other, and daily experience proves that which the hypothesis presumes.

Pistilla (from *pistillum*, a pestle, from the resemblance, doubtless, of the organ to that utensil).—The pistils, or pointals, are not less essential than the stamina; they stand in the centre of the flower, and usually are fewer in number. Sometimes the pistil is not in the same flower as the stamens, and then it does not always occupy the centre of the flower. Every pistil consists of three parts; first, the germen—this is essential, as it is the rudiment or matrix of the seed or fruit; second, stylus, the style (from *ἄστυλος*, *stulos*, a stalk, or sharp-pointed pencil). This part is sometimes wanting, it also

varies exceedingly in length and thickness; it is a pillar or column to support the third part, or stigma (from *Στιγμα*, *stigma*, a mark or brand), the upper part or termination of the style; or, if that be absent, the crown of the germen. Its shape is various, either simple, scarcely more than a point; or capitate, forming a little round head; or variously lobed. Sometimes it is hollow and gaping, more especially when the flower is in its highest perfection; very generally downy, and always more or less moist, with a peculiar viscid fluid, which in some plants is so copious as to form a large drop, though never big enough to fall to the ground. The moisture is designed for the reception of the pollen, which explodes on meeting with it; and hence the seeds are rendered capable of ripening, which, though in many plants fully formed, they would not otherwise be.

Pericarpium (from *περι*, *peri*, round about; and *καρπος*, *karpos*, fruit).—The seed-vessel, an envelope or covering enclosing the seed; it is the impregnated germen enlarging or expanded to maturity. It is not essential, as in many flowers the seeds are naked, being simply protected by the calyx. Such is the case with the ringent flowers of the fourteenth class, *Didynamia*, and with many others. The use of the seed-vessel is to protect the seeds till ripe, and then, in some way or other, to promote their dispersion either by its elastic power, as in Yellow Balsam (*impatiens*, *noli me tangere*), or serving for the food of animals, in whose dung the seeds vegetate. This is said to be the fact with respect to that beautiful and odoriferous tree, *Myrtus pimenta*, or the true Allspice. The berries of this tree are devoured by birds, and thus are prepared for vegetation, which takes place rapidly after the seed has undergone this stimulating process.

ARTICLE VIII.

REMARKS ON THE TUBEROSE.

Polianthes is from the Greek, and signifies *City-flower*.—*French*, la tubéreuse; *jacinthe des Indes* (Indian hyacinth).—*Italian*, tuberoso; *tubero Indiano* (Indian bulb).

THE Tuberose grows naturally in India, whence it was first brought to Europe in 1524. In the warmer parts of the European continent it thrives as well as in its native soil. In Italy, Sicily, and Spain, the roots thrive and propagate without care where they are once planted. The Genoese cultivate it, and send the roots annually to

England, Holland, and Germany, where the climate is less congenial to it.

This plant has long been cultivated in English gardens for its extraordinary beauty and fragrance.

There are several varieties ; one with double flowers, which was obtained from the seed by Monsieur Le Cour, of Leyden, in Holland, who for many years was so tenacious of the roots, even after he had propagated them in such plenty as to have more than he could plant, that he caused them to be cut in pieces, to have the vanity of boasting that he was the only person in Europe who possessed this flower.

Those roots are the best which are the largest and plumpest, provided they are sound and firm ; and the fewer offsets they have, the stronger they will flower. The under parts of the root should be particularly examined, because it is there that they first decay, Before the roots are planted the offsets should be taken off, or they will draw a great deal of nourishment from the old root. They may be planted in April and May, but should be kept indoors, admitting fresh air in mild weather. Most persons raise these flowers in pots in a hot-bed, and, when the flower-stem is about six inches high, plant them out in the open ground in a warm situation ; or repot entire, and place them in a greenhouse. It is essential to have them forced till the flower-stem is as high as above stated. They require a rich loamy soil, well drained, not sifted. They should be supported by stick as the flower-stems advance in height, and should have little or no water till they begin to shoot ; when in flower they require plenty.

Flowers raised in this manner will blow about September and October, adorning and perfuming the apartment they are placed in in a very agreeable manner. When the roots are strong, they will often produce ten or twelve flowers, and the stem will rise three or four feet high. As the flowers come out in spikes, opening successively from the bottom to the top, they will, of course, continue longer in beauty in proportion to the number they produce. They may be placed in a balcony in summer weather, if desired ; but the double-flowered variety must remain in the room : if these are placed at a little distance from a closed window on which the sun shines (yet the room being properly ventilated), they will open more fair than when too much exposed.

The Malaysans style the Tuberose the Mistress of the Night :—

“ The Tuberose, with her silvery light,
That in the gardens of Malay
Is called the Mistress of the Night,
So like a bride, scented and bright,
She comes out when the sun's away.”

We are to remember here that the poet is speaking of the lady's habits when in her native country; in our colder climate she must wait for the sunshine.

When worn in the hair by a Malayan lady, it informs her lover that his suit is pleasing to her.

A friend has obliged me with a translation of a little poem by Madame Deshoulieres, who, he observes, appears, by another poem in her collection, to have been fond of the Tuberose:—

“ Pride of gardens, charming flowers,
Fleeting as your little hours;
Often does a summer day
Give ye life and take away:
Mornings two or three at most
Are the brilliant life ye boast.
Ah! disturb not your reposes,
Gallant Jonquils, fair Tuberoses:
Short is your sweet life, 'tis true,
But 'tis full of pleasure too,
Jealousies and evil tongues
Do not hem ye round with wrongs;
All the world cares not a cipher
For the love 'twixt you and Zephyr;
Nor do over delicate
Feelings vex your happy state.
Nothing does it harm or grieve you
When the wanton zephyrs leave you—
Leave you to go sport elsewhere,
Laughing ever, here and there:
Nothing—nothing; nor are yours
Pangs that the slain heart endures,
When it sees the hand that slew it
Wanting e'en in pity to it.
You, when you would play the queen,
Need but dress ye, and be seen;
Happy flowers! and when you die,
'Tis but a dull day's good-bye:
Born again, you flaunt your span,
And mock the graves that close on man.”

ARTICLE IX.

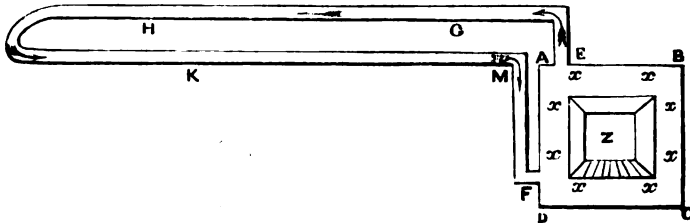
ON HEATING GREENHOUSES BY MEANS OF HOT WATER,
AS DESCRIBED BY C. C., OF SOMERSETSHIRE, Page 255.

BY A. B. C., OF CORNWALL.

C. C.'s observations on this head appear to me to contain exactly the quantity of information calculated to puzzle and mislead all who know nothing of this subject, without giving the slightest information to those who are at all acquainted with it. Having put up an apparatus myself last winter, which answers well. I send you the result of my experience, presuming, however, that I only offer it to those who are ignorant of the subject, as I was before I turned my attention to it.

In the first place, the thing cannot be done unless the principle is understood as well as the *modus operandi*. The principle is that there should be a constant circulation of the hot water, whether it flows through pipe or tank. The circulation keeps the temperature equal throughout the whole pipe, and therefore over the whole house, and unless this circulation is secured you may have one end of your house warm and the other freezing at the same time.

The mode of obtaining this circulation will be readily understood by a little attention to the following diagram and explanation.



Let A B C D represent the boiler; Z represent the fireplace; *xxxx* water all round the fireplace; E G H K M F the water-pipe, of which one end at E enters the top of the boiler, the other end at F enters the boiler at or near the bottom. The water-pipe must be quite horizontal, the branch G H being on the same level as the branch K M, and the whole pipe being above the level of the boiler (except the small parts near the boiler, which descend to it). Now, supposing the fire to be lighted, the top part of the boiler is heated

first, and the water there, being expanded by the steam, is forced up through the pipe at E, circulates in the direction of the arrows, entering the boiler again at F, and this circulation is constant as long as the water is heated, owing to the water at the top of the boiler being hotter than that at the bottom; and the expansion at the top constantly forces the water up through the pipe at E, because, in consequence of the whole pipe being at a higher level than the boiler, the boiler is always full, and the water has no other means of escape. It seems hardly necessary to urge that the pipe should be perfectly horizontal, it being generally admitted that water has no particular fancy for running up hill. It will be obvious enough that if the pipe is below the level of the top of the boiler, the boiler will not be always full; and if the top of the boiler is empty, there would be merely a steam pressure on it, which might induce a blow-up, and would never produce circulation. C. C.'s plan of placing the boiler in any convenient corner, and carrying the pipes along the floor, is well calculated to produce an explosion, since the whole of his pipe would be below the level of his boiler, and he would have no circulation at all. The water may circulate in a gutter made water-tight with Roman cement, and this is the cheapest plan, and answers well if the gutter be laid truly horizontally. The fireplace must have an air-tight door, and there must be a door to the ash-pit, with a regulating valve, or some similar contrivance, to admit more or less air, as required.

My object in giving a sketch of the boiler, as above, is, that it can be cast and fitted up at any foundry, as mine was, as it is not every person who can afford to pay 6*l.* 6*s.* for one of Stephenson's boilers, which, however, are excellently made. The whole of my apparatus, including boiler, forty-five feet of gas-pipe (three-inch diameter inside), and fitting and fixing, cost 10*l.* only. The boiler is sunk in the floor of my back kitchen, which adjoins the greenhouse. My fire will remain lighted for six hours without trouble, and frequently remains in for nine hours. The quantity of "culm" (query, anthracites?) used is quite insignificant, and culm gives far more heat and burns much longer than coke, and I could keep up a high temperature if I wished.

PART II.

LIST OF NEW AND RARE PLANTS.

ANGRECOM DISTICHUM. TWO-ROWED. (Bot. Mag. 4145.) Orchidææ. Gynandria Monandria. A native of Sierra Leone, introduced by Messrs. Loddiges, with whom, and in the Royal Gardens at Kew, it has bloomed. It is a slender growing plant, the stems being from three to five inches long. The blossoms are very small, white.

LOTUS GRACILLIMA. MOST SLENDER. (Bot. Mag. 4146.) Leguminosæ. Decandria Monogynia. Mr. James Drummond sent this very beautiful species from the Swan River to the Royal Gardens at Kew. It is a handsome, shrubby, greenhouse plant, somewhat like an *Eutaxia* densely in bloom. The flower spikes are eight inches, or more, long, forming a dense cylindrical mass of bloom, of a lively yellow spotted with red. It deserves a place in every greenhouse.

APHELANDRA AURANTIACA. ORANGE-FLOWERED. (Bot. Reg. 12.) Acanthaceæ. Didynamia Angiosperma. Dr. Lindley supposes it to be a native of South America. It is a hothouse shrubby plant, of considerable beauty. The flowers are produced in terminal spikes of about six inches long, of a rich orange-red colour. It will be a fine companion plant with the *Ixoras*, *Hindias*, &c., suited for an exhibition. It has bloomed in the nursery of Messrs. Henderson, Pine-Apple Place. It is a very desirable plant for a hothouse collection. Each blossom is about an inch across.

BARBACKENIA PURPUREA. PURPLE-FLOWERED. (Pax. Mag. Bot.) Bromeliacææ. Hexandria Monogynia. It is a native of Brazil, and was found by Mr. Gardner near Rio Janeiro, growing where a little vegetable mould had accumulated, and bloomed profusely. The flower-stems are rigid, extending near a foot long; the flowers are terminal. Each blossom is about two inches across, formed of six spreading petals, of a rich deep purple colour. It has bloomed in the noble collection at Wentworth House Gardens. It is a very interesting and pretty flowering plant.

CALATHEA VILLOSA. SHAGGY. (Bot. Reg. 14.) Marantacææ. Monandria Monogynia. Messrs. Loddiges obtained this plant from Demerara. It is a stove-plant. The flowers are produced in spikes of about six inches long, of a bright yellow. Each blossom being about an inch and a half across.

KUSTOMA EXALTATUM. TALL. (Bot. Reg. 13.) Gentianacææ. Pentandria Monogynia. (Synonyms. *Lisianthus exaltatus*, *L. glaucifolius*, *Kustoma silenifolium*, *Urananthus glaucifolius*.) It is a warm greenhouse annual plant, from the warm parts of Mexico, and various places in North America. The celebrity of *Lisianthus Russellianus* has brought this plant now into celebrity. Its foliage is neat, rather narrower than the plant just named. In order to render it bushy, the leads of the shoots must be stopped so frequent as to induce a sufficient production of laterals. The flowers are of a purplish blue, with a dark fine spotted eye surrounded with white. Each blossom is near two inches across. It is well worth a place in the greenhouse, and may be had at the public nurseries.

MYOPORUM SERRATUM. SAW-LEAVED. (Bot. Reg. 15.) Myoporacææ. Tetrandria Monogynia. A very pretty greenhouse shrub, a native of South Australia. It is in the collection of the London Horticultural Society, and bloomed in their garden last season. The flowers are white, spotted with purple, borne in vast profusion, and are succeeded by blue fruit. It is a very deserving inmate for the greenhouse.

LYCIUM FUCHSIODES. FUCHSIA-FLOWERED. (Bot. Mag. 4149.) Solanææ. Pentandria Monogynia. A native of South America, and sent by Dr. Jameson to the Royal Botanic Gardens at Kew, where it has bloomed. It is a smooth shrubby plant of three or four feet high, flowering very freely. The blossoms are produced in some cases by twos, and in others from that number to ten in an aggregate cluster. Each blossom is about an inch and a half long, tube shaped,

with a spreading limb, something like a Scarlet Trumpet Honeysuckle in form and colour. It is a very handsome flowering plant, well deserving a place in every greenhouse.

ONCIDIUM BICALLOSUM. TWO-WARTED. (Bot. Mag. 4148.) Orchidææ. *Gynandria Monandria*. Sent by Mr. Skinner from Guatemala to the collection at Woburn Abbey Gardens, and to Mr. Bateman at Knippersley in Cheshire. The flowers are yellow, slightly tinged with green on the sepals and petals; they are produced freely in large panicles. Each blossom is near two inches across.

PLÆDRANASSA CHLORACRA. CRIMSON AND GREEN BLOSSOMED. (Bot. Reg. 17.) *Amarylidaceæ*. *Hexandria Monogynia*. From Peru, a greenhouse bulbous plant, which is bloomed at Bury-hill Gardens, near Dorking, in Surrey. The flower-stem rises about two feet high, terminating in an umbel of many drooping flowers. Each blossom is about two inches and a half long, the tubular portion being of a bright crimson colour, and about half an inch of the end a deep green. The contrast is striking, and the plant well deserves a place in every greenhouse bulbous collection.

RUELLIA LILACINA. LILAC-FLOWERED. (Bot. Mag. 4147.) *Acanthaceæ*. *Didynamia Angiospermia*. It is a hothouse shrubby plant, which has bloomed in the collection at the Royal Botanic Gardens of Kew. Mr. Glendinning had sent it there. The plant grows about two feet high, branching, smooth. The flowers proceed from the axils of the leaves in pairs. The tubular portion is about an inch and a half long, almost white at the lower part, but above lilac with red veins. The limb (mouth) is spreading, of five rounded, nearly equal, lobes, of a pretty lilac purple, with red veins, and, when expanded, is about an inch across. It blooms the greater part of summer, and well merits a place in the stove.

SAIVIA AZURRA. AZURE-BLUE FLOWERING SAGE. (Pax. Mag. Bot.) *Labiata*. *Diandria Monogynia*. It is a tall-growing herbaceous plant, smooth, producing its blossoms in racemes about four inches long. There are six blossoms in each whorl. A separate flower is about an inch long. The lip has a purple tinge upon the blue; but the rest portion is a fine azure blue. The leaves are long, and a narrow lanceolate form.

STYPHELIA TUBIFLORA. TUBE-FLOWERED. (Pax. Mag. Bot.) *Epacridææ*. *Pentandria Monogynia*. This very beautiful plant is a native of South Australia, and, although it has been introduced some years into this country, it is not generally known, by no means as it merits, when it is grown as it ought and can be, and thus be rendered an object of much beauty. It blooms, too, in the greenhouse at a desirable season for ornament, viz., during the winter and early spring months. It is an evergreen, *Epacris*-looking plant, producing numerous tubular blossoms all along the shoots of the previous season. They are handsome, pendulous, an inch and a half long, of a rich rosy-crimson colour. It can be had at the nurseries at a very cheap rate, and deserves to be in every greenhouse. In order to have the plant bushy, the ends of the shoots require to be pinched off to induce laterals. A turfy sandy peat soil, and a very liberal drainage, are essential to grow it in.

NEW PLANTS NOTICED IN BOTANICAL REGISTER, NOT FIGURED.

LOBELIA TEXENSIS.—A Mexican species, of the class of *L. fulgens*, *cardinalis*, &c. The flowers are of a rich dark-purple colour. It appears not yet to be in this country.

MAXILLARIA LYONII.—A native of Mexico; it has grass-looking leaves. The flowers are of a purplish-brown, edged with yellow.

HELCOIA SANGUINOLENTA.—An orchidaceous plant, in the way of a *Vanda*. Sepals and petals olive coloured, spotted with brownish red. Labellum white, striped with blood colour, and streaks of yellow near the point. It has been sent by Mr. Hartweg to the London Horticultural Society, and is in the collection at Chiswick.

GESNERIA VESTITA.—A shrubby species, seeds of which Mr. Hartweg sent from Bogota. The flowers are orange, mottled at the end.

BROWNEA ARIZA.—Like *Brownea grandiceps*, but has larger flowers, being near six inches across. In the province of Bogota it grows in the woods from 30 to 40 feet high.

HYBANTHERA CORDIFOLIA.—A twining herbaceous greenhouse plant. It had been received at Berlin under the name of *Echites sinensis*. The flowers are of a greenish yellow, about an inch across, produced in umbels.]

NEW PLANTS RECENTLY SEEN IN NURSERIES, &c.

BEAUFORTIA SPLENDENS.—A greenhouse shrub of considerable beauty. The flowers are much in the form of *B. decussata*; they are, however, of a purple crimson, but in this new species are of a splendid scarlet. It is the profusion of long coloured stamens that form what is termed the flowers. It blooms during the winter months, and well merits a place in the greenhouse. It is in Mr. Knight's Nursery at King's-road, Chelsea.

PHYSIANTHUS AUBICOMIS.—A climbing hot-house plant, much like *Stephanotus floribundus*, of a beautiful white, and fragrant. They are produced in large clusters, profusely, during the entire autumn months. It bloomed in Mr. Knight's nursery last autumn.

RONDOLETIA SPECIOSA MAJOR.—This is a fine autumn and winter flowering plant. The flowers are larger than the original species, and of a brighter colour. It well deserves a place in every plant-stove or warm greenhouse. It has been in bloom at Messrs. Henderson's, Pine-Apple Nursery, London.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON INCREASING PLANTS FROM CUTTINGS, &c.—As an old subscriber to your FLOICULTURAL CABINET, I should feel much obliged by your informing me, in your next number, of the best method to be adopted for striking cuttings, and their propagation. Having been at considerable expense in erecting a greenhouse, I am desirous of extending my collection of greenhouse plants, such as Geraniums, Fuchsias, Calceolarias, Cinerarias, and others. I have recently seen in one of your numbers charcoal recommended. I have tried it, and found it does not answer. By answering the above, giving a description of the soils most suitable for striking, you will much oblige me and other admirers of Nature's beauties.

Boltonlee Moor.

THOS. KERRISON.

[Generally speaking, all soft-wooded plants, as Pelargoniums, &c., strike root readily; hard-wooded, such as *Epacris*, Heaths, *Eutaxias*, *Chorozemas*, &c., are more difficult, but by a particular attention in the process of preparation, and subsequent treatment, all may be accomplished with facility. Cuttings from soft-wooded plants may be made by cutting through horizontally close under a bud, and such will usually succeed. Cuttings from the hard-wooded class succeed the best when they are selected from the side shoots, cutting them off at their origin, when they are about half ripened. The part to be inserted in soil, &c., must be divested of leaves, by means of a sharp knife, and the more delicate (as Heaths) by means of a sharp razor. Sandy loam, or sandy loam and peat, will be suitable for soft-wooded plants, and, for the other class, what is called the white sand is best, the pot to be filled up with loam and peat, or entire sandy peat, nearly as high as where the bottoms of the cuttings, when inserted, come

to, but insert them in the sand only. In fixing the cuttings therein, always have it pressed closely round the stem, but be careful not to bruise it. Bell glasses are essential in the hard-wooded class. Gentle bottom heat is necessary. A moist atmosphere, but not so extreme as to rot, is indispensable to success, the cutting being for a season dependent for support on absorption from the atmosphere, &c. We cannot here go into a longer detail, but enough is said for general purposes. An Article of all the minutiae shall be given in our next number.—CONDUCTOR.]

ON PREVENTING THE GROWTH OF WEEDS AND MOSS ON WALKS.—I should feel much obliged if you could inform me, through the FLORICULTURAL CABINET, whether anything can be done to prevent the growth of weeds and moss on gravel walks. I am now having some new ones formed, and am therefore anxious to know.

AN OLD SUBSCRIBER.

[Unless the inclination of the ground be sufficient to allow the water to pass off freely, a drain along the middle of the walk, and the substratum surface sloping from each side of the walk to the drain. Cover over the drain with large stones or brickbats, &c., then, next, rough stone, brick, or gravel, over them, free from any mixture of earth, &c. The surface of this constructed substratum in the walk, for the final gravel surface, must be filled up with a somewhat finer sort, till the surface gravel completes the whole, and even pebble gravel being that of the surface. This being well rolled, and kept firm and even, is easily kept free from moss. A good sprinkling with salt, or salt water, will readily destroy all that appears; or if the surface be occasionally scrubbed with a stiff besom, &c., it will loosen it, and then be swept away, &c. Weeds of any other class are easily destroyed by a strong application of salt. When the surface of a walk is composed of gravel, it may be readily turned over, and made even as before; this tends to its being kept free from the pest of weeds. Where there is not the advantage of gravel, we have used a covering of rough lime rubbish, four or six inches deep, in the substratum, rolling it even, and when wet beating it smooth; upon this we laid the surface coat of what we were necessitated to use, as sand, &c. The lime kept the surface dry, and in summer it usually destroyed, by the heat, any moss or weeds.—CONDUCTOR.]

ON TROPÆOLUM PENTAPHYLLUM.—Will this handsome and profuse-blooming plant succeed if grown in the open air?

[Yes, perfectly well, if grown against a wall or trellis, in a warm situation, and it deserves to be grown wherever it can. We have seen it bearing thousands of blossoms trained to a trellis at the front of a dwelling-house.—CONDUCTOR.]

ON HEADING DOWN PETUNIAS IN AUTUMN.—A Subscriber would feel much obliged to the Conductor if he would inform her, through the medium of the FLORICULTURAL CABINET, whether Petunias should be cut down in the autumn after blooming. She had several grown to a great height; they were cut to within six or eight inches of the root, and now some of the plants appear in a dying state. They have been in a cold pit, or the greenhouse, all winter.

[When there are several young shoots near to the main stem, then the heads may be cut down as low as where the shoots proceed from, and being taken up with as much soil adhering to the roots as possible, potted, &c., they generally succeed. If they can be placed where there is a little warmth for two or three weeks, it contributes to an earlier establishment. The plants, when first potted, should be well watered at the root, but afterwards, till they have pushed fibrous roots, only as much as will just keep the soil moist. Water should, however, be syringed over the foliage two or three times a-day, to aid in sustaining the plant till the roots derive benefit from the soil, &c. When the heads of the plants grown in the open border are cut down, and there be no young shoots near the origin, they seldom survive winter. The following method we have pursued in some instances, and it has answered well. The number of old plants we require to furnish stock for the following year are headed down early in August. They

push lateral shoots immediately, and when these are about three inches long, the plants are taken up as entire as possible, planted in pots or boxes, and they get well established before winter. Plants for this purpose are isolated ones, so that we have not to disturb the order of an entire bed. The best mode, however, is to have a few plants for stock (to supply the next year), grown in pots, and head them down about the middle of August; they then push freely, and furnish a quantity of young shoots to take off for striking the following spring.—CONDUCTOR.]

A LIST OF SPRING-FLOWERING HERBACEOUS PLANTS.—I shall be glad of a list of spring-flowering herbaceous plants, to bloom from March to May.

A SUBSCRIBER.

	Ft.			Ft.	
Phlox procumbens, rose	$\frac{1}{2}$	A., May	Gentiana humilis, purple	$\frac{1}{2}$	A., M.
— setacea, flesh-lilac	$\frac{1}{2}$	— —	Oenothera speciosa, white	$\frac{1}{2}$	Mh., M.
— subulata, flesh	$\frac{1}{2}$	— —	— Frazeri, yellow	$\frac{1}{2}$	M.
— nivalis, white	$\frac{1}{2}$	— —	— rosea, rose	$\frac{1}{2}$	—
Arabis grandiflora, white	$\frac{1}{2}$	— —	Pentstemon gentianoides,		
— var., purple	$\frac{1}{2}$	— —	purple	$1\frac{1}{2}$	—
— alpina, yellow and			coccinea, scar-		
white	$\frac{1}{2}$	— —	let		—
Fumaria nobilis, lilac and			Anemone memorosa, dou-		
yellow	1	May	ble, white	1	A., M.
— tuberosa, purple	$\frac{1}{2}$	A., M.	— pulsatilla, purple		—
— var., white	$\frac{1}{2}$	— —	— vernalis, white	$\frac{1}{2}$	A.
Alyssum saxatile, yellow	1	— —	Asperula odorata, white	1	A., M.
— orientalis, yellow	1	— —	Ranunculus montana, yel-		
Omphalodes verna, blue	$\frac{1}{2}$	Mar., Ap.	low	1	M.
— sempervirens, blue	1	A., M.	—, white		—
Symphytum sanguineum,			Aquilegia Canadensis, red-		
red	1	May	orange	$1\frac{1}{2}$	M.
Pulmonaria grandiflora,			— grandiflora, blue	1	—
pink	1	A., M.	Tussilago fragrans, white	$\frac{1}{2}$	A., M.
— virginica, blue	1	Mh., April	Saxifraga oppositifolia,		
Iberis sempervirens, white	$\frac{1}{2}$	— —	rose	$\frac{1}{2}$	M., A.
Draba aizoides, yellow	$\frac{1}{2}$	— —	— cordifolia, purple	1	A., M.
— brachystema, yellow	$\frac{1}{2}$	— —	— crassifolia, rose	1	—
— stellata, yellow	$\frac{1}{2}$	— —	— elongata, white	1	—
Veronica elegans, pink	1	May	— geranioides, white		—
— ruthenica, blue	1	—	— umbrosa, rose and		
— serpyllifolia, blue	$\frac{1}{2}$	A., M.	white	1	—
— dentata, blue	1	—	Orotius verna, blue	1	—
Gentiana acaulis, blue	$\frac{1}{2}$	Mh., M.			

M. before A. signifies March; A., April; M. after A., May; M. alone means May. The height is in feet. To the above many others might be added, as the Double Daisies, Single and Double Wallflowers, all the varieties of Double Primroses Winter (so termed) Stocks; many bulbs, as Ornithogolums, Fritillarias, Turban Ranunculuses, Hyacinths, Narcissuses. Some of the Pæonies come in May; Hepaticas too, blue, rose, and white, &c. &c.—CONDUCTOR.]

ON THE TREATMENT OF THE POLYANTHUS DURING WINTER.—A fortnight since I took up my Polyanthus from the north border, where they have stood since May, and, shaking off the earth and washing their roots, I repotted and placed them in a frame, where they will remain for flowering in the spring. This has been my mode of treatment for some years, but I have hitherto found them disposed to flower much earlier than I wished, and have been obliged to take off the first flower stems about January. I wish to know how Polyanthus in pots ought to be treated during the winter. Should they be kept regularly damp, as I have hitherto kept them (indeed I have supplied them with plenty of water

throughout the winter), or would a drier treatment be desirable? Some information on this would much oblige,

October, 1844.

P.S. I had a *Chelone Barbata* this summer, which threw up four principal flower stems, 5 feet 6 inches high, besides smaller ones, and I think it formed the most perfect specimen of what a flowering plant should be I ever saw. It had no protection whatever last winter.

REMARKS.

GRAFTING FUCHSIAS.—Your readers may exercise their taste in combining very opposite groups of blossoms, if they take the present opportunity of grafting or inarching the strong young growing shoots of the *Fuchsia*. For this purpose a warm moist atmosphere is necessary. I find the readiest mode is to select two plants, and within three inches of the heads to cut away half the thickness of the shoots, extending about $1\frac{1}{2}$ inch; the two mutilated heads are firmly bound with soft bass, and the intended scion is then nearly severed just below the junction; within three days the scion may be cut clean through, and no check to its growth will be perceived; the head of the stock is now removed, the scion takes the lead, surrounded by laterals of the other variety. The best stocks are the strong growing kinds, as *Fulgens*, *Cormackii*, &c.; this latter, in combination with *Conspicua arborea*, is very effective. B.

BEST CLIMBING ROSES.—The following are among the best *Roses* for training, as they are rapid-growing, hardy, abundant bloomers:—*Noisette Lamarque*—flowers very large, white, double, and rather early; *Noisette Jaune Desprez*—flowers in large clusters, of a buff or nankeen colour, rather late in the season; *Aimée Vibert*—flowers in large clusters, of pure white, flowering during the autumn; *Bougainville*—flowers purplish lilac, rather small, very double, and in great abundance; *Charles the Xth*—flowers bright red, a free bloomer, rather small, and early; *Madame D'Arblay*—pale flesh, very double, and late; *Ruga*—pale blush, sweet-scented, free bloomer, and very rapid growing, early; *Champneyana*—a very desirable kind, with large clusters of nearly white flowers, late in the autumn, and of rapid growth; *Marie Leonida*, or *Double Macartney*—a beautiful large double white *Rose*, of rapid growth, flowering freely in the autumn; *De Lisle*—large pale blush with pink centre, and very double, rather early; *Boursault*—bright red, free bloomer, but only semi-double, early; *Blairii*—rosy lilac, very large, and a free bloomer, early. There is no *Rose* that blooms all the year round; the old *China* is the longest in flower. There are several semi-double *Roses*, which are well suited for covering rough trellises or walls, such as the *Perthshire*, *Dundee Rambler*, *Lovely Rambler*, and *Roseangle-Blush*.

ROSA.

ON JAPAN LILIES.—Mr. Tillery, gardener to the Duke of Portland, writes, in the "*Gardener's Journal*," that last August he had a plant of *L. lancifolium rubrum*, having one flower; when the petals were just about to expand he opened them a little, in order to find the stigma, and then impregnated it with the pollen from *L. punctatum*, the result was a large pod of seed. He also impregnated others of the Japan kinds of Lilies with pollen from the common *Tiger Lily*, and had the like success. He sowed the seeds as soon as ripe, in pots, now placed in a cool frame and kept dry, purposing to start them in heat in February. No doubt the result will be the production of beautiful hybrid varieties, and probably of a hardier race too.

LUCULIA GRATISSIMA.—In the plant-house at the gardens of Lady Rolle, Bickton, Devon, there is a fine specimen of this noble plant, three years old, 8 feet high, and 16 in circumference, in profuse bloom, having 94 heads of flowers, the heads as large as those of the *Hydrangea*. The lovely sweet pink blossoms producing a delightful effect. The compost consists of one-third light turfy loam,

one-third heath mould, one-eighth coarse charred, and one-eighth half-rotted leaves, mixed with a portion of coarse sand and rough flints. In this it grows like a vigorous willow. A. Z.

[The plant ought to be grown in every conservatory and greenhouse, where practicable, it is so beautiful an ornament through winter.—CONDUCTOR.]

LONDON HORTICULTURAL SOCIETY MEETING,

Regent-street, March 18.

Notwithstanding the severity of the weather several fine things were produced. Mr. Robertson, gardener to Mrs. Lawrence, sent handsome specimens of *Phaius Wallichii*, and *Dendrobium Pierardi*, whose gracefully pendent branches were closely covered with pale lilac blossoms; several plants of *Hippeastrum*, nearly related to *H. aulicum*; and two most beautiful small specimens of the variety of *Azalea indica*, called *Smithii coccinea*, covered with bloom, and exhibiting what can be done with such things under skilful management even in a small state. From the same collection was *Illicium religiosum*, a handsome evergreen shrub from Japan, with shining leaves and yellowish-green flowers; the fruit of this is burned by the Japanese as a perfume at their religious services, and from this circumstance it derives the specific name. A Knightian medal was awarded for these.—A *Cineraria*, called the Pet, was exhibited by Mr. Ivery, of Peckham.—Messrs. Henderson, of Pine Apple-place, sent a *Cyclamen*, called *Persicum rubrum*, it had certainly, however, nothing to do with *Persicum*, but was a hardy European species, possessing a very agreeable perfume. Along with this were two *Acacias*, viz., *prostrata* and *oxycedrus*; the latter having a spiny foliage, and long tail-like yellow blossoms; a certificate was awarded for the *Cyclamen*.—Messrs. Rollisson and Sons, of Tooting, sent *Dendrobium moniliforme*, one of the most handsome of that showy genus; *D. Cambridgeanum*, a beautiful Indian species, which is found in its native country attaching itself to and ornamenting rocks and trees with its rich yellow blossoms. In colour it has considerable resemblance to *Chrysanthum*, and, like that species, it has a deep purple stain in the middle of the lip. Along with these was a variety of *Cyrtochilum maculatum*, the very rare *Burlingtonia rigida*, a fine species inhabiting the woods of Brazil, where it is found clinging, by means of its stiff wire-like roots, to branches of trees, and displaying its airy, gracefully-drooping racemes of pale lilac blossoms in abundance. From the same collection was *Rhododendron Rollissonii*, a beautiful Ceylon species, producing compact balls of bright crimson flowers; it is supposed to be the same as *R. nobile*. Along with it was a cut specimen of *R. Zeylanicum*, of a rich rosy-pink colour, approaching to white in the throat. A Knightian medal was awarded for the *Burlingtonia rigida*.—From Messrs. Veitch and Son, of Exeter, were three seedling *Epacris*es, the best of which was *ardentissima*. This was of a bright glowing red, the finest we have seen of the colour, showing what can be effected by judicious hybridisation of good sorts. If, however, as has been already attempted, *impressa* were crossed by *grandiflora*, something better might yet be expected.—Mr. Beck, of Isleworth, sent a neat slate pan for the growth of orchidaceous plants. That this material is in no way unfavourable to the growth of plants was proved by the fact that the most beautiful *Archimenes picta* possibly ever shown was exhibited by Mr. Beck in one of them on this occasion. This is one of the latest plants which Mr. Hartweg collected in South America, and proves to be one of the best of the genus, possessing beautiful rich brown and yellow flowers, and a fine variegated foliage. A Banksian medal was awarded for it.—Among miscellaneous articles, Mr. Lawrence sent a glass globe similar to those in which gold fishes are kept, with a piece of glass fitted neatly over the top; in this Ferns have been kept since August last in good condition without the lid ever being removed. Also an improved zinc watering-pot, for watering plants without changing the position of the hands; it has a close top with a small aperture near the handle, this is closed in by a cap which is moved by the thumb up and down as required, thus causing the water to flow or to be withheld according as air is admitted or shut out. Along with this were two Wardian Cases, having a small chamber of three or four inches in depth, under-

month the material in which the plants are, and so contrived that hot water can be introduced when required, and drawn off by means of a plug when not wanted, warm dry air can also be carried to the top of the case through pipes. In such cases cuttings may be struck in the drawing room with almost as much certainty and facility as in the propagating-house.—From the garden of the Society was the larger variety of *Oncidium sphacelatum*, *Epidendrum Stamfordianum*, a species of comparatively recent introduction; the handsome *E. aurantiacum*, with rich orange blossoms; the rare *Cypripedium barbatum*, *Hippeastrum Johnsoni*, *Begonia ulmifolia*, with pure white flowers; two *Kpacrises*; a handsome white variety of *Rhododendron arboreum*; and finally, a cut specimen of the new Mexican shrub *Habrothamnus fasciculatus*, which was figured in their Transactions as a plant of great beauty. In consequence, however, of something else (probably *Cestrum roseum*) having been introduced into collections for this, some doubts were apprehended as to its ever realising the expectations formed of it; but this the true *H. fasciculatus*, now blooming in the Society's garden, fully equals all that has been said of it. In its native country it forms a noble shrub, about five feet in height, covered with multitudes of beautiful red blossoms, which are produced in clusters on the ends of the short flower-stems. In this country it should be grown slowly in a cool situation as it will admit of without injury; and as it has a disposition to grow straggling, over-luxuriance should be checked as much as possible.

FLORICULTURAL CALENDAR FOR APRIL.

AMARYLLISES, and other liliaceous bulbous plants which have been kept dormant, may now be re-potted, and put into an increased temperature.

ANNUALS, HARDY, such as *Clarkias*, *Nemophilas*, *Larkspurs*, &c.—The soil will now be moderately dry; sow the hardy kinds in sheltered situations till the end of the month; for if the seeds of many sorts begin to vegetate, and frost operate upon them, they are often destroyed. The best method of sowing the small seeds in patches is to have a quantity of finely sifted soil; spread a portion where desired; after scattering the seeds, sprinkle a little more soil over them, and then press it closely upon the seeds, which will assist them in vegetating properly.

ANNUALS, TENDER, such as *Cockscombs*, *Balsams*, *Stocks*, &c.—Such as have been sown and may be up, should have all possible air given to prevent these being drawn up weakly. In watering those in pots they must not be watered over the tops, or many of the sorts will be rotted by it. The best method is to flood over the surface of each pot, always using water that is new-milk warm. Those annuals sown in frames must be watered (when requisite) with a very fine syringe, or pan-rose to sprinkle with; but the best plan is to take advantage of gentle rains. For any seeds yet requiring to be sown, use fine soil pressed to the seeds, and when convenient, place the pots (if used) in moist heat till the plants are up. *Cockscombs*, *Amaranthus*, *Balsam*, *Browallia*, *Brachycoma*, *Thunbergias*, *Maurandias*, &c., if large enough to pot, should be done in sixty-sized pots.

AURICULAS.—Those requiring top-dressing should be done immediately, by taking off about two inches deep of the top soil, replacing it with some very rich; more than one-half of it should be rotten cow-dung two years old, and the rest loam and sand. Immediately after this dressing, let the soil be well settled by a free watering. By the end of the month the unexpanded blossoms will be nearly full grown; no water must be allowed to fall on them, or the blossoms would be liable to suffer injury by it. All possible air may be admitted to the plants during the day, only screen from cutting frosty winds.

CAMPANULA PYRAMIDALIS—to have fine pot specimens should be potted, if not before done, and encouraged to grow.

CARNATIONS.—At the end of the month, the last year's layers kept in pots or beds during the winter should be planted off into large pots 12 inches wide at the top, 6 at the bottom, and 10 deep. In each pot three plants may be placed triangularly, not planting deeper than to fix them securely. The following compost

is most suitable:—Two barrows full of fresh yellow loam, three of well-rotted horse-dung, and half a barrowful of river-sand, well mixed; plant in it *without sifting*, but breaking very well with the spade, and have a free drainage of rough turf, &c.; place the plants in a sheltered situation out of doors.

CREEPERS—and twining greenhouse or hardy plants, should be pruned and regulated before they begin to grow, where growing early attention to training and thinning should be given.

CALCEOLARIA SEED—should be sown early in the month, having the finest sifted soil for the surface. Offsets root rapidly now, and should be potted off.

CHRYSANTHEMUMS—sow seed off, and raise in moist heat. Mind the suckers of old plants are not drawn up; admit duly of air. Pot off suckers for next blooming.

COMMELINA TUBERS and Tigridia bulbs should now be planted.

CUTTINGS of Salvias, Fuchsias, Heliotropes, Geraniums, Celsias, Alonsoas, Lotuses, Senecios, &c., where it is desired to plant such out in beds, should be struck in moist heat as early as possible. Young shoots, cut off clean, strike readily. (See kinds of plants suitable, in vol. i., p. 38; and for additional kinds, subsequent vols.) Pot into small pots any struck to give vigour to them, to be better suited for turning out in May.

DARLIAS—if not already put into excitement, should be done as early as possible. Seeds should also be sown, placing them in a hot-bed frame till up. Cuttings be taken off and struck in heat. Pot off struck cuttings.

ACHIMENES, Gesneria, Gloxinia, and Tropæolum bulbs, &c., that have been kept dry during winter, should now be potted, and gently brought forward in heat.

HERBACEOUS perennials, biennials, &c., should now be divided, if required.

HYDRANGEAS—Cuttings may now be taken off, cutting off the tops of any shoots that have very plump leading buds about one inch below the bud of each cutting. These inserted, each into a small pot, and placed in moist heat, will soon strike root, and will, with future proper treatment, bloom one fine head each, strikingly beautiful. To make them bloom blue, use charcoal.

PANSIES divide successfully now; the shoots root freely at the under sides.

PELARGONIUMS—Cuttings now put in, struck in a hot-bed frame, and potted off as soon as they have taken root, will bloom during autumn.

POLYANTHUSES—should now be top-dressed, as directed for Auriculas, only the soil need not be so rich. Seed may now be sown; the best method is to raise it in heat, harden gradually, and transplant when large enough. Offsets may be removed, or plants divided, if an increase is desired.

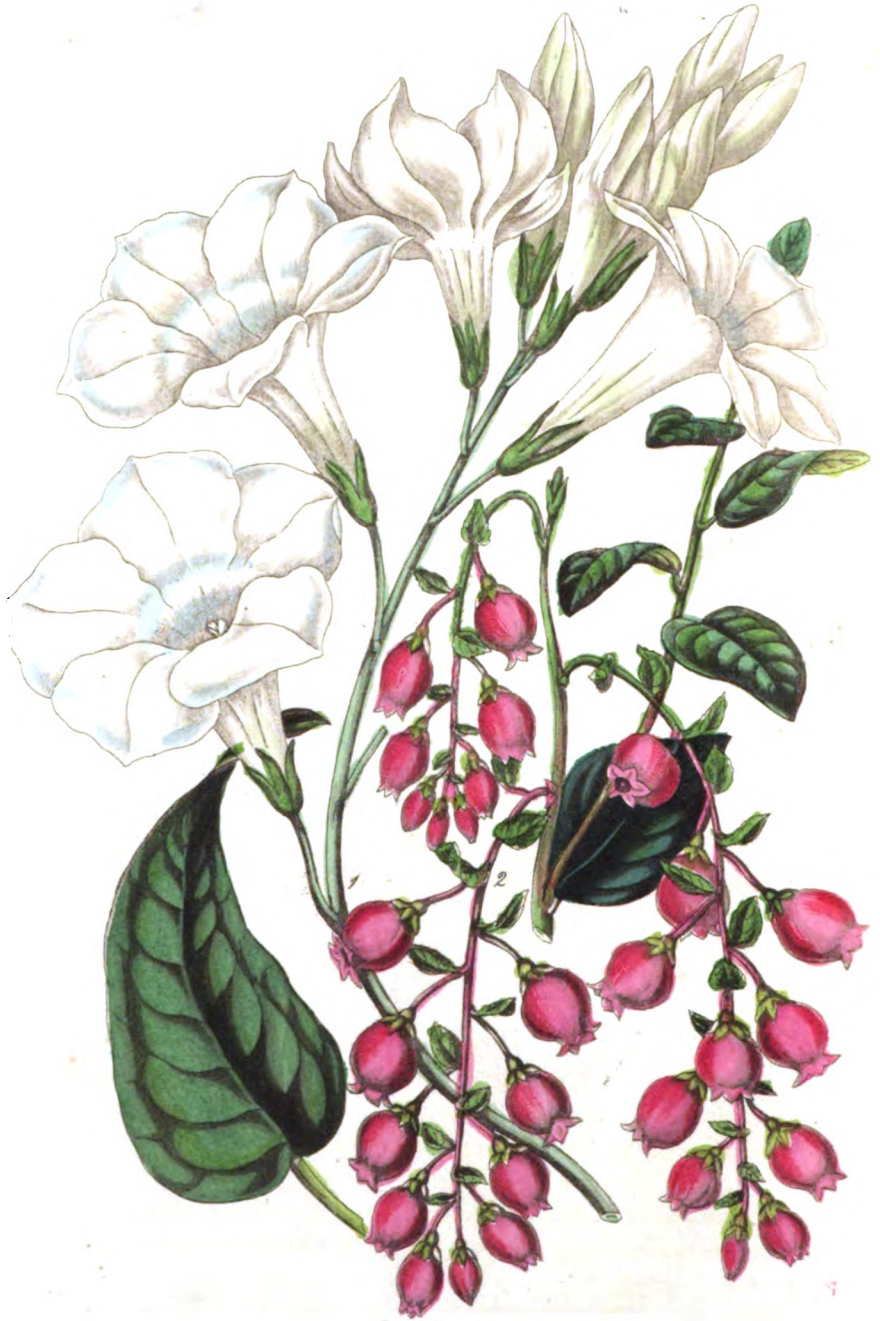
RANUNCULUSES and **ANEMONES**—should now be planted, taking care no fresh applied dung is in the soil, nor should the ground to plant in be lightened up more than two inches deep. The soil of the bed should be half a yard deep at the least. The best roots for flowering are such as have the crowns high and firm, with regular placed claws. Another bed, planted a fortnight later, brings them into bloom, so as to assist a florist to select for a show. Protect from excess of rain.

ROSE TREES—not yet pruned, if allowed to remain untouched till the shoots of the present coming season be about an inch long, and be then shortened by cutting back all the old wood to below where the new shoots had pushed, the dormant buds will then be excited, and roses will be produced some weeks later than if pruned at a much earlier season. Plants in pots now put into heat will come into bloom in May.

TUBEROSES—should be planted, one root in a small pot, using very rich sandy soil; the pots should be placed in moist heat till the plants are up a few inches; then they may be planted into larger pots, and taken into a stove, and finally into a greenhouse.

TULIPS—At this season, such as happen to be affected with canker will appear sickly; the roots should be examined, and the damaged part be cut clean out. If left exposed to sun and air, the parts will soon dry and heal. Avoid frosty air getting to the wound by exposure. Protect from excess of rain.

SEEDS—of greenhouse and similar plants may now successfully be sown, raised in moist temperature.



1. *Mandevilla jasminiflora*. 2. *Gaylussacia buxifolia*.
Floricultural Cabinet, May, 1845.

THE
FLORICULTURAL CABINET,

MAY 1st, 1845.

PART I.
EMBELLISHMENTS.

ARTICLE I.

1. MANDEVILLIA SUAVEOLENS.

It is a native of South America, and is one of the prettiest conservatory or warm greenhouse climbing plants. It grows and blooms very freely, producing numerous snowy-white sweet-scented flowers, very interesting and ornamental. The plant well merits a place as a neat and valuable climber wherever it can be grown. It may now be procured at a reasonable price.

2. GAYLUSSACCIA PSEUDOVACCINEUM.—(Synonym *Andromeda coccinea*.)

This very pretty flowering evergreen shrub is a native of the sandy plains of Brazil. It flourishes freely in the greenhouse in this country, treated in all respects as are the Cape Ericas. We have seen it thriving well in the collection of Messrs. Loddiges, of Hackney Nursery. It well merits a place in every greenhouse. Those of our readers who know the habit and beauty of most of the *Andromedas* will at once conceive the present plant is well worth cultivating.

ARTICLE II.

OBSERVATIONS ON THE BROOM,

BY FLORA.

NOT having noticed any observations in the CABINET relative to the Broom as one of the most ornamental shrubs that adorn the pleasure ground, plantation, or forest wood, induces me to transmit the remarks below.

I have a peculiar attachment to the old yellow flowering Broom of our own country, and have an immense quantity forming belts at the sides of several large woods and plantations, besides a proportion in my shrubbery. When in bloom they are a mass of beauty, and when out always look cheerful, and afford an evergreen under shelter. I sowed seed, which is very cheap, in the situations I wished to ornament, and in the second year they bloomed very profusely. To encourage others to grow it in all its kinds is my present object. It is delightful to grow it by road sides, walks, in drives, &c., in woods.

The following interesting particulars upon it are selected from the pen of a celebrated author, and their admission into the CABINET will, I think, be pleasing to the readers.

English, broom.—*French*, le genêt ; le genêt a balais.—*Italian*, sparzio ; scopa ; ginestra ; scornabecco ; all referring to its use as besoms.*

The Brooms are very ornamental shrubs, with few leaves, but an abundance of brilliant and elegant flowers ; they strike a deep root, but are too handsome to be rejected where room can be afforded for them.

The violet-coloured has no leaves, and is usually called the leafless Broom ; it was found by Pallas in the Wolga Desert. The Spanish Broom has yellow—the Portugal, white blossoms. The white-flowered, one-seeded kind, is a native both of Spain and Portugal. “ It con-

* The family of Plantagenet took their name from this shrub, which they wore as their device. It has been said that Fulk, the first Earl of Anjou of that name, being stung with remorse for some wicked action, went on pilgrimage to Jerusalem as a work of atonement, where, being soundly scourged with broom-twigs, which grew plentifully on the spot, he ever after took the surname of Plantagenet, or Broom-plant, which was retained by his noble posterity.

verts the most barren spot into a fine odoriferous garden," says Mr. Martyn, speaking of this species.

All the species here named will endure the cold without shelter; they do not like much wet. Our common Broom surpasses many of the foreign kinds in beauty; indeed few shrubs are more magnificent than this evergreen, with its profusion of bright golden blossoms.

" On me such beauty summer pours
That I am covered o'er with flowers;
And when the frost is in the sky
My branches are so fresh and gay
That you might look at me, and say,
This plant can never die.

* * * *

The butterfly, all green and gold,
To me hath often flown,
Here in my blossoms to behold
Wings lovely as his own."

Wordsworth.

They are the delight of the bees; and the young buds, while yet green, are pickled like capers. It is said that the branches are of service in tanning leather, and that a kind of coarse cloth is manufactured from them. The young shoots are mixed with hops in brewing, and the old wood is valuable to the cabinet-maker. Brooms are made from this shrub, and from their name it is supposed to have furnished the first that were made.

" Where yon brown hazels pendent catkins bear,
And prickly furze unfolds its blossoms fair;
The vagrant artist oft at eye reclines,
And broom's green shoots in besoms neat combines."

Scott.

In the north of Great Britain it is used for thatching cottages, corn, and hay-ricks, and making fences. In some parts of Scotland, where coals and wood are scarce, whole fields are sown with it for fuel.

But the Scotch have long been aware of the poetry as well as the utility of this beautiful shrub. The burden of one of their most popular songs is well known:—

“ O the broom, the bonny bonny broom,
 The broom of the Cowden-knows;
 For sure so soft, so sweet a bloom
 Elsewhere there never grows.”

Burns lauds it, too, in one of his songs, written to an Irish air, which was a great favourite with him, called the Humours of Glen:—

“ Their groves of sweet myrtle let foreign lands reckon,
 Where bright beaming summers exalt the perfume;
 Far dearer to me yon lone glen o’ green breckan,
 Wi’ the burn stealing under the lang yellow broom.

“ Far dearer to me are yon humble broom bowers,
 Where the blue-bell and gowan lurk lowly unseen;
 For there lightly tripping among the sweet flowers,
 A listening the linnet, oft wanders my Jean.”

“ ’Twas that delightful season, when the broom
 Full-flowered, and visible on every steep,
 Along the copses runs in veins of gold.”

Wordsworth.

Thomson speaks of it as a favourite food of kine. It flowers in May and June.

“ Yellow and bright, as bullion unalloyed,
 Her blossoms.”

Broom makes a pleasant shade for a lounge in the summer; it seems to embody the sunshine, while it intercepts its heat.

“ To noontide shades incontinent he ran,
 Where purls the brook with sleep-inviting sound;
 Or, when Dan Sol to slope his wheels began,
 Amid the broom he basked him on the ground,
 Where the wild thyme and camomile are found.”

Castle of Indolence.

Mr. Horace Smith speaks of it as poisonous, yet most of the species are eaten by cattle; some are particularly recommended as a food for kine. The Base Broom, or Green-weed, is said to embitter the milk of the cows that eat of it; but, from the bitterness of the plant itself, they commonly refuse it.

“Willows and humble broom afford either browse for the cattle, or shade for the shepherds, and hedges for the fields, and food for bees.”

Martyn's Translation.

The poet is supposed to intend the Spanish Broom in this passage, which grows plentifully in some parts of Italy, and of which the Italians weave the slender branches into baskets.

Virgil speaks of it as the “bending Broom.” In England the Broom has generally a kind of sharp and arrow-like straightness; in Italy, where it rises higher than in this country, the branches being very slender do not support themselves so stiffly.

Clorin, in the Faithful Shepherdess, reproves

————— “the lazy clowns

That feed their heifers in the budded brooms.”

Mr. Seward observes, in a note upon this passage, that this instance of laziness is taken from Spenser's Shepherd's Calendar for February, and supposes it to mean that they leave their herds among the Broom, which grows on the worst soil, instead of driving them into the best pastures.

“So loitering live you little herd-grooms,
Keeping your beasts in the budded brooms.”

Spenser.

Dr. Hall complains much of the negligence of the farmers in taking so little heed to check the growth of thistles, furze, broom, &c., even in the fields in the neighbourhood of Edinburgh. “It is well known,” says he, “that the seeds of thistles, rag-weed, and the like, are blown with the wind, and that though furze, as Lord Kaimes observes, is the only shrub in Britain that flowers all the year round; and Broom in bloom is one of the most beautiful shrubs we have, and appears like gold at a distance, yet they ought, if possible, to be completely extirpated out of those parts of the country where sheep are not reared.”

Browne alludes to the use of Broom in thatching:—

“Among the flags below there stands his coate,
A simple one, thatched o'er with reed and broom;
It hath a kitchen, and a several room
For each of us.”

Britannia's Pastorals.

A Russian poet speaks of the Broom as a tree:—

“ See there upon the broom-tree’s bough
The young grey eagle flapping now.”

Bowring’s Russian Anthology.

The blossom of the common Broom closely resembles that of the furze, both in form and colour—that furze which sheds such a lustre over our heaths and commons, and at sight of which, it is said, Dillenius fell into a perfect ecstasy. In many parts of Germany the furze-bush is unknown. Gerarde says, that about Dantzic, Brunswick, and in Poland, there was not a sprig of either Furze or Broom; and it is really a striking sight to come suddenly upon a common, glowing, as it were, in one great sea of gold. Gerarde adds, that, in compliance with earnest and repeated entreaties, he sent seeds to these places, and that the plants raised from them were curiously kept in the finest gardens. Furze bears various names in different parts of England: Furze in the south, Whin in the east, and Gorse in the north.

“ The prickly gorse that, shapeless and deformed,
And dangerous to the touch, has yet its bloom,
And decks itself with ornaments of gold.”

Cowper’s Task.

“ Or from yon swelling downs, where sweet air stirs
Blue harebells lightly, and where prickly furze
Buds lavish gold.”

Keats’s Endymion.

St. Pierre evidently alludes to the furze-bush in the following passage:—“ I saw in Brittany a vast deal of uncultivated land; nothing grows upon it but Broom, and a shrub with yellow flowers, which appeared to me a composition of thorns. The country people called it Lande, or San; they bruise it to feed their cattle. The Broom serves only to heat their ovens. It might be turned to better account. The Romans made cord of it, which they preferred to hemp, for their shipping.”—*St. Pierre’s Voyage to the Isle of France.*

ARTICLE III.

OBSERVATIONS ON THE CULTURE OF FLOWERS, &c.,

BY SARAH ELIZABETH.

It has afforded me much pleasure to observe, that ever since the first number of the *FLORICULTURAL CABINET* there has been an increasing attention given to the cultivation of flowers, both in exotics and hardy kinds.

The very cheering change in the present season excites even talent, floral habits, and propensities, and urges to the delightful and healthful pleasures of the flower-garden. I very recently met with the following remarks on the culture of flowers, which when taken in connexion with the now delightful spring season, I was so much pleased with them as to be induced to forward them for insertion in the *May* number.

When summer's delightful season arrives, rarely in this country too warm to be enjoyed throughout the day in the open air, there is nothing more grateful than a profusion of choice flowers around and within our dwellings. The humblest apartments, ornamented with these beautiful productions of nature, have, in my view, a more delightful effect than the proudest saloons with gilded ceilings and hangings of Genoa velvet. The richness of the latter, indeed, would be heightened, and their elegance increased, by the judicious introduction of flowers and foliage with them. The odour of flowers, the cool appearance of the dark green leaves of some species, and the beautiful tints and varied forms of others, are singularly grateful to the sight, and refreshing at the same time. Vases of Etruscan mould, containing plants of the commonest kind, offer those lines of beauty which the eye delights in following; and variform leaves hanging festooned over them, and shading them if they be of a light colour, with a soft grateful hue, add much to their pleasing effect. These decorations are simple and cheap.

Lord Bacon, whose magnificence of mind exempts him from every objection as a model for the rest of mankind (in all but the unfortunate error to which, perhaps, his sordid pursuit in life led him, to the degradation of his nobler intellect), was enthusiastically attached to flowers, and kept a succession of them about him in his study and at

his table. Now the union of books and flowers is more particularly agreeable. Nothing, in my view, is half so delightful as a library set off with these beautiful productions of the earth during summer, or, indeed, any season of the year. A library or study, opening on green turf, and having the view of a distant rugged country, with a peep at the ocean between hills, a small fertile space forming the nearest ground, and an easy chair and books, is just as much of local enjoyment as a thinking man can desire. I reckon not if under a thatched or slated roof, to me it is the same thing. A favourite author on my table, in the midst of my bouquets, and I speedily forget how the rest of the world wags. I fancy I am enjoying nature and art together, a consummation of luxury that never palls upon the appetite—a dessert of unclaying sweets.

There is something delightful in the use which the Eastern poets, particularly the Persian, make of flowers in their poetry. Their allusions are not casual, and in the way of metaphor and simile only; they seem really to hold them in high admiration. I am not aware that the flowers of Persia, except the rose, are more beautiful or more various than those of other countries. Perhaps England, including her gardens, green-houses, and fields, having introduced a vast variety from every climate, may exhibit a list unrivalled, as a whole, in odour and beauty. Yet flowers are not with us held in such high estimation as among the Orientals, if we are to judge from their poets.

Bowers of roses and flowers are perpetually alluded to in the writings of Eastern poets. The Turks, and indeed the Orientals in general, have few images of voluptuousness without the richest flowers contributing towards them. The noblest palaces, where gilding, damask, and fine carpeting abound, would be essentially wanting in luxury without flowers. It cannot be from their odour alone that they are thus identified with pleasure; it is from their union of exquisite hues, fragrance, and beautiful forms that they raise a sentiment of voluptuousness in the mind; for whatever unites these qualities can scarcely do otherwise.

Whoever virtuously despises the opinion that simple and cheap pleasures, not only good, but in the very best taste, are of no value because they want a meretricious rarity, will fill their apartments with a succession of our better garden flowers. It has been said that

flowers placed in bed-rooms are not wholesome. Plucked and put into water they quickly decay, and, doubtless, give out a putrescent air; when alive and growing there need not be any danger apprehended from them, provided fresh air is frequently introduced. For spacious rooms the better kinds, during warm weather, are those which have a large leaf and bossy flower. Large leaves have a very agreeable effect on the senses; their rich green is grateful to the sight; of this kind, the *Hydrangea* is remarkably well adapted for apartments, but it requires plenty of water. Those who have a greenhouse connected with their dwellings, have the conveniences, by management, of changing their plants as the flowers decay; those who have not, and yet have space to afford them light and occasionally air, may rear most of those kinds under their own roofs, which may be applied for ornament in summer. Vases of plaster, modelled from the antique, may be stained any colour most agreeable to the fancy, and fitted with tin cases to contain the earthen pots of flowers, to prevent the damp from acting on them, will look exceedingly well.

The infinite variety of *Roses*, including the *Guelder Rose*, the *Rhododendron*, and other plants of similar growth, are fitted for the saloon, but they please best in the library. They should be intermingled with the bookcases, and stands filled with them should be placed wherever practicable. They are a wonderful relief to the student. There is always about them a something that infuses a sensation of placid joy, cheering and refreshing. Perhaps they were first introduced at festivals, in consequence of their possessing this quality. A flower-garden is the scene of pleasurable feelings of innocence and elegance. The introduction of flowers into our rooms infuses the same sensations, but intermingles them more with our domestic comforts; so that we feel, as it were, in closer contact with them. The succession might be kept up for the greater part of the year; and even in winter evergreens will supply their places, and, in some respects, contrast well with the season. Many fail in preserving the beauty of plants in their apartments, because they do not give them sufficient light; some species do well with much less light than others. Light is as necessary to them as air. They should not be too often shifted from one place to another. Those who will take the trouble may quicken the growth of some plants, so as to have spring flowers in winter. Thus autumn and spring might be con-

nected; and flowers blooming in the winter of our gloomy climate possess double attractions.

For my own part I manage very well without the advantage of a greenhouse. The evergreens serve me in winter. Then the Lilacs come in, followed by the Guelder Rose and Woodbine, the latter trained in a pot upon circular trellis-work. After this there can be no difficulty in choosing, as the open air offers every variety. I arrange all my library and parlour-plants in a room in my dwelling-house, facing the south, having a full portion of light, and a fire-place. I promote the growth of my flowers for the early part of the year by steam-warmth, and having large tubs and boxes of earth I am at no loss, in my humble conservatory, for attending them is all my own, and is one of those employments which never appear laborious. Those who have better conveniences may proceed on a large scale; but I contrive to keep up a due succession, which to a floral epicure is everything. To be a day in the year without seeing a flower is a novelty to me; and I am persuaded much more might be done with my humble means than I have effected, had I sufficient leisure to attend to the retarding or forcing them. I cover every space in my sitting-room with the beautiful fairy things of creation, and take so much delight in the sight of them, that I cannot help recommending those of limited incomes, like myself, to follow my example and be their own nurserymen. The rich might easily obtain them without; but what they procure by gold the individual of small means must obtain by industry. I know there are persons to whom the flowers of Paradise would be objects of indifference; but who can imitate or envy such? They are grovellers, whose coarseness of taste is only fitted for the grossest food of life. The pleasures "des Fleurs et des Livres" are, as Henry IV. observed of his child, "the property of all the world."

REVIEW.

Observations on the Cultivation of Roses in Pots, by W. Paul; Nurseries, Cheshunt, Herts. Published by Sherwood and Co., London. pp. 32.

(Continued from page 61.)

BOTANON.—This class of Roses is truly elegant. It has also been much extended lately, and become more varied, by the introduction

of many purple, crimson, and blush roses. Before the appearance of these, the Bourbons were nearly all of a rose colour. Probably the dark varieties now obtained have something of the Chinese in them; but should the crossing not affect their hardiness, which I venture to predict it will not, they will rival, and, in one point (profusion of bloom), surpass their progenitors. The colours of the Bourbon Roses are very clear; the petals smooth, thick, and large, and generally well-formed.

*Amarantine, lively rose.

Armosa, fine bright pink.

Augustine Lelieur, vivid, even rose.

Celimene, fine clear blush.

Comte de Rambuteau, clear reddish violet.

Coupe d'Hebe, deep rose.

Delille (new), deep rose, finely formed.

*Desiré Roussell, clear flesh.

Dumont du Courset, very deep crimson, often shaded.

George Cuiver, bright cherry, edged with clear rose.

Gloire de Paris, bright dark crimson violet.

Grand Capitaine, rich carmine.

Madame Nerard, silvery pink blush.

Madame Souchet, pale rose when opening, often edged with lake.

Paul Joseph, superb velvety crimson.

Princess Clementine, violet red, changing to purple.

Queen, buff rose, fine.

Souchet, large, rich crimson purple.

Souvenir de Dumont—d'Urville, cherry, changing to violet.

Speciosa, full, shaded rose.

Theresia Margat, bright pale rose.

Virgil, rose, finely formed.

(T.) CHINESE, OR BENGALÉE.—Among the Autumnal Roses these are very valuable, being continually in flower. They group admirably with the Tea-scented; and their colours being, in part, those which are deficient among the latter, they are the more to be valued.

The Lawrencianas are very pretty Roses, but do not group well

with any others. A few varieties will be given here; for when the plants become of some size, and are covered with their diminutive buds and blossoms, they are really interesting objects. They delight in a light sandy soil.

Abbé Mioland, rosy purple, striped.

Alba, or white.

Angustine Hersent, deep pink.

Cramoisie superieure, bright velvety crimson.

Duchess of Kent, white, edged with rose.

*Fabvier, scarlet.

Madame Breon, large brilliant rose.

Madame Chavent, large, rosy pink.

Madame de Rohan, blush white.

Mrs. Bosanquet, beautiful pale flesh.

Napoleon, large blush pink.

Prince Eugene, crimson purple.

Reine de Lombardie, rose, blush and crimson, variable.

LAWRENCIANAS.

Alba Minor, white.

Caprice des Dames, pink.

Fairy, pale rose.

La Laponne, bright pink.

Pumila, rose.

Rubra, brilliant crimson.

(T.) TEA-SCENTED.—These are, in fact, but a selection from the Chinese, on account of their peculiar odour and shining foliage. They are well suited for growing in pots. They are tender, and should have some protection from frost in winter. The best way of growing these and the preceding class is, perhaps, in pits, as previously advanced, where they may be sheltered from the cold nights or rough weather, at any season, by placing the lights on. They are excellent forcing Roses, and more admired than any others when grown in pots, the tints being rich and delicate.

Adam, large clear rose.

Archiduchesse Thérèse, creamy white and yellow.

Bardon, blush and salmon pink.

Bride of Abydos, creamy white, tinged with rose.

Caroline, rose and blush pink, shaded.
 Cels multiflore, pale flesh.
 Clara Sylvain, white, centre cream.
 Comte de Paris, large flesh-coloured rose.
 Comte d'Osmond, white, centre yellow.
 Devoniensis, large, pale yellow.
 Don Carlos, pale buff and salmon.
 Eliza Sauvage, fine yellow, centre orange.
 Eugene Desgaches, bright rose.
 Goubault, large rich rose, centre buff.
 Josephine Malton, large shaded buff and white.
 Julie Mansais, delicate pure white, large.
 La Renommé, white, centre pale yellow, fine.
 Lyonnais, large, rose and lilac, shaded.
 Madame Dupuis, white, centre rose and yellow.
 Madame Roussel, white, centre flesh.
 Mansais, large rose, shaded with buff.
 Nina, fine clear flesh.
 Pellonia, pale yellow.
 Perfection, nankeen, centre rose.
 Taglioni, creamy white, buff centre.

It would be useless to offer any remarks as to which of the preceding should be grown as dwarfs, and which as dwarf standards; for most of them do well in either way. This, then, is better left to the option of the cultivator.

The classes which the letter *S* precedes are Summer Roses; the others continue flowering throughout the autumn; during which period they should be plentifully supplied with water.

The letter *T*, preceding any class, indicates that the varieties of which it is composed require protection in winter.

CLIMBERS.

Climbing Roses should be invariably grown on their own roots; and being chiefly kept in pots, their cultivation may commence at any season we please. What we have hitherto been accustomed to regard as Climbers are from the classes Boursault, Sempervirens, Ayrshire, &c. Magnificent as such must be regarded when growing in the open ground, often to the height of twenty feet, and covered

with immense trusses of bloom, their semi-double and transient flowers render the greater part not altogether suitable for growing in pots. A growth not too vigorous, and finely-shaped flowers, should be the criteria with regard to Roses grown in pots as climbers. As a great height, then, is not in this instance desirable, the various Hybrids, the Noisettes, and Bourbons, may be chosen, and trained upwards to about three feet, which will probably be found as high as convenient or manageable: not that we would, however, altogether exclude the Ayrshire and Sempervirens, for among them a few admirable Roses are to be found.

Now, one great point to be held in view is, to induce the plants to flower from the summit to the ground; for if a few flowers only are to be produced at the top of the plant, then the dwarfier it can be grown the better. This, complete flowering, judicious pruning, and training, will accomplish.

TRAINING AND PRUNING CLIMBERS.

In training, they may be formed into any shape. Such varieties as have long twining or flexible shoots may be trained spirally, with which view, in pruning, in the first instance, they should be cut-in close, to induce them to form lengthened shoots, which should be trained in their proper course during the season of growth. By this treatment, in all probability, they will not flower the first year; but if, after this, the main shoots be merely stopped, and the lateral ones cut within a few eyes, an abundance of bloom will be secured the succeeding year. Any superfluous shoots may, of course, be removed; but under this system of growth a small amount of pruning only is necessary.

The stiff, erect growing kinds may be formed into short pillars of a pyramidal form, or trained to flat wires. The former presents the most natural appearance; and to effect this, from three to five shoots may be allowed in the first instance, and pruned of different lengths: these will throw out laterals, and a short pillar rose is formed. In after seasons they may be pruned, as proposed for other Roses.

CLIMBING VARIETIES.

Here, then, is a list of such varieties as appear best adapted for this purpose.

*To train spirally, or as twiners.***HYBRIDS OF THE CHINESE.**

- Beauty of Billiard, beautiful vivid scarlet.
 Blairii, No. 2, large blush pink.
 Fulgens, rich velvety crimson.
 General Kleber, purplish red, changing to violet.
 Hippocrates, deep crimson lilac.
 *Ne Plus Ultra, fine carmine.
 Pompon Bicolor, purple and crimson shaded.
 *Princess Augusta, bright crimson and purple mottled.
 Triomphe de Laqueue, red and purple, shaded.

BOURSAULT.

- *Amadis, purplish crimson.
 Gracilis, bright rosy red.

AYRSHIRE.

- *Ruga, pale flesh.
 *Splendens, white, tipped with red.

SEMPERVIRENS.

- Banksiaflora, white, centre pale yellow.
 Félicité Perpétue, creamy white.
 Leopoldine d'Orleans, white, shaded with rose.
 Myrianthes Rénoncule, delicate rose.

BOURBON.

- De L'Isle, bright rose.
 Etoile de Lyons, purplish rose.
 Phœnix, reddish purple.
 Souvenir D'Anselmne, bright scarlet.

NOISETTE.

- Desprez, rose and reddish yellow.
 D'Espalais, rose.
 Du Luxembourg, lilac rose, red centre.
 Fleur du Jeune Age, white, yellow centre.
 La Biche, large pale flesh.
 Lemarque, fine sulphur yellow.
 *Prudence Rœser, lilac blush, sometimes rose, blooming in clusters.†

† This Rose has hitherto been classed as a Hybrid Perpetual; but differing so much from the general run of these, and having the characteristics of a Noisette Rose, I have ventured to introduce it here,

*To train upright, as Pillars or Pyramids.***HYBRIDS OF THE CHINESE.**

Aurora, crimson and violet shaded, sometimes striped with white.

Belle de Rosny, delicate peach.

Belle Marie, superb large rose.

Brennus, rich carmine, large.

Captain Sisolet, beautiful rose.

Charles Duval, fine deep pink.

Chénédolé, rich vivid crimson, very large.

Dandigné de la Blanchaie, dark slaty purple.

Duke of Devonshire, rosy lilac, striped with white.

*Great Western, crimson and purple, very large, blooming in clusters.

*Henry Barbet, deep vivid rose.

Hybrid Stadtholder, fine light rose.

La Grandeur, large rose.

*Lord John Russell, brilliant even rose.

Madame Plantier, pure white.

Madame Rameau, dull violet purple, centre bright crimson.

Paul Perras, beautiful large rose.

Richelieu (Duval), pale pink, finely formed.

Victor Hugo, large rosy lilac.

HYBRID PERPETUAL.

Dr. Marx, rosy carmine.

Duchess of Sutherland, fine pale rose.

Madame Laffay, brilliant rose, superb.

BOURBON.

Bouquet de Flore, light carmine.

Hennequin, bright crimson purple, fine.

Marquise d'Ivry, deep bright rose.

NOISETTE.

*Bouton Nankin, nankeen, changing to blush distinct.

*Fellenberg, bright crimson.

*Euphrosyne, pale rose and yellow, very sweet.

FORCING.

Roses required for forcing will succeed tolerably well if potted early in the preceding autumn. It is, however, obvious, that, by

being potted a twelvemonth previously, they become established, and better enabled to support an accelerated growth and premature development of bloom. If, therefore, we are anxious to obtain a good bloom of forced Roses, and have plants that have been a twelvemonth or more in pots, they should certainly be taken in preference, for the purpose, and the fresh-potted ones be allowed to grow on for the natural season of flowering. Presuming, then, the plants about to be forced have been grown one season in pots, we will proceed with our subject.

HEATING FORCING-HOUSE.

The various systems of heating horticultural buildings now in vogue have been frequently descanted on in the gardening periodicals, and it would be out of place to speak of them here, except in general terms. Heating by hot-water, in its various modes of application, which have now become general, is universally acknowledged to be preferable to the old flue system, and in no instance more so than for forcing Roses: nevertheless, they will force well upon the old flue system. As, however, as must be apparent, syringing should be more freely resorted to here; and a pot or two of water, poured down on the floor of the house every morning, is necessary, to keep a moist atmosphere, which is very favourable to forced Roses, and, at the same time, noxious to the red spider, which it is not impossible should appear under the flue system of heating. Arnott's stove is also used by some, and is found to answer exceedingly well.

[We again recommend the pamphlet to our readers as well deserving to be possessed.—CONDUCTOR.]

PART II.

LIST OF NEW AND RARE PLANTS.

BLANDFORDIA MARGINATA. ROUGH-EDGED. (Bot. Reg. 18.) Liliacæ. Hexandria Monogynia. A native of Van Dieman's Land, where it grows abundantly. It is in the collection of Messrs. Osborne and Co., of Fulham, near London, where it bloomed last year in the greenhouse. It is an inhabitant of wet places, and, consequently, in the growing season, requires a liberal supply of water. The flowers are produced in a long conical shaped raceme, of a deep rich red-copper colour outside, and yellow within, and at the edges of the petals. It is a very interesting and pretty flowering species. There have been discovered two other new species. In Van Dieman's Land, viz., *B. Backhousii*, which produces its flowers in a large corymbose head of more than twenty in

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each. *B. Cunninghamii*, in New Holland. The flowers are very large, of an uniform red colour outside, yellow within.

CESTRUM AURANTIACUM. ORANGE-COLOURED. (Bot. Reg. 22.) Salanaceæ. Pentandria Monogynia. Mr. Skinner obtained this new species from Guatemala, It bloomed in the Chiswick Garden last August. It is a handsome greenhouse shrub, which blooms profusely. The flowers are produced in spikes, numerous, altogether forming fine heads. Each blossom is about an inch long, of a rich orange colour, having too the perfume of orange peel. It flourishes in the open border, in summer, and well deserves to have a place in the same, or in the greenhouse.

DENDROBIUM MONILIFORME. NECKLACE-STEMMED. (Bot. Mag. 4153.) Orchidaceæ. Gynandria Monandria. (Synonym, *Limodorum moniliforme*.) A native of China and Japan. It has bloomed at Kew, in November, 1844, and February, 1845. It is one of the most lovely of the Orchideous Epiphytes. The flower stems grow about a foot high, and the blossoms are produced towards the top portions of the stems. Each blossom is about two inches and a half across. Sepals and petals white, having the upper half of a purple-blush. Lip small, white tipped, with deep purple. It is a very handsome species.

DISOPHYLLA STELLATA. THE STARRY. (Bot. Reg. 23.) Lamaceæ. Didynamia Gymnospermia. (Synonym, *Mentha quaternifolia*.) A native of India. in the Malabar and Mysore countries. It is a delicate little light green plant, looking much like the Ladies Bedstraw of our own country hedges and banks. The flowers are produced in spikes, of a pretty purple colour, having much the appearance in form of the spike of a Mimosa when in full bloom. It is a very neat and beautiful greenhouse plant. It bloomed in the garden of the Earl of Auckland last October.

GESNERIA SCHIEDEANA. M. SCHIEDE'S GESNERIA. (Bot. Mag. 4152.) Gesneriaceæ. Didynamia Angiospermia. Sent from Mexico to the Duke of Bedford's collection, at Woburn Abbey Gardens, where it bloomed last November. It is an erect growing plant. Producing numerous long stems of flowers, in whorls, around the stems. Each blossom is near an inch long, of a rich scarlet colour, and the limb yellow dotted with red.

IOCHROMA TUBULOSA. THE TUBULAR. (Bot. Reg. 20.) Solonaceæ. Pentandria Monogynia. (Synonym, *Habrothamnus cyaneus*.) It was discovered by Mr. Hartweg, growing on the mountains of Yanguana, near Iloxa. It is a handsome, free flowering, half hardy, greenhouse shrub, blooming from June to November. The flowers are produced in terminal cymose heads of a dozen or upwards in each. The corolla is tube shaped, about an inch and a half long, of a deep blue outside, and purple within. It is a very pretty interesting plant, well deserving a place in the greenhouse or conservatory. It flowered in the garden of the Horticultural Society, at Chiswick, last autumn.

SPATHOLOTIS FORTUNI. MR. FORTUNE'S. (Bot. Reg. 19.) Orchidaceæ. Gynandria Monandria. This pretty little Bletta like plant was one of the first that Mr. Fortune, the collector sent out by the London Horticultural Society, met with in China, growing on the granite mountains of Hong Kong. The flowers are produced in erect racemes, several in each, a single blossom is about an inch across, of a bright yellow colour. It appears there are other species which have been discovered, viz., *S. pubescens*, *S. parvifolia*, and *S. tomentosa*, all with yellow flowers, all interesting and pretty.

LOBELIA THAPSOIDEA. MULLERIN-LIKE. (Bot. Mag. 4150.) Lobeliaceæ. Pentandria Monogynia. The genus *Lobelia* has been considerably reduced by the genera that have lately been separated from it, as *Siphocampylus*, *Tupa*, &c., yet there are 173 species described in De Candolle's *Prodromus*. The present species was sent to this country by Mr. Gardner, who gathered specimens eight feet long. The flowers are of a purple-blue, producing a splendid appearance.

AERIDES MACULOSUM. SPOTTED AIR-PLANT. (Fax. Mag. Bot.) Orchidaceæ. Gynandria Monandria. This very beautiful species was sent from Bombay two

years ago, and last summer bloomed in the collection of C. Horsfall, Esq., of Liverpool. The flowers are arranged in racemes, which usually have lateral ones proceeding from the sides. The graceful half-nodding racemes of flowers, of the mingled purple, rose, carmine, and yellow, tints and spots, produce a very beautiful appearance. The blossoms are deliciously fragrant. It deserves to be in every collection.

BUGAINVILLEA SPECTABILIS. THE REMARKABLE. (Pax. Mag. Bot.) Nyctaginaceæ. Octandria Monogynia. An evergreen climbing shrub, very suitable for a conservatory or greenhouse. It is a native of Peru. The flowers are large, being three inches across, of a beautiful rich purple colour. It well deserves a place in either situation.

AZALBA INDICA, VAR. OPTIMA. (Pax. Mag. Bot.) The flowers are large, of a rich red, shaded with dark crimson. *A. Broughtoni*, a beautiful rose, shaded with lilac. *A. exquisita*, pink, with white margined petals. All very handsome. They have recently bloomed with Mr. Knight.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON CALLA ÆTHIOPICA.—A subscriber from the commencement of the FLORICULTURAL CABINET will feel much obliged if a correspondent will give some information respecting the treatment of the Arum Lily, or Calla Æthiopica, the proper compost, &c.

February 24th.

[The plant is now named *Richardia Æthiopica*. It thrives in a rich turfy loam and turfy sandy peat, two parts of the former to one of the latter, chopped, not sifted, compost, and to have a free drainage. It flourishes in a warm greenhouse, having plenty of light, and the pot to be placed on wood, not stone, or similar cold material. In its growing state requires to have a liberal supply of soft water; during winter just enough to save it from drought.—CONDUCTOR.]

ON VERBENAS, ANAGALLIS, PETUNIAS, AND CALCEOLARIAS.—During winter I have lost nearly all my stock of the above, will cuttings now put in be strong enough to plant out in beds the coming season. LUCY.

[If the stock plants now have lateral shoots four or five inches long, they should be cut off clean at their origin, inserted in sandy loam or peat, and be placed in a moist heat, they will readily strike root on doing so; early pot them singly, and replace them in heat to start them, after which gradually inure them to a temperature, so that by the end of May, or early in June, they might be planted out with entire balls. These plants may be expected to bloom by the middle or end of July. In order to have a vigorous display and earlier, too, strong plants had better be procured at once.—CONDUCTOR.]

ON CLIANthus PUNICEUS.—A constant subscriber begs to be informed of the probable reason why a fine plant of *Clianthus puniceus*, which flowered profusely this spring, should have lost all its leaves in the centre of the plant. The leaves near the root and at the top are abundant. It is still growing vigorously, and has not suffered from either snails or red spider, but it is stripped of leaves in the middle. Is it the habit of the plant? It must be about four years old, and is planted on a south wall of the house.

August 10, 1844.

ON LILIUM LANCEFOLIUM.—Isabella is desirous of being informed whether the kinds of *Lilium lancefolium* have been grown and succeeded to satisfaction in

the open air. An early answer will be an additional favour, as if they do succeed it is her intention to procure some to plant out this spring.

Toines, Devon, Feb. 17, 1844.

[We have seen a large bed of *Lilium lancifolium album*, grown in the open air, and blooming beautifully, and several of the *punctatum* and *rubrum* do equally well. The bulbs were planted in small pots, and kept in a cool frame, and the plants turned out early in spring into the open bed, the soil of which was a sandy peat and light loam, about equal parts. There is no doubt but that they may be planted out at once into a bed or border, as done with the old kinds of Lilies, where the substratum is dry and the compost light, as above described, and will flourish equal to the common kinds. We have been informed by a friend that he has tried it one season with entire success.—CONDUCTOR.]

ON ORANGE TREES.—I am but a beginner in gardening, but having erected a small conservatory and a greenhouse I have a promise of a present of a dozen Orange Trees, which have been in the possession of my friend for several years, but they grow weakly, and appear of a sickly yellow hue. What is the best kind of compost to grow them in, in tubs or large earthen pots, as on my first obtaining the plants I intend to remove them into one or the other. An answer in the March CABINET will much oblige,
ENQUIRER.

[Chopped turfy-loam, well enriched with rotten cow-dung, to which add one quarter of turfy sandy peat and a tolerable sprinkling of bits of charcoal, and small granite stones added. In this compost, with a free bottom drainage, and not to be over-potted, the plants will grow vigorously, if otherwise properly attended to. We have seen them growing quite robust in such compost.—CONDUCTOR.]

REMARKS.

ON PRESERVING EXOTIC PLANTS SUITED FOR THE FLOWER-GARDEN IN SUMMER DURING WINTER, AND EARLY SPRING.—The flower-gardens are, during the summer months, in many cases, almost exclusively decorated with exotics; and too much cannot be said in favour of a practice that enables them to rival, for a time, the sun-lit scenes of happier climes, from which we have lately received many plants so perfectly suited to such a purpose, and so exquisitely lovely when displaying their beauty in masses, that without them our gardens would be a blank indeed. What, in all the range of floral beauty, unlimited as it is, could compensate us for the loss of even that single group, the matchless Verbenas? The duration of plants used for this purpose, under the mode of culture this practice has introduced, is only annual; as they require to be propagated in autumn or spring, produce their blossoms during the season, and perish at its close. As they cannot be turned out with any certainty of success until the season is far advanced, the small plants require to be planted thick enough to cover the soil, and produce an immediate effect. Thus a moderate sized garden requires a considerable number of plants to furnish it annually, a prospect that would have appalled even the best gardeners of yore; but at the present day, where sufficient means are allowed, the propagation of the plants is a matter of no difficulty. In cuttings, put in during February or March, failures seldom occur; when they do, they are generally the effect of too much confinement, and not, as is often assumed, of too much water. For the sort of cuttings I am speaking of, during the early part of the season, double glass is altogether unnecessary: watering them overhead during sunshine, while air is admitted, will prove of more service than covering them with glasses or shading, a practice that ought to be avoided.

The inexperienced will find a frame with a little bottom heat, covered four or five inches deep with light soil, the cuttings planted in the soil, a most efficient apparatus; and those who possess a stove or hothouse will find that cuttings in pots, plunged in the bark-bed, and fully exposed to the light, will root without further trouble.

The introduction of so many plants into the houses at a time when those wintered there are beginning to grow, and require more room, is a serious evil;

to remove which as soon as possible, we are apt either to turn out the plants before the proper season, when they often suffer so much from premature exposure, that we are forced to replenish the beds, or endure their squalid appearance during half the season; or to retain the young plants, fifty or sixty together, in the cutting-pots, until they are finally turned out. This, no doubt, saves room, the labour of potting, and watering in a great measure; but it is the practice of the sluggard, and ought to be avoided with all his doings, as the plants invariably thrive better when potted singly, and allowed to establish themselves in the pots. To avoid these habits, and still retain house-room for more important purposes, select a sheltered spot, fully exposed to the sun, over which erect a temporary framework of rafters to support a roller, with canvas or matting. Cover the bottom of the space enclosed with sand. When the plants have been potted off, the pots filled with roots, and tolerably hardened, let them be taken to this shelter, carefully turned out of the pots, and each plant placed upon a small piece of turf previously placed upon the sand. As the plants are not expected to increase much in size while they remain here, they may be placed rather close together, thereby sheltering each other, and making the most of the space covered. As the plants are placed, let the space between each be filled up with sand, when they will require little attention, save an occasional watering, until they are removed to their final destination. Under such a shelter, the hardier sorts, or such as have been propagated in autumn, may be placed as early as the 1st of March; the pots, and the room in the house that they occupied, to be employed in forwarding others to be treated in the same manner. High or cutting winds, heavy rains, and cold, are to be guarded against, during which the canvas must remain down.

The mere saving of room is not the only recommendation such a practice possesses. When the plants are taken up with the small piece of turf attached, it will be found that they have formed numerous strong and fleshy spongioses, ready to seize upon the soil with the greatest avidity. They likewise suffer much when taken from under glass, and exposed to the direct influence of light: placed out so early, the cause is less powerful; the effect, consequently, less felt; and what they do suffer in appearance is entirely recovered while they remain where their appearance is not of the smallest consequence. Those who possess propagating-houses, and every convenience to supply the plants required of them, may deem it unnecessary to employ such an auxiliary; but the number of such is limited indeed, when compared with those who happily take an interest in a garden, and strive to make the most of the means placed at their disposal: to those who have only a greenhouse it is invaluable. Persons so situated would do well to propagate as many as possible in autumn; retain them in the cutting-pots during the winter, allowing them plenty of air, as the best safeguard against damp, the greatest enemy to plants at such a season; pot them off, and place them under the shelter already recommended in spring. When judiciously managed, it is surprising how many plants may be thus produced, even by a single frame. Annuals intended for planting out in beds, for which purpose there are many sorts well adapted, ought to be sown in autumn, and treated in every respect like cuttings, when they will produce a far finer display than those raised in spring.

Specimen greenhouse plants, in pots, placed singly or in groups upon the lawn, when properly introduced, produce a fine effect. To prevent plants so placed having their roots injured by the action of the sun upon the pots, they ought to be plunged, or otherwise covered, and proper drainage secured. This is generally effected by a stratum of coal-ashes; but I have often had occasion to plunge plants where the remains of the ashes, turned up in digging, appear unsightly in the extreme: in these cases I drained the pots containing the plants by placing a small empty pot beneath each, and found the result so satisfactory, that I have adopted this plan wherever plants are plunged, it being free from every objection that applies to ashes. Pots are easier applied and removed, and more effectual, as by them worms are completely excluded. The plunging taking place when the pots required for drainage would be lying idle, they may be so applied without any sacrifice.

Folkstone.

ON THE CULTURE OF THE CALCEOLARIA.—About the middle of July, when the plants have done flowering, preparation should be made for propagating the different kinds—the herbaceous, by dividing the roots; the shrubby, by cuttings. The plants should be encouraged in their growth, a short time previously to the operation, by judicious watering, the remaining flowers picked off, and the stems allowed to die down that no nourishment may escape. A little of the old soil should be removed, and a top-dressing of fresh compost added, in which the shoots will readily take root; those shoots that do not touch the soil require to be pegged down.

The cuttings from the shrubby sorts should be struck singly, in small'sixties, in a frame with a gentle bottom-heat, kept shaded, and rather sparingly watered; when rooted, air may be more freely admitted, and the plants gradually hardened. As soon as the roots appear through the soil, they will require shifting into forty-eights, and to be placed in a house where they may receive plenty of top air—side air and drafts being prejudicial to the free growth of the Calceolarias when the sun bears considerable power the plants should remain on the shady side of the greenhouse; the temperature of the house should be from 45° to 50°.

About the beginning of September, those plants which are growing vigorously will require shifting into larger pots; and when large specimen plants are required, this operation should be repeated as often as the pots are filled with roots; liberal drainage should at all times be given, and regular watering carefully attended to, never allowing the pots to get dry. The decaying leaves should be removed, for if suffered to remain upon the plants, they cause mildew, and much injury ensues. The plants require to be frequently examined, to watch for the appearance of the green-fly; and when discovered, a check should be put to their increase by well fumigating the plants, and repeating the operation if the first is not effective, as it is difficult to dislodge these pests from the young and downy leaves. The house should be frequently steamed by damping the flues, as the Calceolaria thrives best in a moist atmosphere. During the winter months the plant must be removed to the south side of the house, to receive all the light possible, and prevent their being drawn up weakly. This treatment is continued till the beginning of March, when a gentle watering over the heads with a fine rose or syringe will prove very beneficial. As the power of the sun begins to increase, and the flowers approach their blooming season, it will be necessary either to shade the plants or remove them to the north side of the house; for if suffered to remain in the sun and allowed to become dry, the plants will be forced prematurely into bloom before obtaining a desirable height and size. When the flower-stems begin to rise, training should commence, and a stick put to each shoot that it may rise in its proper place, and assist in forming a regular head of bloom. A supply of liquid manure twice a-week will give additional strength to the plants, and cause the flowers to expand freely. The compost for the Calceolarias should be the following: one barrowful of loam, one of bog-earth, and one of cow-dung. For the winter potting an additional half-barrowful of bog-earth may be used, for which, in spring, a half-barrowful of loam should be substituted.—*Gardeners' Chronicle.*

SUPERB CARNATIONS AND PICOTEES.—As it is now the Carnation and Picotee season for planting, I here forward you a list of what I consider first-rate, and many of them new sorts, which have come under my observation on my visits to the different shows and collections of amateurs and florists in the neighbourhood of London during the past season.

J. BELL.

Scarlet Bizarres.—Twitchett's Don John (not yet out), Headley's William Cobbett, ditto Achilles, Rainsforth's Game-boy, Roi da Capucins, Pugh's Haidee, Martin's Splendit, Barrenger's Fire-king, Smith's Duke of Cambridge, ditto Duke of Wellington, Ely's Regular, ditto Joily Dragon, ditto Lord Durham, ditto Earl of Mexborough, Wheeler's Victory, Grove's Sir Robert Peel.

Crimson Bizarres.—Holmes's Count Palini, Hufton's Duke of Wellington, Hogg's Champion, Paxley's Prince Albert, Roi Dagoberts, Barnard's Duke of Roxburgh, Ely's Duke of Bedford, ditto Lord Milton, ditto Duke of Manchester,

Bucknell's Talma, ditto Charlemagne, Harvey's Huntsman, Barrenger's Enchantress, Venebles's Spitfire, Wood's William IV., Young's Karl Grey.

Scarlet Flakes.—Twitchett's Queen of Scarlets (not yet out), Simpson's Marquis of Granby, Barrenger's Hope, Woollard's Queen Victoria, Martin's Mars, ditto Phoenix, Willson's Sir H. Davey.

Purple Flakes.—Ely's Mango, ditto Mrs. Burkell, Hepworth's Elizabeth, Mansley's Euclid, Martin's President, ditto Lord Morpeth, Hogg's Colonel of the Blues, ditto Lady Chetwoda, Willmer's Solander.

Rose Flakes.—Brooks's Flora Garland, Harvey's Maria, Ely's Lovely Ann, ditto Lady Ely, Pullen's Queen of England, Harrison's Lady Milner.

Red Picotees.—Meadley's Sarah (not yet out), Willmer's Duke of Cornwall, Orson's Queen Adelaide, ditto Eliza, Ely's Mrs. Homer, Barnard's Colonel Foreman, Giddings's Don John, ditto Teaser, Wildman's Isabella, Sharp's Duke of Wellington, ditto Unique, ditto Hector, ditto Beauty, Wood's Earl of Sandwich, ditto Queen Victoria, Holliday's Queen of England (not yet out).

Purple Picotees.—Giddings's Miss Hennell, ditto Vespasian, Wood's Lord St. John, Ely's Grace Darling, ditto Dr. Homer, Pullen's Lady Peel, Kirtland's Queen Victoria, Pluperfecta, Crask's Queen Victoria, Dickson's Trip to Cambridge, Brinklow's Hope, Heath's Superb.

Rose and Scarlet-edge Picotees.—Barnard's Mrs. Barnard (not yet out), Waine's Queen Victoria, Burrough's Sylph, Barrenger's Duchess of Bedford, Giddings's Diana, Garret's Lady Dacre, Sykes's Eliza, Millard's Fair Ellen.

ON THE AMARYLLIS.—Having more than once observed directions in the CABINET for the cultivation of Stove Amaryllis, which are likely, if my experience be correct, to prove very injurious to them, I am induced to send a few remarks thereon. The point I allude to is the direction to re-pot them as soon as they show flower, or before they begin to grow. When first I cultivated Amaryllis I pursued this plan, to the destruction of many of my bulbs; and whenever I have recurred to it since, or seen it tried by others, the same effect, either of complete or partial decay, has followed. If Amaryllis be shifted into fresh pots, either soon after the leaves die off, or just before they begin to grow, the whole of the young roots perish, and decay so begun extends to the coats of the bulbs, forming a caaker, which it is almost impossible to cure. The management which I recommend is invariably to re-pot such bulbs as require it when their foliage is in full vigour or still growing, say in June or July, or earlier, according to the treatment they have received. When the foliage dies at the tips, water should be gradually withheld, and the bulbs kept dry till the flower-buds appear. When the stem is half grown, water may be administered very moderately; but the plant should not have much till its leaves are six inches long. I find the very strongest loam, almost resembling clay, is best suited to these plants, and of course the pots should be well drained. As far as I have observed, most Amaryllis make root at the end of summer; and it is in the fibres thus made that the deposit of sap takes place to supply the future flower.

A. PETERSON.

POTTER'S LIQUID GUANO.—For the last three months I have applied Potter's Liquid Guano to my general stock of the best greenhouse plants, and their improved appearance is truly astonishing. I give it three times a-week, a very small proportion each time of watering.

AN AMATEUR GARDENER.

ON BANISHING ANTS.—I tried the plan of dusting common flour sulphur over ants with a view to kill them, but in this have failed; it, however, had the effect wholly to banish them, for, although I turned over the soil in the melon bed, and examined the neighbouring places not one ant could be found. I have tried it in several situations, and it invariably banishes them. It equally affects black and red ants.

P. M.

ANSWER.

ON TREATMENT OF THE JACOBÆA LILY.—Plant them in equal portions of turfy loam and sandy peat, with a free drainage of crocks and rough pieces of turfy loam. After potting, place them in a frame, with a gentle hot-bed heat; when the flower-stem just makes its appearance, then remove them into a warm place in the greenhouse. If a portion be potted a little later in the season, they will succeed the others, and prolong the blooming season. A season of rest will be required from October to February. Withhold water after September 1st, and keep them dry till potting time in February. CONDUCTOR.

FLORICULTURAL CALENDAR FOR MAY.

TENDER OR SLOW ANNUALS.—When it is desired to have some plants to bloom late in autumn, as Balsams, Cockscombs, Browallis, &c., seeds should now be sown, and the plants potted off into small sized pots, as soon as they are large enough, using a rich soil.

GREENHOUSE.—During the early part of May, a few frosty nights generally occur; in consequence of which, it is advisable not to take out the general stock of plants before the middle of the month, or even, in cold situations, before the 25th. Whilst the plants however, remain in the greenhouse, let them have all the air that can be given, during the day, and at nights, if no appearance of frost. Particular attention will now be required to afford an ample supply of water to free growing kinds of plants. Frequently syringe them over the tops at evening, just before sun-set. If any of the plants be attacked with green fly, or any other similar insects, apply a sprinkling of tobacco water, diluted with water, by adding to one quart of the liquid five of water; in applying which to the plants, syringe them at the under as well as upper surface of the leaves: a repetition will rarely be required. This mode of destroying the insects is far preferable to fumigation, no injury being sustained by it, even if applied in a pure state. The liquid can be obtained of tobaccoists, at 10*d.* or 1*s.* per gallon. Inarching Orange or Lemon trees may still be performed. It is a good time for increasing plants by cuttings, striking in moist heat. Greenhouse Annuals, as Salpiglossises, Globe Amaranthuses, Balsams, &c., should be encouraged by a little warmth, and shifted into larger pots, early in the month; so that the plants may make a show, to succeed the removal of the general collection of greenhouse plants. Cuttings or suckers of Chrysanthemums should now be taken off, if not done before. Achimera coccinea, longiflora, rosea, &c., plants, should be potted singly into a light rich soil, and be forwarded in the stove, and repotted as they advance in growth, not too much at a time, but as root room appears necessary. Lobelias for the greenhouse should be similarly treated, as to potting, &c.

FLOWER GARDEN.—Continue to protect beds of Hyacinths, Tulips, &c. Carnations in pots should be encouraged by manure water, &c., in order to grow them vigorously: care in striking them will be required. By the middle of the month, half hardy annuals, as China Asters, Marigolds, &c., may be planted out in the open borders. Some of the best kinds may be potted, as done to the more tender sorts. Many kinds of greenhouse plants, as Petunias, Salpiglossises, Salvias, Fuchsias, Heliotropes, &c., should now be planted out in the open border. Dahlias that have been forwarded in pots, frames, &c., may be planted out towards the end of the month. Seedlings may be pricked out, in a warm situation, having a deep, fresh, rich soil. When Stocks, Mignonette, China Asters, &c., are wished to bloom late in the year, seeds may now be sown, either under a frame, or on a warm border. Slips of double Wallflowers should now be put in under a hand-glass. Seeds of biennials, as Sweet Williams, Scabious, Campions, &c., should now be sown. Tuberoses, for late flowering, should now be planted, either in pots or warm borders. Offsets of Campanula pyramidalis should be planted in rich soil, and placed in the greenhouse. Repotting must be continued till they cease to grow; by this means the plants will reach eight feet high, and be very branching.

In every previous Volume there are articles upon the Auriculas, Polyanthus, Carnations, Ranunculuses, Anemones, Tulips, Violets, Pinks, Heartsease, &c. We refer our readers to them, as affording directions and precautions valuable, especially at this early part of the season.



1. *Gympholobium Hendersonii*. 2. *Pendulotia Longiflora*. 3. *Fuchsia* sp.

Floricultural Cabinet June, 1848.

THE
FLORICULTURAL CABINET,
JUNE 1st, 1845.

PART I.
EMBELLISHMENTS.

ARTICLE I.

1. GOMPHOLOBIUM HENDERSONII.

THIS very beautiful *Gompholobium* has been introduced into this country by Captain Mangles, R.N., from the Swan River colony. It is not, like the well-known *Gompholobium polymorphum*, a climbing plant, but forms a neat evergreen bush, and blooms very freely. It deserves a place in every greenhouse. We saw beautiful specimens in the nursery of Messrs. Hendersons, of Pineapple-place, London, and was informed it blooms the greater part of summer, being very ornamental even in autumn too.

It requires to be grown in a turfy sandy peat, with a small portion of loam and leaf-mould, having a very free drainage.

2. RONDOLETIA LONGIFLORA. (*Long-flowered.*)

Messrs. Veitch and Son, of Exeter, introduced this beautiful flowering greenhouse plant from Brazil. It forms a very neat shrubby plant, much in the way of *Bouvardia triphylla*, and flourishes under a similar treatment. It is supposed to grow to a tolerably-sized bush, larger than the *Bouvardias* usually grow. The plant deserves a place in every greenhouse; its profusion of beautiful flowers render it an object of much beauty.

3. FUCHSIA, VAR. PICTA.

This is one of the immense quantity of seedlings that we raised, and it bloomed with us late in the season of 1844. The blossoms do not stand erect, as represented in our plate, but are, after the usual mode, pendant; the representation being thus given to suit our artist in arranging the three flowers to suit the size of the plate; the blossoms are larger, too, than the figure given. It is a free-flowering plant, grows vigorously, and is very distinctively pretty. Our plant had one or two entire self-coloured flowers, which added to its beauty in the contrast given. It deserves a place in every collection. We expect to have upwards of 4000 seedlings bloom during the present season; and, as we paid very special attention to intermix the various superior varieties, we doubt not but the results will afford us some valuable additions to the lovely tribe.

ARTICLE II.

AN EXTRACT ON THE CULTIVATION OF THE AMARYLLIS
TRIBE OF PLANTS,

AS RECOMMENDED BY THE HON. AND REV. WILLIAM HERBERT, DEAN OF MANCHESTER,
IN HIS EXCELLENT WORK ON THE AMARYLLIDACEÆ.

[SEVERAL correspondents having requested, in former numbers, some information on the culture of Cape bulbs, and having recently had the privilege of reading the very valuable work of the Dean of Manchester, on the bulbous tribe of plants, induces me to extract the following from the work, for the use of the correspondents referred to, and as a recommendation of the work itself, containing such a fund of valuable instruction on the subjects treated upon.]

ON CYRTANTHUS.

“They are altogether plants of difficult culture, the bulbs being more disposed to dwindle and rot than to increase in bulk. Mr. Griffin was, I think, more successful than most others in the cultivation of *C. obliquus*, of which he had many strong bulbs on a shelf, very near the glass in his stove, when the heat was never great. A common greenhouse is usually too damp for it in winter, and the air of a hot stove too confined. A light soil, which is not retentive of water, will be found to suit the whole genus; and I think that the use of peat

will always be dangerous to them. Those with persistent leaves should be cautiously watered in winter, the deciduous species not at all. *C. carneus* is one of the most difficult to manage; twice I lost it, notwithstanding the greatest care, and have at last succeeded in establishing one with better hopes, by giving it water but very seldom the first year, and rather more after it had formed a strong leaf, keeping it as much as possible in a draught of air in the greenhouse. It is planted in a mixture of white sand with a little light loam, with an open under drain.

“With respect to the other species, there is some peculiarity in the soil congenial to them which it is very difficult to analyse. When I lived at Mitcham, in Surrey, *C. angustifolius* was a weed with me, ripening seed freely; and the seedlings quickly came to a flowering age, and were vigorous, being potted in the soil of Mitcham Common, which was a light brown earth, with a little admixture of dead furze-leaves on a gravelly substratum. Since I lived in Yorkshire, I have been able to find no soil that suited it; and, although many changes were tried, the plants dwindled, and all perished; nor have I found any species of *Cyrtanthus* succeed well in the soils to which I have access here. Mr. Rollison had equal success with *C. angustifolius*, at his nursery at Tooting, near Mitcham. *C. lutescens* has, I believe, never been in Europe, but Dr. Burchell has many specimens of it. It has very narrow leaves, and comes very near to *C. odoratus*, except in its colour, which is invariably a yellowish white. *Ventricosus*, figured by Jacquin, under the name *Angustifolius*, is only known to us by his plate and description. It was probably one of Mason’s plants from the East Coast, and is allied to *Collinus*. Mr. Ker conceived that Jacquin had, by mistake, represented a scape of *Spiralis*, with the foliage of *Angustifolius*; but it is evident that his plant had not the inflorescence of *Spiralis*.

“The recollection that *Hippeastrum equestre*, single and double, which will not exist in the light soils to which I have access in Yorkshire, thrive exceedingly with me at Mitcham, in Surrey, in the same soil that peculiarly suited *Cyrtanthus angustifolius*, and that all the *Cyrtanthiform* bulbs are disposed to rot in light earth at Spofforth, persuades me that when their cultivation is found difficult, a soil that is more disposed to set firm, and not fall to pieces when turned out of the pot, should be substituted, with good drainage and cau-

tious watering. The difficulty is to find a light soil which has a little tenacity. There is a yellow earth of that nature, in which I have observed *Erica cinerea* thrive with much greater vigour than in any black soil, in the neighbourhood of the New Forest, which would perhaps suit the *Cyrtanthi*. In a soil of that nature all Mr. Woodford's *Ericæ* were cultivated at Rickmansworth. The earth of Mitcham Common was so congenial to the *Ixias*, that in it I have had seventy-two flowers from one bulb of *Ixia longiflora*, and nearly as many from one of *Spiraxis grandiflora*; whereas, the confluent soils of this neighbourhood, though favourable to the hardier *Gladioli*, destroy the *Ixias* and *Babianas*, and are not favourable to *Sparaxis*.

ON HIPPEASTRUM.

“There is some difference as to the cultivation of the various species of *Hippeastrum*, in consequence of the several latitudes, altitudes, and situations in which they are found. Capricious watering is their bane; they should be watered pretty freely while they are making leaves, more sparingly after they are grown, and not at all when at rest. *Aulicum* I have found very difficult to manage; I have had but two or three roots of it, and have not been satisfied with their treatment. *Calyptstrum* flourished well with me in light soil on the hothouse flue, growing all the year round, till I was told by a gentleman that they had been found to succeed better in the greenhouse; and, having transferred them according to his advice, I lost all my bulbs of that species. *Psittacinum*, and the beautiful mules between it and *Regio-vittatum*, are hardy greenhouse plants, requiring absolute rest in the winter, and flower freely in the spring; they grow weak in the stove, and will not flower without rest. *Solandriflorum* and *Stylosum* are tender stove plants, but should rest in winter time. *Vittatum* is a greenhouse plant, requiring rest in winter, and may be brought into the stove in spring to flower it. In Surrey it lived well, flowered yearly, and sometimes ripened seed in the open ground near the south front of my house, a small heap of ashes being thrown over it in winter. The mules between *Psittacinum* and *Vittatum* would perhaps bear as much exposure if the wet could be kept from them in winter. *Reticulatum* and *Striatifolium* are tender stove plants, and I believe the former is nearly lost, and its habitation has never been exactly ascertained. Of latter years the striped-leaved variety

has been frequently sent from Brazil, but the original plant has not been met with. The mules between *Striatifolium* and different varieties of *Bulbulosum*, as well as *Regium* and *Regio-vittatum*, have a hardier constitution; and many of them come so near to the reticulated parents, that they will be preferred in cultivation for ornaments. *Equestre* is a plant of singular constitution, and frequently lost in the stoves; though a native of the hottest regions of the west, it will not live if watered constantly in the stove. It requires absolute rest in winter, in a moderately cool but not damp situation. It will flower early in the summer, and after flowering should be placed in the greenhouse, or in the open air, where it will grow better than in the stove.

“*Regium* requires less care, the stove, and rest in winter. The whole family of *Bulbulosum*, except *crocatum*, are easily managed. By giving them two periods of rest, in winter and again at mid-summer, they, as well as the mules *Regio-vittatum* and *Rutilo-regio-vittatum*, may often be made to flower in the spring and autumn. I have found great advantage, with bulbs that were to stand on a hot flue, in placing under them a shallow tray made of tin or zinc, and nearly filled with sand. In pursuance of this system of encouraging their growth by moist warm sand underneath, a gentleman to whom I had given several tender bulbs informed me that he had constructed a pit for them, with a chamber, into which was introduced a slender steam-pipe, perforated with small holes; and the chamber was covered with hurdles, over which he placed a layer of brushwood, and on that a body of sand, in which the pots were plunged. The steam worked its way through into the sand, and kept up a moist warmth, which was very congenial to the tender bulbs during their season of growth; and I do not conceive that any better mode of cultivation could be adopted. A bed of the various splendid *Hippeastras*, successfully cultivated in a low warm house, would exceed most vegetable displays in beauty. Some of the varieties of *H. bulbulosum*, if not all, may be found in South America, growing in black vegetable earth. My collector found *Pulverulentum* in such soil with the scape three feet high, and the leaves long; and I discovered *Equestriforme* growing unperceived in a mass of parasitic plants, *Cereus* and *Pitcairnia*, which had been torn off a stem or the face of a rock. I have, however, lost so many bulbs by the use of peat at

various times, that I am generally fearful of using it. There is so much variety in the vegetable black earth of different places, that it should be tried cautiously. I have been told that *H. calypttratum* has been found growing on the branches of trees, and that it has been necessary to shoot off the limb by repeated discharges of a gun, in order to get the bulb; and I have seen it grown in a pot of moss. The principal causes of the sickly state of *Hippeastrum*, in cultivation, are too light a soil, want of water when the leaves are pushing, and too much water after. I have observed them grow with unusual vigour in a split or broken pot, in consequence of better drainage. The finest bulbs I ever saw were two self-sown seedlings from a cross-bred plant, which established themselves in the pot where *Convolvulus gangeticus* was growing. They killed the *Convolvulus*, and at last broke the pot, and have not been so vigorous since. In consequence of its falling to pieces, it became necessary to shift them. It is evident that good drainage is essential to their health. With earth that sets firm, that object may be effected better by a single crock placed carefully so as to cover only part of the hole, than by many, of which the lowest covers the aperture, and the remainder become choked by the earth settling amongst them. I have had seedlings of crosses with *Vittatum*, which sent up two stems of blossoms from a pot scarcely twice the size of the bulb. A self-sown seedling established itself in one of my stoves, and is growing freely on a stump of wood, into the cavity of which a little peat had been thrown to encourage the growth of a *Pleurothallis*; and I do not doubt the bulbs being often found on old trees, amongst the ferns, and other parasites; but I consider a well-drained rich alluvial soil to be most fit for bringing them to perfection. They appear to have gone rather out of favour lately with cultivators, probably from failures through mismanagement, for certainly they can be surpassed by few flowers in beauty, and most of them may be cultivated in a warm greenhouse, if they are kept quite dry in the winter; but it should be always remembered that very tender bulbs, which are to be kept dry in a greenhouse, will rot if above ground, from the dampness of the atmosphere, though they would have been uninjured if closely covered by light earth.

“It is now pretty well understood that, although cuttings of *Camellia Japonica* strike root readily in sand, a light and confluent soil is fatal

to the growth of the plant, causing the young leaf to turn yellow, become spotted, and fall off, especially if exposed to the sun, a well-drained stronger soil being essential to their health. Most sorts of *Hippeastrum* seem to me liable to suffer from the same cause, which is apparently too rapid evaporation of the moisture which they require. The more frequent watering, which becomes necessary to the development of their leaves, occasions the decay of the fibres. Due attention to this point will make the cultivation of the bulbs of this genus easy to those who have been unsuccessful in their treatment, always bearing in mind that the stronger the soil used the more perfect should be the drainage. Strong loam and a cool situation, with complete rest in winter, suits *H. vittatum*, and I believe that *Aulicum* will succeed best with the same treatment. I consider that *Hippeastrum* generally does not thrive well in soil which is powdery when dry, and does not set."

This work we warmly solicit those of our readers who desire to improve or extend their knowledge of bulbous plants to purchase, being perfectly convinced that another so well calculated for that purpose cannot be found. Looking over the genus *Crinum*, we observe a variety named *Careyanum*, on which the author has the following lines, which we extract for the purpose of laying before our readers some account of that eminent man, in memory of whom the above variety of *Crinum* is named, and to whom the succeeding remarks relate. "This beautiful plant was brought to light by Dr. Carey, late of Serampore, and I had the pleasure of naming it after one of the best, the most amiable, gifted, and indefatigable of men, whose virtues and talents adorned his country, and whose labours have promoted the glory of the Almighty. I never saw this excellent man, but fifteen years' correspondence had accustomed me to look upon him as a deeply-valued friend. His life was devoted to the diffusion of the gospel; horticulture, natural history, and botany, afforded the brief recreation he allowed himself from his daily toils, His favourite plants were the Amaryllidaceous family, and to him we are indebted for our knowledge of many of them. He was born in 1761, at Hackleton, in Leicestershire, and embarked for India in 1793. In 1800 he was settled at Serampore, and he closed the labours of his useful life in 1834, beloved by all who knew him, honoured by all whom his name has reached, having translated and

superintended the publication of the gospel in forty oriental languages, which he had the perseverance to acquire for that purpose. Born in the humblest circumstances, often uncertain of his daily bread, at first a journeyman shoemaker, then a village schoolmaster, he had, before his departure from England, taught himself to read the Bible in Greek, Latin, Hebrew, French, Italian, and Dutch, and had become conspicuous by his eloquent preaching and his ardent desire to bring about the mission to India, which originated in his powerful mind. When he arrived there, he found it necessary to offer his services, by a hand-bill, to make or repair shoes; and, after he had risen to the head of a flourishing establishment, and occupied the chair of three professorships, he was not ashamed to nail up the original hand-bill against the wall of his study, but took pleasure in considering from what an humble grade he had been lifted up to a more useful and distinguished station by the grace of God and his own virtuous perseverance."

ARTICLE III.

ON THE CULTURE OF BROMPTON STOCKS.

BY A FLORIST.

THE entire race of Stocks are plants I much admire, and there is not a kind, I believe, of these which thrive in the open air of this country but I possess. I am more especially partial to the Brompton Stocks, and they very deservedly stand in high repute, producing by proper management spikes of flowers two feet long, and each separate blossom two inches in diameter. In addition to their splendour and fragrance they bloom during all the summer season, and are among the finest ornaments of the flower garden, their various colours grown in contrast producing a fine effect.

This season I have blooming plants of the following kinds:—

1. The best way of propagation is by seeds, and unless some little attention be paid to the selection of the seed double flowers will very rarely be produced. Always collect the seeds from such plants as have semi-double flowers, or which grow in the immediate neighbourhood or are surrounded by double ones; for although double ones have no power to produce seed themselves, and it has been disputed whether they can impregnate others, yet it has been always found that plants raised from seed gathered in such situations have amongst

them a greater number of double ones than when the seed-bearing plants grew under different circumstances.

2. The best time for sowing is the beginning of May. This should be done on a border of light sandy soil prepared for the purpose, on an eastern or south-eastern aspect; never on a south aspect, as this would be too hot for them. Of all other modes the best is to sow the seeds in shallow drills, six inches apart, scattering the seed very thinly.

3. Water as often as they require it, but never do this in the middle of the day, when the sun is hot, for the plants would be liable to be damaged by the sun, rendering the drops of water hot, and thereby scalding the leaves, which, if it did not entirely destroy them, would greatly retard their growth. The best time is either very early in the morning, or towards five o'clock in the evening, when the sun's rays are oblique.

4. When the plants are nearly three inches high they should be thinned out to six inches apart in the rows, and afterwards to a foot, taking up every other row; and those plants taken out should be transplanted carefully into a similar border as that prepared for the seed-bed, or be planted three or four together in the flower borders; the former plan is the best, if it is convenient, because the whole are more easily protected through the severity of winter. In either case they must be taken up with balls, and be sheltered from the sun, and regularly watered, until they have begun to grow again. Those left in the seedling bed will be much finer plants in the autumn than the transplanted ones, from the circumstance of having received no check in removing, which, from having so small a quantity of fibrous roots, prevents their growth for some time.

5. On the approach of winter the borders may either be hooped over, and be covered with mats in severe cutting weather, or a frame may be set over the plants, and the glasses put on to preserve them. If they are left entirely exposed, if the plants are not killed, the long leaves will be beat to pieces by the winds, and the naked stalks, at the approach of spring, will be very unsightly. Those planted in patches in the flower borders may be protected by branches of spruce fir, stuck into the ground round them, in the absence of other shelter.

6. In March, if the weather be fine, or if not early in April, take

them up with as large balls as they can be got, and plant them in the situations intended for them in the flower borders. Early in June they will come into bloom, and will more than repay for all the care taken of them.

ARTICLE IV.

REMARKS ON PLANTING OUT PELARGONIUMS, VERBENAS, SALVIAS, &c., INTO THE BEDS OF THE FLOWER GARDEN.

BY A LADY AMATEUR GARDENER.

Now that the season is fast approaching for putting out into the flower-garden Verbenas, Geraniums, Salvias, &c., I am inclined to offer the following hints to my sister gardeners, and though many of them may have already adopted my method, to some it may still be a novelty. When scarlet Geraniums are put out of the pot into the flower-garden they present a most gay and beautiful appearance; if laid quite flat, and pegged down at the joints, the branches very quickly turn themselves upwards, and in a very few weeks the bed is a complete carpet of green, thickly studded with the brilliant scarlet flowers. I have adopted this plan for the last two years, and nothing could exceed the beauty of my Geranium bed. There are also considerable advantages gained by pursuing this system; the plant is not liable to be broken by the wind, and as they strike root nearly at each place where they are pegged down, a great increase of plants is gained by cutting the branch close to each root when the season comes for re-potting them.

The same plan may be pursued with the *Salvia*, and by intermixing the *Salvia patens* with the other the blue and the scarlet produce a most brilliant contrast, and at the same time a harmony of colouring which can hardly be surpassed.

[We hope our Correspondent will favour us with other communications.—CONDUCTOR.]

ARTICLE V.

ON THE CULTURE OF CLIANTHUS PUNICEUS, AS A STANDARD PLANT.

BY CLERICUS.

THE *Clianthus Puniceus* is well worthy of a place in every collection, both for its beautiful foliage and pendant racemes of red flowers.

When grown as a standard, it far surpasses in beauty and elegance any plant I have seen of its kind: I shall mention a few words regarding its culture as a standard. Select cuttings from a plant about the beginning of May or June; the cuttings should not exceed four inches in length, and taken from the same year's growth; recollect that the extremity or point of the cuttings must not be pinched off. After making the cuttings, allow them to remain for a day or two before potting, to dry some of the superabundant moisture from them, which is an advantage gained by the cuttings rooting two days sooner. A 32-sized pot should be filled with white sand, and the cuttings inserted therein to the depth of two or more inches; they will strike readily in a heat of 70 or 75 degrees; if they are covered with a bell-glass the strike will be more successful. After struck they should be potted off separately, in thumbs or small sixties, amongst a compost of sand, leaf, loam, with a little well decomposed cow-dung all well incorporated together; when potted they should be placed in a bottom heat till they have matured roots enough to support themselves. Then they should be removed to a more airy situation, either to a greenhouse or conservatory, and great care and attention must be paid to the re-potting and watering, or without the plants will soon form a sickly, stunted appearance. For to make good standards all side-shoots must be pinched off as soon as they appear, training the plant up with a clear stem to the necessary height required; then, after they have attained the required height, the tops should be pinched off, and that causes them to throw out laterals, and these laterals again stopped makes them still to throw out the more, till at last the plants attain a most luxuriant head, richly decorated with thick but dense pale green foliage. When treated after the above method that I have laid down, then planted out in a conservatory amongst good rich mould, one-half fresh loam, one-quarter leaf mould, and one-quarter decomposed cow-dung, along with a little vegetable mould and sand; all these to be well incorporated together, and a pit made for the reception of the plants, three feet square by two and a half deep, filling it up with the above composts, then insert the plant, putting it about an inch deeper than it was in the pot; then there should be a stake of durable wood procured to fasten it to. When planted out it grows more luxuriant than in pots, and has always a more healthy appearance. When in flower, what can surpass

it? the bunches of pale red flowers hanging the one upon the other out of a dense thicket, as it may be termed.

ARTICLE VI.

REMARKS ON THE CULTURE OF CALCEOLARIAS.

BY A LONDON AMATEUR GROWER.

I HAVE been a cultivator of the very lovely tribe of flowers, the Calceolarias, but have encountered a good deal of difficulty in my attempts to grow them well. Determined, if possible, to succeed, I visited from time to time the establishments of the most successful growers who exhibit such fine specimens as is shown at the London shows, in order to ascertain the method pursued. The result of my inquiries and observations is, that the plants require to have a *very free* drainage of broken pot and rough pieces of turf. A compost as follows,—equal portions of well enriched turfy loam, with a moderate sprinkling of white sand in it, and the other half well rotted leaf mould, these materials not to be sifted, but be in what is termed a chopped or rough state. The plants are placed in an airy situation, and where they can be near to the glass, and have a free circulation of air. Generally they are kept in the greenhouse, and special attention is given to watering, taking care the plants do not lack moisture, but never be given so as to be saturated, and that they are not allowed to be droughted. The pots they require is in proportion to the size of the plants, care being paid that they are not over-potted, as when they are they generally get over watered, turn yellow, and soon die.

The period immediately succeeding the blooming of the plants I have found precarious with them, but the best method is as soon as possible after blooming cut off the flower stems of the plants intended to produce stock for future supply, and carefully re-pot by shifting them into a size larger; keeping the ball entire, and placing the plants in the light and near glass, also having a free air, but where they can be shaded from powerful sun. Thus treated they soon push, and a supply of shoots or offsets is afforded, so that cuttings, &c., will readily be struck early in the summer, and furnish young plants in a state of vigour to survive the effects of a winter's trial.

ARTICLE VII.

OBSERVATIONS ON A HOUSE FOR ERICAS.

BY AN AMATEUR GROWER.

HAVING remarked in some former volume of the FLORICULTURAL CABINET that Ericas were grown admirably in frames, elevated in the summer season by a brick or two at each corner, admitting a current of air among the plants, I had a house constructed to answer the same purpose, as follows :—

In situation it stands due East and West. It is a double roofed one, having an elevated floor up the middle of the house, brick walls three feet and a-half high, and the space inside filled up with brick and lime rubbish two feet, and the remainder with coal ashes, the surface being finest. This forms an even surface, and the nature of the materials are very congenial to the growth of the plants, being just cool enough for the roots, without having the injurious striking cold that I have observed in some places of a stone floor to stand upon. I have a walk round the centre thus prepared bed, and on each side I have a similar formed bed a yard broad, the surface being on a level with the centre bed. The bottom of this is supported by piers half a yard high, and underneath the same, up the middle, is hot water pipes, the side being open to allow the warmth to enter the house, and there being a cavity four inches wide between the exterior wall of the house and the front pit-wall, the warmth from the hot water-pipes ascends thereby into the house so as to preserve the plants thus placed at the sides of the house from being damaged by frost. Only as much warmth is required as will just protect therefrom, more is injurious. The roof is only just high enough to allow a tall person to walk up the path without his hat touching the rafters. The erect sashes at the sides are two feet deep, and made so that hanging upon hinges air can be admitted by every one, and when required a regular current through the house. Of course I have my tallest plants on the centre bed, but all my specimens are very bushy, and dwarf of their size. They flourish admirably in this house, and the plan is well deserving to be adopted for the successful growth of Heaths, and glass and timber now being so cheap ought to be provided, where this class of so lovely a tribe are grown.

REVIEW.

The Lady's Country Companion, or, How to enjoy a Country Life rationally. By Mrs. Loudon, author of " Gardening for Ladies, &c." With an Engraving on Steel, and Illustrations on Wood. London, Longman and Co., 1845.

THIS is a very interesting addition to the previous useful and pleasing publications which have been sent forth to the ladies of our country by Mrs. Loudon, and which we very cordially recommend to our readers upon its own merits, and additionally so, as the procuring of it will be an act of benevolence, by contributing towards the support of the author and family of our late valuable and much respected friend, J. C. Loudon, Esq.

The volume is divided into six Books, or Parts. The first is, *The House*; the second, *The Garden*; the third, *Domestic Animals*; the fourth, *Rural Walks*; the fifth, *Country Amusements*; the sixth, *Country Duties*. The volume is 12mo, and contains 396 pages. Each subject is treated upon in a Letter. Of course we are best acquainted with the gardening subjects which are treated upon. The following extract (Letter 7) will give our readers a fair specimen how each particular subject is treated :—

“ It gives me great pain, my dear Annie, to find that you still think that you shall never like the country so well as town. I do not, however, despair; for I am convinced that you do not at present know whether you shall like it or not. The pleasures of the town and the country are, indeed, so different, that it requires some time to become accustomed to the change; but when you are sufficiently well acquainted with country pursuits to take an interest in them, I am sure you will never feel any want of the pleasures of the town. The great secret of being happy is, to be able to occupy ourselves with the objects around us, so as to feel an interest in watching their changes; and, when you can once do this in your present situation, you will no longer complain of dulness or want of excitement. To be convinced of the truth of what I say, you need only remember the pleasure your friend Mrs. P. C. takes in the cultivation of her garden; the interest with which she watches the opening of her flowers, the coming up of the seeds she has sown, and the growth of the trees she has planted. It is not the positive beauty of these things that

occasions the pleasure she experiences in watching their changes, but the interest they have created in her mind; for the entomologist will find pleasure in the most hideous caterpillars, and the geologist will pass whole days delightfully among barren rocks. All that is wanted to give an interest in any subject is, a sufficient degree of knowledge respecting it to be aware of its changes, and our own natural love of variety will do the rest.

“It is a great advantage in a country life, that its principal objects of interest must be found at home; and hence, as home is woman's peculiar dominion, the noblest and the best feelings of the female heart are more likely to be called into action in the country than in the town. In youth, especially, the ameliorating effects of country pursuits will soon be perceptible, both morally and physically; and your health, which has always been delicate in a town will, I have no doubt, in the country become positively robust. As the first step towards the attainment of this desirable object, let me recommend to you to have a flower-garden laid out as near the house as possible. I should like to have those cedars, the remainder of those gloomy firs, cleared away, which I see close to your house in your sketches, and your flower-garden so placed that you could step into it at once from the windows of your usual sitting-room. I will hope that this may be the case; and as I am most anxious that you should have a flower-garden to interest you as soon as possible, and as I must have a *locale* to make my descriptions understood, I will proceed to give you some hints as to the laying out and planting of a garden in the warm and sheltered corner under the southern window of your morning room.

“In the first place, it will be absolutely necessary that the remainder of the trees should be not only cut down but grubbed up; as it will be quite impossible for any flowers to grow under the shade of tall thick trees, and leaving the roots would prevent the possibility of digging the ground. In other respects the situation is admirably adapted for the purpose, as it is open to the south and south-east, and protected from the north and north-west. Supposing the Scotch pines and cedars to have been cut down, their roots to have been grubbed up, and the ground to have been dug over and levelled; the next thing is to determine upon the plan for the garden. I think it should certainly be a regular geometric figure, and planted in

masses, each bed containing flowers of one kind, so as to produce something of the effect of a Turkey carpet when looked down upon from the windows of the house. I enclose you a design which I think will suit the situation, and I will adapt what I have to say to it, as my observations might easily be made suitable to another plan, if another should be found more desirable.

“We will suppose the plan to consist of twelve flower-beds on grass, with a gravel walk round, which may be bordered on the side next your room by beds for flowers, with little gravel openings opposite each of your windows, or be plain gravel, as you like. There may be a conservatory into which the drawing-room windows facing the south may open, and on the other side there should be a shrubbery to unite it with the lawn. In the centre of the flower-garden there may be a fountain. As the flower-garden is to be seen principally from your windows, the beds nearest you should be planted with dwarf flowers, so that those in the back beds may be seen; and I should advise the shrubbery behind to consist of *laurustinus* and *arbutus*, so as to afford a handsome green background to the flowers in summer, and yet to afford a few flowers themselves in winter and spring, when flowers are scarce in the beds.

(*To be continued.*)

PART II.

LIST OF NEW AND RARE PLANTS.

ALLAMANDA GRANDIFLORA. LARGE-FLOWERED. (Pax. Mag. Bot.) We recently figured the handsome *Allamanda cathartica*, but the present species is even superior to that, although the flowers are similar in colour, those of *A. grandiflora* are much larger. It is a native of Brazil, and was discovered by Mr. Gardner, who sent it to the nursery of Mr. Cunningham, Comely-bank, Edinburgh. It is an evergreen climbing plant, well deserving a place in every warm greenhouse conservatory, or plant stove. It has bloomed finely in the gardens of Colonel Baker, of Salisbury, under the skilful management of Mr. Dodd.

ANGRÆCUM APICULATUM. (Bot. Mag. 4159.) Orchidacæ. *Gynandria Monandria*, a native of Sierra Leone, introduced by Mr. Whitfield into this country in 1844. The flowers are produced on a drooping raceme of near a foot long. The flowers are white, with a tinge of pink at the ends of the petals. Each blossom is about two inches across.

BEGONIA RAMENTACEA. THE SCALY. (Pax. Mag. Bot.) A native of Brazil, introduced into this country in 1840, and is now to be had in several of the London nurseries. It is an evergreen perennial. The leaves are a bright green above, and pink-red beneath. The flowers are of a pale blush, and white intermixed. It is one of the prettiest species, well deserving a place in every stove.

CALCEOLARIA ALBA. White flowered. (Bot. Mag. 4157.) Scrophulariæ. Diandria Monogynia. A native of Chili, from whence Messrs. Veitch's, of Exeter, received it, and with whom it bloomed last year. The plant is an half shrubby one, growing erect, branching, leaves about two inches long, and an eighth of an inch broad. The flowers are produced in large terminal branching panicles, of a pure white.

CORRÆAS. GAINES' SEEDLINGS. (Pax. Mag. Bot.) Rutacæ, Octandria Monogynia. Mr. Gaines, Florist, of Battersea has been very successful in raising several very handsome varieties of this lovely tribe of autumn and winter flowering plants. The kinds here figured are,—

PICTA. A rosy-crimson tube, with a bright green end. The flower is near an inch and a half long.

RUBESCENS. The entire of the flower is a deep rosy-crimson, rather longer than *Picta*.

DELICATA. The flower is about half an inch long, tube very broad, and the mouth of the flower spreads much. The colour is a pretty pink.

FERRUGINEA. The flower is about an inch long, of a sulphur-yellow; the ends being of an orange colour.

PALLIDA. The flower is of a pale sulphur, about an inch and a quarter long.

PICTA was raised between *virens* and *speciosa*.

RUBESCENS was raised between *speciosa* and *Lindleyana*.

DELICATA was raised between *alba* and one of the deep coloured.

FERRUGINEA was raised between *alba* and *Grevillia*.

PALLIDA was raised between *alba* and *rufa*.

DENDROBIUM VIMBRIATUM VAR. OCLATUM. THE FRINGE-LIPPED, DARK-EYED. (Bot. Mag. 4160.) Orchidacæ. Gynandria Monogynia. A native of Nepal, which bloomed the first time in this country in the Liverpool Botanic Garden. It has since bloomed in the royal gardens at Kew. The flowers are of a rich golden-yellow, with a dark blood-coloured eye-like spot on the centre of the Labelum, which adds greatly to the beauty of this otherwise very charming plant.

GOODENIA GRANDIFLORA. OVATE-LEAVED. (Bot. Reg. 20.) Goodeniæ. Pentandria Monogynia. A native of New Holland or New Zealand. It is a perennial, herbaceous, greenhouse plant. The flowers are yellow, with a few streaks of red. They are powerfully fragrant, very similar to the orange blossom. Each flower is about an inch across.

JASMINUM AFFINE. KINDRED JASMINE. (Bot. Reg. 26.) Jasminæ. Diandria Monogynia. Dr. Lindley considers this the wild officinal Jasmine. It differs in very little, and would, under ordinary circumstances, be deemed a mere variety with pink-tubed flowers. It is quite hardy. Each blossom is about an inch across. It is grown in the garden of the London Horticultural Society at Chiswick.

LUPINUS RAMOSISSUS. BRANCHING LUPINE. (Bot. Reg. 25.) A native of Chimboraza. Seeds of it were sent by Mr. Hartweg to the London Horticultural Society, in whose garden it has bloomed. The flowers are blue and red, having the delightful fragrance of the sweet pea. It is a shrubby species.

PERISTERIA HUMBOLDTI, VAR. FULVA. HUMBOLDT'S DOVE FLOWER, TAWNY FLOWERED. (Bot. Mag. 4156.) This very noble flowering orchideous plant is a native of Venezuela, discovered by Humboldt. It bloomed for the first time in this country in the collection of G. Barker, Esq., Springfield, near Birmingham. The flowers are produced on a raceme of about two feet long; they are numerous, fleshy, of a tawny-yellow colour, sprinkled over with an immense number of purplish-brown spots. Each flower is about three inches across. It is a noble plant, and well deserves to be in every collection.

SALPISKANTHA COCCINEA. SCARLET-TRUMPET FLOWER. (Bot. Mag. 4158.) Acanthaceae. Didynamia Angiospermia. Mr. Purdie, botanical collector for the royal gardens at Kew, discovered this pretty flowering plant in Jamaica. It has bloomed in the stove at Kew during last autumn, and through winter. It is a low branching shrub. The flowers are produced in terminal spikes, trumpet-shaped, of a bright red outside, and white inside. Each flower is an inch long. It is very neat and pretty.

ECHVERIA SCHREERII. MR. SCHREER'S. (Bot. Reg. 27.) Crassulaceae. Decandria Pentagynia. A native of Mexico, introduced into this country by F. Scheer, Esq., of Kew. It is a greenhouse plant, blooming in winter. The flowers are produced in a long paniced raceme, pale red and green.

STANHOPEA BUCEPHALUS. BULL-HORNED STANHOPEA. (Bot. Reg. 24.) Orchidaceae. Gynandria Monandria. It is a native of the woods of Paccha, found by Mr. Hartweg. It has bloomed in the collection in the Chiswick Gardens. It is one of the finest and rarest of Stanhopeas. The flowers are produced on an erect stem, each blossom being about four inches across, of a rich bright golden colour, spotted beautifully with dark purple. They are deliciously fragrant.

PLANTS NOTICED IN THE BOTANICAL REGISTER, NOT FIGURED.

BEGONIA STIGMOSA.—At Messrs. Loddiges's. The flowers are white, produced in cymose panicles.

DENDROBIUM ANOMUM.—Messrs. Loddiges's obtained it from the Phillippine Islands. Its blossoms have much the appearance of *D. macrophylla*; they are scentless. It is a remarkable variety.

EPIDENDRUM RUFUM.—It was sent to the collection of Sir Charles Lemon, Bart., at Carclew, from Rio. It has bloomed at Sir Charles's; the flower-scape rises about half a yard high, bearing a profusion of brownish-yellow flowers.

SPIRANTHUS LOBATA.—A native of Mexico. The scape rises about half a yard high, having about a dozen of yellowish-green flowers. It is in the collection at Carclew.

GALANTHUS REFLEXUS.—It was found on Mount Gargarus, by Mr. Lander, who sent it to the Dean of Manchester. The flowers are white, about half the size of the common Snowdrop.

ODONTOGLOSSUM MEMBRANACEUM.—This very handsome species has bloomed at Messrs. Loddiges's. The flowers are pure white, large, and margined with deep rose colour. They have the scent of bitter almonds.

ONCIDIUM GALLOPAVINUM.—A native of Mexico. Sepals and petals greenish, stained with purple crimson. The lip is yellow.

CATLEYA PAPYRANSIANA.—It appears to be a variety of *C. Loddigesia*.

BEFARIA GLAUCA.—A native of Venezuela; discovered growing on the mountains. It there arrives at the height of 15 to 20 feet, being a companion to the *Vaccineums*, *Gaultherias*, &c. It appears to belong to the *Ericaceae*, and blooms nearly all the year, resembling a fine *Asalia*.

PLANTS SEEN AT NURSERIES, &c.

At Mr. Lowe's, of Clapton. In the Stove.

BEGONIA MANICULATA.—The plant is very branching, and the flowers a pretty delicate blush-pink.

BEGONIA PELTATA.—The leaves are very large and a hoary-white. The paniced heads of flowers are very large; green and white.

SIDOPHYLLUM LONGIFOLIUM.—The foliage is singularly pretty, being arranged as in nine rays from a common centre.

PAVETTA BORBONICA.—The leaves are tolerably large, of a deep rich green, spotted numerously with bright yellow, the midrib being of a deep red colour. The contrast of the whole produces a very pretty effect.

LAURUS PUMKO.—It has a fine oval-shaped evergreen leaf, and is said to be hardy, having been discovered on the same locality as *Araucaria imbricata*. If it proves to be so, it will be a very valuable addition to our out-door ornamental trees or shrubs.

TRADESCANTIA ZEBRINA.—The foliage is very pretty, of a deep green with bright silvery stripes. It is a trailing plant.

At Messrs. Loddiges's.

SPIREA REEVESII.—A pretty hardy shrub, producing fine clusters of white flowers.

PHÆLANOPS AMABILE.—In fine bloom. Each flower about four inches across; white, with the tip tinged with yellow and pink.

DENDROBIUM MACROPHYLLUM.—White, with the lip inside of a deep velvet; very beautiful in contrast. There are four varieties of this species in the same house.

D. FULCHELLUM var. **PURPUREUM.**—Blush, with purple and yellow; a very distinct variety.

D. PIERARDI.—Pale blush, with a greenish-yellow labellum.

CENOTOCHILUS SETACEA.—The leaves are most beautiful; the deep velvet in contrast with golden veins. There are two other new unnamed species, having an equally beautiful foliage.

LEPTOTES BICOLOR.—White, labellum purple, with white tip.

PAVETTA BORBONIA.—Some fine specimens of this handsome leaved plant.

ECCHITES NUTANS.—A new species of this fine genus, not yet bloomed.

CERBERA FRUTICOSA.—The flower is much like a Phlox in form, about two inches across; blush, with a crimson eye. A pretty hot-house plant.

GLADIOLUS GRACILIS.—Having sky-blue coloured flowers. Greenhouse.

G. HIRSATUS.—Pink with white centre.

MIRBELIA SPECIOSA.—The flowers at first are a deep purple and change to white. A pretty pea-flowered plant for the greenhouse.

ERIOSTEMA SCABRA.—The flowers are produced numerously in spikes, white.

E. CUSPIDATA.—In large spikes, white tinged with rose.

Mr. Lowe has raised some of the most beautiful seedling *CAMELLIAS* we have seen.

No. 1, **LOWE'S JUBILEE.**—The flower is near six inches in diameter, equal to *C. reticulata*; it is nearly double, having seven tiers of petals: although it shows a centre of stamens, they are of such a bright yellow, as to be so beautifully distinct, as to add to the fine effect; the petals are of fine form and substance, regularly arranged, of a beautiful peach-rose colour, altogether rendering it one of the finest in this country, and deserving a place in every collection.

No. 2, **LOWE'S CENTIFOLIA.**—This is a most beautiful distinct flower, being as double as the Cabbage Rose in its best form, and of a rich rosy-crimson. Like the other, it deserves a place wherever it can be grown.

At Messrs. Chandler's.

HYBRID RHODODENDRONS, SMITHI-CHANDLERI.—Rich purple-crimson, with numerous dark spots.

R. VENESTRUM.—Deep purple, rosy centre, neatly spotted with dark.

R. CONSPICUA.—Lilac-purple, light centre, prettily spotted with black.

CORONEA SPECIOSA-VENTRICOSA.—Tube bellying, bright crimson; about one-third of it a deep green.

C. BICOLOR.—Blush with white end. The plant has been in bloom the entire of two years.

CHOROZEMA CHANDLERI.—A dwarf variety, a very profuse bloomer, and the flowers large and distinct in colours. It is the best of the varieties we have seen.

EPACRIS ATLEEANA.—The flowers are of a very pretty flesh colour.

E. COCCINEA.—This new species was in vigorous bloom, the flowers are of a bright-carmine colour, very pretty.

E. ELEGANTISSIMA.—The flowers are of a bright pink-crimson outside and bluish inside. The end of the tube is deeply notched.

The following Camellias were of the finest form:—

C. Colvilli—white, rose stripes. **C. eximia-coccinea**—very compact and double. **Duchess of Orleans**—white striped with bright red. Very double, compact, and beautiful, one of the best grown. **C. Leeana superba**—fine crimson, very double. **C. Brucea**—large, rich red; petals of thick substance. **C. Chandleri-elegans**—large, fine, rosy-blush. **C. imbricata-alba**—white with pink stripes. **C. corallina**—rich deep red; a very late flowering variety. **C. King**—white with pink stripes, very double.

(To be continued.)

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON ERYTHRINA LAURIFOLIA.—I have kept a plant of the above in a cool greenhouse during winter, the root and crown appear sound, but it does not push shoots; how am I to proceed in order to succeed? **A SUBSCRIBER.**

[Shake off a portion of the old compost, repot (keeping the crown above the soil) in a soil consisting of one part a rich turfy maiden loam, one part turfy sandy peat, and the other equal portion of old rotted hot-bed dung. Chopping them up well together, and then sprinkle amongst it a handful of charcoal dust, and another of bits of charcoal. Place the plant in a hot-house, or similar situation as to heat, and unless some casualty has destroyed the eyes at the crown it will soon push. Where several shoots arise, thin away in an early stage the superfluous ones, so as to retain a few in order to have them vigorous. When the shoots have extended a foot in height the plant should be removed to a temperature of about sixty degrees. They require much light and a liberal portion of air to prevent them drawing up weakly. When the pot becomes filled with roots, repot, keeping the ball entire, and having a liberal drainage. In its growing condition it usually requires a free supply of soft water, and frequent syringing underside of the leaves, in order to preserve it from the red spider, without which precaution, daily, it will be almost certain to be attacked. When the plant has done blooming it should be allowed gradually to become dry at the roots, and be preserved in a greenhouse, free from frost, till February. The top should not be cut down lower than about six inches from the crown.—**CONDUCTOR.**]

BRACHYCOMA IBERIDIFOLIA.—I want to have a bed in my flower-garden of this neat and pretty-flowering plant. With this intention I have sown seed in a pot, and am raising it in a hot-bed frame. I should be glad to know whether I may retain the plants in the seed-pot till the time of planting out in the open bed, with the prospect of fully succeeding, or whether the plants necessarily require to be potted singly as soon as fit, and then be put out with entire balls?

[The latter treatment is necessary, and to forward the plants as much as possible by keeping them, after potting, in the frame for a week or two, and then place them in a warm greenhouse or gentle hot-bed frame, where air must be admitted freely, so as to have the plants robust by the middle of May, to turn out of the pots. A rich loam and sandy-peat, not sifted, suits well to grow them in, and in which they bloom profusely.—**CONDUCTOR.**]

REMARKS.

LONDON HORTICULTURAL SOCIETY.

May 6.—This being the season of Azaleas and Rhododendrons, several fine varieties of these showy plants were produced. Among the latter, perhaps, the most remarkable were cut blooms of *R. formosum*, miscalled Gibsoni, from the Duke of Devonshire's gardens at Chiswick. This pretty East Indian species has been described for many years, but it is rarely to be met in gardens; on account of the plant having been grown in a stove the flowers were of a pure white, having much the appearance of large blooms of the white Indian Azalea: but when the plants are grown in a cooler house, and exposed to bright light, the flowers are beautifully streaked with pink, giving the plant a handsome appearance. Along with this was *Dendrobium densiflorum*, producing three handsome spikes of bright yellow blossoms. A certificate was awarded for the Rhododendron.—From Mr. J. Wells, gardener to W. Wells, Esq., were beautifully cut blooms of Rhododendrons, including *R. caucasicum*, a hardy rather dwarf-spreading species, and *R. campanulatum*, a perfectly hardy Indian species, of considerable beauty, which will suffer any amount of cold without the least injury. The latter is easily distinguished by its somewhat large and flat foliage, the underside of which is covered with a soft ferruginous down, and by its large white flowers which are tinged with pink. The principal part of these Rhododendrons had been kept during winter under the canvass of a Tulip shade, assisted by mats at the sides in very severe weather, but exposed to the weather at all favourable times. A Banksian medal was awarded for the latter.—Messrs. Cunningham and Orr, Manchester, sent a hardy hybrid Rhododendron, with light-coloured blossoms, apparently a cross between *R. caucasicum* and some of the common hardy kinds.—From Mr. Jackson, of Kingston, was a pale-coloured seedling Rhododendron, very distinctly marked with dark brown spots.—Finally, the Dean of Winchester sent a collection of blooms of hybrid Rhododendrons in excellent condition, including one named *R. campanulatum*, which appeared, however, to be a spurious variety of that species. These were mentioned to have stood the whole of this untoward winter unprotected in the open gardens, at Bishopstoke, where the plants are now in full beauty. They were mostly red kinds, having in them much of the crimson arboreum. Along with these were cut blooms of *Magnolia Soulangeana*, a cross between *conspicua* and *purpurea*; *M. purpurea* and *gracilis*; the latter like *purpurea*, but smaller. A Banksian Medal was awarded for these.—Mr. Errington, gardener to Sir P. G. Egerton, Bart, again sent a collection of seedling Cacti, among which, one named *regalis* is a fine showy scarlet flower, measuring fully six inches across. Several others also possessed considerable beauty.—From Messrs. Veitch and Son, of Exeter, was *Bletia catenulata*, which was found by their collector, Mr. Lobb, growing on dry sandy hills, near Muna, in Peru. It is the original species named by the Spanish botanists after Don Louis Blet, whose name the genus bears, and is not known to have been before introduced into this country.—Mr. Ayres, gardener to J. Cook, Esq., sent *Begonias coccinea* and *suaveolens*, the latter remarkable for its fragrance; a Cactus called Conway's Giant, a large, noble-looking flower; *Leschenaultia Baxterii*; and *Chorozema angustifolium*, a New Holland species of considerable beauty. A Banksian Medal was awarded for this and the *Begonias*.—From Mr. Cole, gardener to C. Lewis, Esq., was the larger variety of *Corræa speciosa*, and a seedling *Cineraria*.—R. Gollidge, Esq., sent a collection of *Calceolarias*.—From Mr. Robertson, gardener to Mrs. Lawrence, was a perfectly hardy scarlet Rhododendron, and an exceedingly handsome *Erica propendens*, which was covered from the soil in which it grew to the top with multitudes of pretty little pink bells; a Banksian Medal was awarded for it.—Messrs. Loddiges sent *Epacris miniata*; a species of recent introduction, having much of the aspect of *E. grandiflora*, but possessing peculiarities which readily distinguish it from that species. The flowers are long, of a rosy-pink colour, passing into pure white at the end of the tubes; indeed, we can scarcely imagine anything more beautiful than this plant when in full bloom; it was awarded a Banksian Medal.—Mr. Lawrence, of Parliament-street, sent a small watering-pot, for plants in sitting-rooms, which was worked on the same principle as the one

exhibited at a former meeting.—From the garden of the Society were plants of the white and purple Indian Azaleas; *Chorozema varium*, a handsome Swan River shrub; *Gesnera Douglasii*; *Æschynanthus maculatus*, an Indian species, with bright scarlet blossoms; *Cyrtocilium hastatum*; *Eriostemon buxifolium*, a pretty New Holland shrub, bearing multitudes of showy flowers, and deserving a place in every greenhouse; varieties of *Epidendrum macrochilum* and *Oncidium ampliatum*; *Spiraea Reevesiana*, a hardy species, but whose pretty heads of white flowers and fine green foliage render it well worthy of a place in the greenhouse, where it is very ornamental at this season; *Clematis Sieboldii*, and two *Cinerarias*. Seeds of *Buddlea Lindleyana* were distributed to such Fellows as wished to receive them. This is a native of Chusan, where it was found by Mr. Fortune, growing in ravines and on banks, in company with *Glycine sinensis*; it is said to form a fine shrub five or six feet in height, with clusters of deep violet flowers, probably as large as those of the Persian Lilac. It is supposed that it will turn out to be hardy.

ROYAL BOTANIC SOCIETY, LONDON.

THE first exhibition for the season was held on May 6, in the Gardens, inner circle, Regent's Park. The morning was gloomy, yet no rain fell until after the gates were opened, at two o'clock. Those patrons of gardening, whom no weather heretofore ever daunted, had apparently on the present occasion lost all their enthusiasm, for when the gates were thrown open, scarcely a dozen persons had assembled for admission, and not a single carriage, with the exception of two cabs, had made its appearance. The garden itself, which was in good order, looked cheerless, with its numerous empty benches. When the rain began to fall the military bands took shelter under the canvass, which afforded during the afternoon ample space for the company to patrol up and down, listening to the music. The exhibition itself, although inferior to former seasons, was creditable to the growers, evincing improvement in plant culture. The Azaleas which were expected to have been in great perfection, were inferior to many former exhibitions, and the collections of Orchidaceous plants were much below the average. Of new plants there were scarcely any worth recording, unless it was the new *Gompholobium* from Messrs. Lucombe, Pince, and Co. In the general collections there were some striking specimens. *Eriostemon buxifolium*, from Messrs. Veitch, of Exeter, was an extraordinary plant, in the highest possible perfection; so also was an *Erica aristata*, from Mr. May, as regarded health, but not in good bloom. There were some noble specimens of *Erica Cavendishii*; that in Mr. Pawley's collection was in robust health, although scarcely in flower. In the same group was also a gorgeous specimen of the double red Azalea, just in its prime, and literally loaded with blooms. In the collections of Messrs. Hunt and Barnes were some wonderful specimens of cultivation, and Mr. Green had some fine plants; *Azalea variegata* stood out in bold relief, a perfect mass of bloom; in his collection, also, were two new kinds of which much was expected, viz. *exquisita* and *prælautissima*. They, however, were inferior to many of the older varieties. The *Roses* of Messrs. Lane and Son were done superbly, so also were the *Pelargoniums* of Mr. Gaines, of Battersea. We cannot omit mentioning that the spelling of the names in many of the collections was extremely inaccurate, a circumstance which has a tendency to mislead the visitors, and betrays great carelessness on the part of the exhibitor.

Large collections of 30 Stove and Greenhouse Plants were contributed by Mr. Hunt, gardener to Miss Traill; Mr. Barnes, gardener to G. W. Norman, Esq.; and Mr. Green, gardener to Sir E. Antrobus, Bart.

Beautiful specimens of **CARE HEARTS** were exhibited in great variety, and excited considerable interest. The best collection was from the garden of E. Goodheart, Esq.; it contained noble bushes of *mundula*, *perspicua nana*, and *propendens*, the latter literally covered with blossoms; a well-grown *aristata major*; a large specimen of *grandinosa*; and several others, exhibiting equally good management.

The display of **ROSES** in pots, considering the season, was excellent; the plants were exceedingly well grown, and reflected the highest credit on the cultivators. Collections were produced by Mr. Lane, Mr. Slowe, and Mr. Beck.

In AZALIAS, a first prize was awarded to Mr. Green, for a collection containing variegata in fine condition; speciosissima, producing large bright rose-coloured blossoms; and a good plant of Indica alba.—In the Nurserymen's class a first prize was awarded to Mr. Smith, of Norbiton, for a collection containing good plants of formosa, bicolor nova, the old Indica alba, and splendens.—Mr. Gaines obtained a second prize for a group, in which were pulchella, Queen Victoria, Florida, and floribunda; the latter covered with blossoms of a most intense scarlet colour. Some good specimens were also exhibited by Mr. Clarke, who sent a splendid plant of the double-red, and an excellent double-flowered purplea.—Mr. Slowe likewise furnished very fine plants of Indica alba and plumosa; and in Mr. Hunt's collection was a most beautiful lateritia, and a magnificent plant of splendens, 5 feet in height and 3 feet through.

The display of PELARGONIUMS exceeded our expectations. The collections which contained the new and distinct varieties were not only the most interesting, but they were produced in finer condition, than the older sorts. Mr. J. Dobson, gardener to Mr. E. Beck, had no competitor in this class.

CALCEOLARIAS.—First prize, Mr. Gaines, for six distinct and well-grown varieties, named Sylph, Eclipse, Candidate, Vivid, Venosa, and Crimson Superb.

CINERARIAS WERE SHOWN in collections of four distinct varieties, in 11-inch pots.

SEEDLINGS were not numerous in any class. Two Seedling Pelargoniums of the present year from Mr. Beck, of Isleworth, Named Hebe's Lip and Patrician, received Certificates of Merit; both flowers are large, of good substance, and form, and should they retain their present good qualities will find their way into every good collection. Resplendent, a seedling of 1844, from the same grower, is a high-coloured variety, with a white centre, and remarkably clear and striking in appearance.

Among MISCELLANEOUS OBJECTS were six handsome plants of Schizanthus, from Mr. Cox, of Stockwell.—A collection of BRITISH FERNS from Mr. Taylor, and an ingenious device executed with cut flowers, illustrating the principles of arrangement and combination of colours of plants in beds, in a flower-garden, from Mr. Barton.

OBSERVATIONS ON THE GARDENS AND COLLECTIONS OF PLANTS AT EALING PARK, NEAR LONDON.

THE name of Mrs. Lawrence is so familiar to every one interested in horticultural pursuits, and her magnificent plants, long associated with the great Exhibitions of the Horticultural Society, are so well known and appreciated, that every lover of gardens will be interested in hearing of the actual state of the collection at Ealing Park on the eve of those occasions when the choicest are again to be produced for public competition.

Ealing Park, then, has been singularly favoured this winter, compared with other suburban residences; so fresh and luxuriant are all the evergreens, that one might be led into the belief that a great glass-house had sheltered the whole. The Laurustinus are blossoming freely, so also are the crimson Rhododendrons; Garrya elliptica; and Euonymus variegatus are quite unscathed; Aralia japonica and Paulownia imperialis are bursting out with their wonted vigour; a fine plant of Arbutus procera is just coming into flower; Photinia serulata and Maclura aurantiaca are both unhurt, and so is Berberis trifoliata, a rare shrub of great beauty and interest. Ceanothus thyrsiflorus has been killed almost everywhere near London; but at Ealing Park, against a wall, it appears as green as if we had had no winter at all.

The lawn, connected with the house, occupies a surface of several acres, studded all over with valuable objects of great interest; amongst them we observed the following:—Fine plants of Picea Webbiana, P. nobilis, P. amabilis, Pinus Montezumæ, P. monticola; indeed all the scarce and valuable sorts procurable in the vicinity of London. A great number of Deodars, Araucarias, &c., are occasionally grouped over this lawn, which, with great propriety, may be termed a Pine-grove; one remarkable feature is an avenue of Cedrus deodara,

which, in the course of a few years, will be a grand object, especially when looking from the lower part of the grounds towards an appropriate building, called Pope's Temple. In passing through the grounds the visitor is occasionally and imperceptibly brought into the view of some charming little scene, suddenly bursting upon him; so skilfully have the sentiments of the poet been carried into effect:—

“ More cautiously will taste its stores reveal ;
 Its greatest art is, aptly to conceal ;
 To lead, with secret guile, the prying sight
 To where component parts may best unite.”

In going from the house, in one direction, you pass through an arch, forming a part of an architectural screen projecting from the principal building, and approach a piece of ornamental water; the walk on both sides is flanked with a row of Irish Yews, the effect of which is excellent. The Belvidere rises in the centre of the water, immediately before the spectator. The taste, however, which dictated such an arrangement, we are quite certain could never subscribe to the beds of herbaceous plants surrounding the water, and we were glad to find that their days were numbered. There is a piece of rock-work recently executed at considerable cost, representing some remnant of antiquity near Jerusalem; doubtless, this is accomplished with great truth, and much faithfulness in all its details. A noble Cedar of some two hundred years' growth sheds a sacred halo over these representations of antiquity; contiguous to this also is a lovely dell with fountains, and other appropriate objects of a similar kind, overshadowed with Willows from the tomb of Napoleon, at St. Helena. Close by are some fine specimens of *Cercis siliquastrum*, a princely Cherry-tree of great size, and an extraordinary *Juglans nigra* of immense growth.

On this lawn we also noticed *Ilex latifolia*, and a singular Juniper, introduced by Lord Auckland, and presented to Mrs. Lawrence; it is of compact growth, and of a singular purplish glaucous hue; various architectural objects are judiciously placed about the grounds, and not the least of them is an ornamental dairy, beautifully, yet chastely fitted up with numerous specimens of natural history, as well as objects of art, decorative in character, yet appropriately applied. Close to the mansion is a conservatory, or rather greenhouse, chiefly filled with splendid Camellias in capital health, just gone out of bloom; on the outside are placed two superb plants of *Araucaria excelsa*, giving quite a character to that side of the building; leaving this conservatory, and proceeding through the shrubbery on the right from the house, the visitor is brought at once in front of the principal hothouses; in approaching them you pass through a flower-garden, chiefly appropriated to summer ornamental flowering plants, with various accompaniments of vases, statues, rock-work, &c., and in the centre a basin of water with a Triton fountain. Those hothouses are filled with plants of no ordinary kind, not only as regards their intrinsic value, but particularly with reference to the care and skill bestowed in their cultivation. Taking these two circumstances together few private establishments in this, or as far as we know, any other country, can approach the collection at Ealing Park; such an assemblage of the most valuable objects in this branch of natural history could only have been brought together at great cost, aided by an enthusiasm that knows no limit; these botanical riches are open to public inspection by application at Ealing Park on certain days. There are four houses filled chiefly with New Holland plants, two of them measure 65 feet by 17 each, all of them with span roofs.

A new forcing pit, 38 feet long, is heated with water underneath the bed of earth, in which are growing Cucumbers and Melons, and a few rare plants. We remarked two new species of *Gesnera*, *Pleroma Benthamianum*, *Luculia Pinceanca*, *Luxemburgia ciliosa*, the beautiful *Cyrtoceras reflexum*, *Rondeletia sulphurea*, *Allamanda grandiflora*, *Echites mealeuca*; *Portlandia grandiflora*, an old, but first-rate, plant; *Hindsia violacea*, *Pavetta borbonica*, *Erythrochiton Braziliensis*, and the extraordinary new Pitcher Plant called *Nepenthes Rafflesii*; there were also several large plants of *Clerodendron fallax*, *C. Kœmpferi*, *C. squamatum*, and *C. macrophyllum*, and a fine plant of the splendid *Gardenia Sherbournia*.

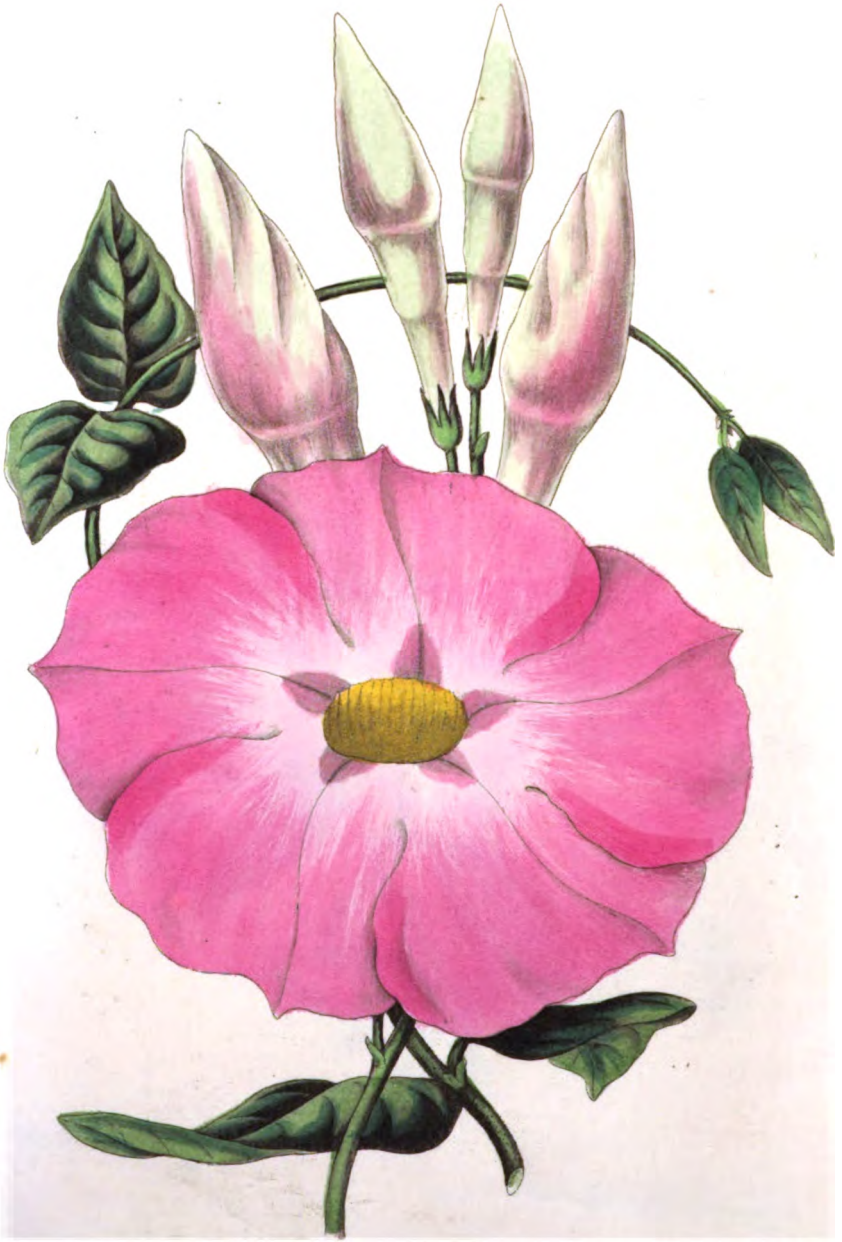


1. FRANCISCEA POHLIANA.

2. TROPEOLUM BRICKWOODII.

Floricultural Cabinet.

Charles ZinnoGRAPHY, Skinner Street.



Dipladenia crassivida.
Floricultural Cabinet, July, 1845.

THE
FLORICULTURAL CABINET,

JULY 1st, 1845.

PART I.
EMBELLISHMENTS.

ARTICLE I.

DIPLADENIA CRASSINODA. (Thick-jointed.)

THIS very beautiful flowering plant was originally discovered by Mr. Gardner, on the Corcovada Mountains, in the neighbourhood of Rio Janeiro. It requires a stove temperature and moist atmosphere in order to grow it in full vigour, but it will bloom well in a warm conservatory; and, being an evergreen climbing shrubby plant, when in bloom forms a most splendid object.

It was assigned to the *Echites*, but has now been separated, along with *E. atropurpurea* and *E. splendens*, and named *Dipladenia*.

It bears somewhat of the appearance of *E. splendens*, but is much richer in colour, and has the addition of a fine orange-coloured throat, which gives such a beautiful contrast.

The plant grows rapidly, blooms freely, and is easy to cultivate: it well deserves to be in every collection. A handsome specimen was exhibited at the Royal Botanic Gardens Show, held June 10th, 1845.

1. FRANCISCEA POHLIANA. (Pohl's *Franciscea*.)

Our drawing of this species was made at the nursery of Messrs. Loddiges', Hackney, who, we understand, received it from Brazil.

It is a pleasing kind, and of very free growth. The specific name
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was given in compliment to M. Pohl, the celebrated German botanist.

2. *TROPÆOLUM BRICKWOODII*. (Brickwood's Indian-cress.)

Seeds of this plant were brought from Chili by Mr. Brickwood, and presented by him to H. Berens, Esq., Sidcup, Kent, in whose garden it has bloomed this spring.

It is a pretty and delicately coloured species, bearing a slight resemblance to *T. brachyceras*: unlike that variety, however, it is quite a free bloomer, and therefore a very desirable improvement.

The same treatment as applied to *T. tricolor* will succeed in its cultivation.

1. *SIPHOCAMPYLUS COCCINEA*. (Scarlet-flowered.)

The brilliant colour of the flowers, their large size, and distinct bushy growth of this new species of *Siphocampylus*, is remarkable. It was received from South America by Messrs. James Veitch and Son, of the Killerton Nursery, Exeter,—gentlemen who have recently become famous for the many beautiful productions they have introduced, and which we have from time to time had occasion to notice in our remarks upon new or rare plants.

A specimen of our present subject was shown in May and June last at the Chiswick and Regent's Park exhibitions.

2. *VASALIA FLORIBUNDA*. (Abundant-flowering.)

This beautiful plant has bloomed in the nurseries of Messrs. Lucombe, Pince, and Co., and Messrs. Veitch and Son, at Exeter; and a plant from each of these gentlemen was exhibited last month at the Royal Botanic Society's Show, that from the former being awarded a prize.

It is a charming greenhouse shrub, being graceful in habit, and freely producing its lovely-coloured pendant blossoms.

In a soil of turfy sandy peat, having a small portion of leaf mould mixed, and a free drainage, the plant appears to luxuriate. As soon as plants are ready for sale, we have no doubt it will be noticed in our advertising sheet.

ARTICLE II.

OBSERVATIONS UPON PREPARING PELARGONIUMS, &c., FOR PLANTING OUT TO BLOOM IN THE OPEN FLOWER-BED DURING SUMMER.

BY C. C., OF SOMERSET.

HAVING observed in the June CABINET an Article on growing various plants in beds, and considering it not to go far enough in detail, and as the season for the final arrangement of the flower-beds is arrived, I am desirous to offer a few hints thereon for insertion in your valuable journal.

It may be proper in the first place to state the best way to prepare the various plants for the beds. At the beginning of March, when the plants begin to grow, my practice is to shorten the various plants I intend planting out in the beds down to three or four joints, which will induce the production of many shoots; which, by the later part of the month, will form strong bushy plants, fit to be placed under some temporary shelter till the proper season for planting them out in the beds.

Cuttings struck in the spring, as soon as they begin to grow, have their shoots shortened in the same way, being very careful to remove any flower-buds that appear till after the plants are planted in the beds, which will strengthen them a great deal. Scarlet Pelargoniums treated in this manner will require no pegging, as they are very liable to split at the joints; but Salvias, Verbenas, Anagallises, Heliotropes, Petunias, &c., I should recommend to be pegged down, not by wooden pegs, but strings of matting six inches long put over the shoot, and fastened in the ground by a small setting stick. One person can do more this way than two with wooden pegs, and the matting will not injure the most delicate shoots. Persons who grow Annuals in beds, I should recommend to gather the seed-pods as soon as the flowers are decayed, which will greatly prolong their bloom; but if the seed-pods are left to perfect their seed, the plants will soon decay. Take, for example, that beautiful annual, the *Nemophila insignis*; if the flowers are removed as soon as they begin to flag, it will prolong its duration a full month. If any person wishes to save seed, I should advise them to sow a patch in the kitchen-garden.

P.S. It has been hinted by a friend of mine that it would not be

amiss to suggest to the Conductor whether it would not be most acceptable to the numerous readers of the CABINET to insert occasionally some of the communications discussed at the Gardeners' Mutual Instruction Societies, some of which are no doubt valuable.

[Any forwarded to us of the character named, we will insert with pleasure.—CONDUCTOR.]

ARTICLE III.

OBSERVATIONS UPON DOUBLE SWEET WILLIAMS.

BY CLERICUS.

FOR the last four years, I have been collecting and growing all the varieties of double-flowered Sweet Williams I could obtain. I have eighteen very dissimilar and beautiful varieties, varying in gradation from a white ground spotted with red, crimson, and purple, through the various shades of pink, rose, lilac, purple, scarlet, and crimson. I need not attempt to eulogize the flowers of this beautiful and ovely tribe; all admire Sweet Williams, and especially the double kinds. By proper attention in culture, I have my flowers not only very double, but three-quarters of an inch across; and these produced in fine corymbose heads, give a fine effect, especially so when the fine colours are so distinctively arranged as to have the best contrast. They are beautiful, whether grown in masses or singly, and well merit a situation in every flower-garden.

I grow mine in a good, moderately rich, loamy soil, upon a dry subsoil. I increase them by taking off slips in July: these soon strike root in pots placed under a hand-glass, or in a frame, inserting them in a moist, yellow sand: they would most likely root as well in sandy loam or sandy peat. I pot them singly towards the end of September, and keep them in a dry cool frame during winter turning them out entire at the end of March.

I can strongly recommend these lovely flowers to the notice of all persons who desire to have beautiful dwarf flowers for ornamenting the flower-garden. Some of my varieties I procured at nursery gardens, and others I met with in the gardens of various friends, to which I have added eight splendid seedlings of my own raising.

ARTICLE IV.

REMARKS ON THE GARDENS, &c., OF MEXICO, EXTRACTED FROM PRESCOTT'S HISTORY OF THE CONQUEST OF MEXICO.

BY AN AMATEUR FLORIST.

IN the above-named work I have been much pleased to find numerous particulars relative to the gardens of Mexico, and of some of the finest plants of that country; and as we are indebted to that fine part of the world for many of our most beautiful flower-garden plants, I am persuaded it will be interesting to the readers of the CABINET to peruse anything of a floral character connected with Mexico, I therefore send the following for insertion.

*"The Garden of an Aztec Monarch—1400 to 1500 (A.D.)—*Nezahualcoyotl's fondness for magnificence was shown in his numerous villas, which were embellished with all that could make a rural retreat delightful. His favourite residence was at Tezcotzinco, a conical hill about two leagues from the capital. It was laid out in terraces, or hanging gardens, having a flight of steps, 520 in number, many of them hewn in the natural porphyry. In the garden, on the summit, was a reservoir of water, fed by an aqueduct, that was carried over hill and valley for several miles, on huge buttresses of masonry. A large rock stood in the midst of this basin, sculptured with hieroglyphics representing the years of Nezahualcoyotl's reign, and his principal achievements in each. On a lower level were three other conservatories, in each of which stood a marble statue of a woman, emblematic of the three states of the empire. Another tank contained a winged lion, cut out of the solid rock, bearing in its mouth the portrait of the emperor. His likeness had been executed in gold, wood, feather-work, and stone, but this was the only one that pleased him. From these copious basins the water was distributed in numerous channels through the gardens, or was made to tumble over the rocks in cascades, shedding refreshing dews on the flowers and odoriferous shrubs below. In the depths of this fragrant wilderness marble porticoes and pavilions were erected, and baths excavated in the solid porphyry, which are still shown by the ignorant natives as the "Baths of Montezume!" The visitor descended by steps cut in the living stone, and polished so bright as to reflect like mirrors. Towards the base of the hill, in the midst of

cedar groves, whose gigantic branches threw a refreshing coolness over the verdure in the sultriest seasons of the year, rose the royal villa, with its light arcades and airy halls, drinking in the sweet perfumes of the gardens. Here the monarch often retired to throw off the burden of state, and refresh his wearied spirits in the society of his favourite wives; reposing, during the noontide heats, in the embowering shades of his paradise, or mingling in the cool of the evening in their festive sports and dances. Here he entertained his imperial brothers of Mexico and Ilacopans, and followed the hardier pleasures of the chase in the noble woods that stretched for miles around his villa, flourishing in all their primeval majesty. Here, too, he often repaired in the latter days of his life, when age had tempered ambition, and cooled the ardour of his blood, to pursue in solitude the studies of philosophy, and gather wisdom from meditation. The extraordinary accounts of the Tescucan architecture are confirmed, in the main, by the relics which still cover the hill of Tezcotzinco, or are half buried beneath its surface. They attract little attention indeed in the country, where their true history has long since passed into oblivion; while the traveller, whose curiosity leads him to the spot, speculates on their probable origin; and as he stumbles over the huge fragments of sculptured porphyry and granite, refers them to the primitive races who spread their colossal architecture over the country long before the coming of the Acolhuans and the Aztecs.

“And here, also, they beheld those fairy islands of flowers, overshadowed occasionally by trees of considerable size, rising and falling with the gentle undulations of the billows. Here, again, they found fresh cause for admiration in the grandeur of the city, and the superior style of its architecture. The dwellings of the poorer classes were, indeed, chiefly of reeds and mud. But the great avenue through which they were now marching was lined with the houses of the nobles, who were encouraged by the emperor to make the capital their residence. They were built of a red porous stone, drawn from quarries in the neighbourhood, and, though they rarely rose to a second story, often covered a large space of ground. The flat roofs, *azoteas*, were protected by stone parapets, so that every house was a fortress. Sometimes these roofs resembled parterres of flowers, so thickly were they covered with them; but more frequently these

were cultivated in broad terraced gardens, laid out between the edifices. Occasionally a great square or market-place intervened, surrounded its porticoes of stone and stucco; or a pyramidal temple reared its colossal bulk, crowned with its tapering sanctuaries, and altars blazing with inextinguishable fires. The great street facing the southern causeway, unlike most others in the place, was wide, and extended some miles in nearly a straight line, as before noticed, through the centre of the city. A spectator standing at one end of it, as his eye ranged along the deep vista of temples, terraces, and gardens, might clearly discern the other, with the blue mountains in the distance, which, in the transparent atmosphere of the table-land, seemed almost in contact with the buildings. As they (the Spaniards) passed down the spacious street, the troops repeatedly traversed bridges suspended above canals, along which they saw the Indian barks gliding swiftly with their little cargoes of fruits and vegetables for the markets, &c.

“The *Chinampas*, that archipelago of wandering islands, have, also, nearly disappeared. These had their origin in the detached masses of earth, which, loosening from the shores, were still held together by fibrous roots, with which they were penetrated. The primitive Aztecs, in their poverty of land, availed themselves of the hint thus afforded by nature. They constructed rafts of reeds, rushes, and other fibrous materials, which, tightly knit together, formed a sufficient basis for the sediment that they drew up from the bottom of the lake. Gradually islands were formed, two or three hundred feet in length, and three or four feet in depth, with a rich stimulated soil, on which the economical Indian raised his vegetables and flowers for the markets of Tenochtitlan. Some of these *Chinampas* were even firm enough to allow the growth of small trees, and to sustain a hut for the residence of the person who had the charge of it, who with a long pole, resting on the sides or bottom of the shallow basin, could change the position of his little territory at pleasure, which, with its rich freight of vegetable stores, was seen moving like some enchanted island over the water. How gay and picturesque must have been the aspect in those days with its shining cities, and flowering islets, rocking, as it were, at anchor on the fair bosom of its waters.

The gardens of Huaxtepec are thus described:—“The Spanish

general Sandoval took up his quarters in the dwelling of the lord of the place, surrounded by gardens which rivalled those of Iztapalapan in magnificence, and surpassed them in extent. They are said to have been two leagues in circumference, having pleasure houses, and numerous tanks stocked with various kinds of fish, and they were embellished with trees, shrubs, and plants, native and exotic; some selected for their beauty and fragrance, others for their medicinal properties. They were scientifically arranged; and the whole of the establishment displayed a horticultural taste and knowledge, of which it would not have been easy to find a counterpart at that day in the more civilized communities of Europe. Such is the testimony not only of the rude conquerers, but of men of science, who visited these beautiful repositories in the day of their glory.

“But the best wealth of the first settlers was in the vegetable productions of the soil, whether indigenous or introduced from abroad by the wise economy of Cortés. He had earnestly recommended the Crown to require all vessels coming to the country to bring over a certain quantity of seeds and plants. He made it a condition of the grants of land on the plateau, that the proprietor of every estate should plant a specified number of vines in it. He further stipulated, that no one should get a clear title to his estate until he had occupied it eight years. He knew that permanent residence could alone create that interest in the soil which would lead to its efficient culture; and that the opposite system had caused the impoverishment of the best plantations in the islands. His various regulations, some of them not a little distasteful to the colonists, augmented the agricultural resources of the country by the addition of the most important European grains, and other vegetables, for which the diversified climate of New Spain was admirably adapted. The sugar-cane was transplanted from the neighbouring islands to the lower level of the country, and, together with indigo, cotton, and cochineal, formed a more desirable staple for the colony than its precious metals. Under the sun of the tropics, the peach, the almond, the orange, the vine, and the olive, before unknown there, flourished in the gardens of the table-land, at an elevation twice as great as that at which the clouds are suspended in summer above our heads. The importation of a European fruit or vegetable was hailed by the simple colonists with delight. The first produce of the exotic

was celebrated by a festival, and the guests greeted each other as on the appearance of an old familiar friend who called up the remembrance of the past, and the tender associations of their native land.

“The Banana, so generally heard of, is a celebrated plant in Mexico. Another is the Cacao, the fruit of which furnished the chocolate,—from the Mexican *chocolate*—now so common a beverage throughout Europe. The Vanilla, confined to a small district of the sea-coast, was used for the same purposes, of flavouring food and drink, as with us. The great staple of the country, as, indeed, of the American continent, was Maize, or Indian corn, which grew freely along the valleys, and up the steep sides of the Cordilleras, to the high level of the table-land. The Aztecs were as curious in their preparation, and as well instructed in its manifold uses, as the most expert New-England housewife. Its gigantic stalks in these equinoxial regions afford a saccharine matter not found to the same extent in northern latitudes, and supplied the natives with sugar little inferior to that of the cane itself, which was not introduced among them till after the conquest. Hernandez, who celebrates the manifold ways in which the Maize was prepared, derives the name from the Haytian word *Mahiz*. But the miracle of nature was the great Mexican Aloe, or *Magney*, whose clustering pyramids of flowers, towering above their dark coronals of leaves, were sprinkled over many a broad acre of the table-land. Its bruised leaves afford a paste, from which paper was manufactured; its juice was fermented into an intoxicating beverage, *pulque*, of which the natives to this day are excessively fond; its leaves further supply an impenetrable thatch for the more humbler dwellings; thread, of which coarse stuffs were made, and strong cords, were drawn from its tough and twisted fibres; pins and needles were made of the thorns at the extremity of its leaves; and the root, when properly cooked, was converted into a palatable and nutritious food. The *Agave*, in short, was meat, drink, clothing, and writing materials, for the Aztec! Surely never did nature enclose in so compact a form many of the elements of human comfort and civilization. It would be obviously out of place to enumerate in these pages all the varieties of plants, many of them of medicinal virtue, which have been brought from Mexico into Europe. Still less can I attempt a catalogue of its flowers, which, with their variegated and gaudy colours, form the greatest attraction of our

greenhouse. The opposite climates embraced within the narrow latitude of New Spain have given to it, probably, the richest and most diversified flowers to be found in any country on the globe. The different products were systematically arranged by the Aztecs, who understood their properties, and collected them into nurseries more extensive than any then existing in the Old World. It is not improbable that they suggested the idea of those 'gardens of plants,' which were introduced into Europe not many years after the conquest. The first regular establishment of this kind, according to Carli, was at Padua in 1545."

ARTICLE V.

THE GRAND FLORAL EXHIBITIONS OF THE METROPOLIS.

AN opportunity of great utility is afforded the cultivator of flowers by floral exhibitions: by the assemblage of numerous choice and new kinds of plants, he can early become acquainted with such as are good; he may besides learn a great deal in successful cultivation by noting much of the manner adopted in growing the finest specimens he sees; and thus is rendered more general that kind of superior skill which, without these exhibitions, would continue confined to a few, just as it was previous to the system of annual exhibitions being adopted. Public competition creates animation, and tends to rouse into exertion all the cultivator's capabilities with a determination of equalling his compeers. Under the influence of causes like these, improvement spreads; like as the circles formed in water, when disturbed by a blow,—at first there is a little agitation exclusively at the point of displacement, but the tranquil fluid once set in motion, the ripple spreads, and its circumference is quickly extended till it embraces the whole breadth of the stream.

The extensive patronage received by the principal floral societies of London enables them to give exhibitions upon an extensive and liberal scale; and the facility offered by the numerous railways now established, of a speedy, cheap, and easy conveyance for plants, will no doubt induce persons having new and good things to send them to some of these exhibitions. We have therefore determined, from time to time, to publish, for the benefit of our readers, and especially those residing at a great distance, a detailed account of

each exhibition, commencing with that of the first show for this year of the

HORTICULTURAL SOCIETY,

Chiswick, May 24.

This exhibition, regarded as a whole, was exceedingly fine, and indeed, we believe, the best the society ever had. Some idea of its extent may be formed from the fact that, in addition to the usual several commodious tents, a new one of 100 feet long, and containing about 300 feet of tables, was added, and yet it was found necessary to construct additional staging for a large number of plants. The general excellence of the specimens in all the collections was very remarkable; in Orchidaceæ especially, the display was magnificent, and the collections of stove and greenhouse plants were likewise very superior: the most prominent features in all these we shall particularize as we proceed. The new species of plants shown were but few, and in seedling florist-flowers the best was Mr. Beck's Pelargoniums, and the Calceolarias of Messrs. Kinghorn and Gaines; in the latter was two or three deserving of particular mention, although no prizes were awarded to them, viz., Rosina (Kinghorn), Hope (Kinghorn), and Gaines's Conspicua and Flora. In Mr. Hoyles's Pelargoniums the one we most fancied was called Chimborazo, a large good shaped flower, of some substance, and much smoother than his others.

The visitors to the meeting numbered 3622, all of whom appeared highly delighted with the splendid display they witnessed, and as the day was fine, would have returned home gratified with the agreeableness of the whole, were it not that by about half-past four o'clock some heavy clouds arose, and presently discharged torrents of rain upon the scene; consequently, all those unprovided with large umbrellas, amongst which unfortunate number we happened to be, had no chance of escaping from the tent they were under but with a complete soaking. We hope arrangements will be made to prevent such a disagreeable termination to future meetings, by constructing a covered passage from one of the garden entrances to the tents, as well as to connect them with each other.

The regulations of the society enable all persons, whether fellows of the society or not, to send subjects for exhibition; but the society

request exhibitors will notify in writing, previous to the day of meeting, what plants they intend to supply, in order that due provision may be made for the proper distribution of the specimens on the tables. As it is necessary that the judges should proceed to consider the respective merits of the exhibitions by 10 A.M., and as it is absolutely indispensable that the tables should be arranged by that time, it has been determined that no subject for exhibition shall be admitted into the garden after half-past 8 o'clock in the morning; and if the owners of any locked-up or other cases should not be in the exhibition tent at the said hour, such cases or boxes must be excluded from competition. All specimens will remain untouched until after 6 o'clock, when they will be delivered into the hands of the exhibitors. Exhibitors of cut flowers must supply their own boxes or stands. No box or stand should exceed 8 inches in height at the back, or 18 inches in depth from front to back: the lids of all boxes must either be loose, or made to unhinge. The society distributes the following rewards, namely:—

	£.	s.	d.	
1.	20	0	0,	or the large gold medal.
2.	10	0	0,	or the gold Knightian medal.
3.	7	0	0,	or the gold Banksian medal.
4.	4	0	0,	or the large silver gilt medal.
5.	1	15	0,	or the large silver medal.
6.	1	5	0,	or the silver Knightian medal.
7.	1	0	0,	or the silver Banksian medal.
8.	0	10	0,	or the Certificate.

Exhibitors to whom any of these shall be awarded may receive their value in money or in plate. If in case an exhibitor shall receive a first prize in any one class of plants, he shall not be entitled to receive any other in the same class.

Names fairly written are to be attached by exhibitors to all florist's flowers, and the judges are restrained from awarding any medal to such exhibitions, whatever their merit may be, if this regulation is not complied with. By florist's flowers are meant not only flowers usually so named, but also Fuchsias, Pelargoniums, Roses, and Calceolarias. It is also hoped that all other subjects of exhibition will be neatly and legibly labelled with their names. The judges have the

power of increasing or diminishing the number and value of the awards offered by the society for particular objects, and also of conferring awards in cases not contemplated in these regulations, if they think necessary to do so. The society's prizes are offered less for new and curious objects than for fine specimens of horticultural skill, the design of the council in instituting these meetings being not so much to encourage the collector as to reward the skilful gardener; for in cases where the objects exhibited do not appear worthy of a prize, a bad single exhibition might obtain a prize merely because there is no better exhibition of the same class to oppose it.

AWARDS.

CLASS I.

In which Nurserymen and Private Growers exhibit independently of each other.

PELARGONIUMS.

In collections of 12 new and first-rate varieties, cultivated with superior skill, in pots of 24 to a cast.

Private Growers.

1st Prize, 7*l.*, J. Dobson, gardener to Mr. E. Beck, Isleworth.—These were grown in slate-pots, which Mr. Beck manufactures, and certainly presented a very superior appearance: the blooms were large in size, and of the best shape. The kinds were, Zanzummim (Beck), first-rate flower; Lurida (Beck), Leonora (Beck), Resplendant (Beck), Sir R. Peel (Foster), one of the best and most distinct in all collections; Pulchellum (Foster), Sultana (Foster), Favourite (Beck), very fine; Susanna (Beck), Bella (Beck), very fine; Hero (Beck), and Conflagration (Foster).

2nd Prize, 4*l.*, Mr. Cock, Chiswick.—These were likewise all bloomed exceedingly well. The varieties were, Madeline, Angelica, Cyrus, Sir R. Peel, Mad. Taglioni, a mass of bloom; Rosetta, superb, Wizard, Queen Philippa, Unit, Eliza Sauvage, Erectum, and Pre-eminent.

No other competitors.

Nurserymen.

1st Prize, 7*l.*, Mr. N. Gaines, Battersea.—For Cothorstone, fine; Ackbar, fine; Augusta, Saxon King, fine; Queen of Bourbons, Lady

Prudhoe, Excelsa, Druid, fine; Princess Alice, fine; Pirate, King of Beauties, fine; and Lady Mildmay.

No other competitor.

In collections of 12 varieties in pots of 24 to a cast.

Private Growers.

1st Prize, 7*l.*, Mr. R. Staines, Paddington.—For Duke of Cornwall, Lady Sale, Superbum, Sunrise, Roulette, Erectum, Madeline, Enchantress, Alice Gray, Symmetry, Hebe, and Duchess of Sutherland.

2nd Prize, 4*l.*, J. Dobson, gardener to Mr. Beck, Isleworth.—For Majestic (Beck), fine; Erectum (Beck), Serjeant (Beck), The Purple (Beck), Susanna (Beck), Flora (Beck), good; Sir R. Peel (Foster), Cleopatra (Beck), Luna (Foster), Matilda (Foster), Dido (Foster), and Lord Chancellor (Foster).

Nurserymen.

1st Prize, 7*l.*, Messrs. C. D. Smith and Co., Pimlico.—For Grand Duke, Coronation, Grand Monarch, Madeline, Arabella, Mrs. Stirling, Cyrus, Gipsy, Hebe, Fair Maid of Devon, Queen of the Fairies, and Lady Sale.

2nd Prize, 4*l.*, Mr. N. Gaines, Battersea.—For Cotherstone, Queen of Bourbons, Rising Sun, fine; Lady Prudhoe, Pilot, Coronation Superb, Douglas, Hermione, fine; Enchantress, Ackbar, Madeline, and Lady Sale.

In collections of 6 varieties in pots of 8 to a cast.

1st Prize, 1*l.* 15*s.*, Mr. N. Gaines, Nurseryman, Battersea.—For Nymph, fine; Madeline, Lady Isabella Douglas, Lady Sale, Julia and Albina. These were superior grown bushes, 3 feet across.

No competitors.

ROSES,

In collections of 12 for Private Growers, and in collections of 25 distinct sorts for Nurserymen, in pots.

Private Growers.

1st Prize, 7*l.*, J. Dobson, gardener to Mr. Beck, Isleworth.—This collection was in the very vigour of health, profusely in bloom, and most deservedly received the first prize; the varieties were, White

China, Hardy, Fabvier, Mrs. Bosanquet, Nemesis, fine; Hyclere seedling, Caroline, blush; Augustin Marget, clear salmon; Belle Allemande, large pale yellow of fine shape; Fenelon du Luxembourg, Pauline, Plautier, creamy white; and Beau Carmin, a beautiful rose.

2nd Prize, 4*l.*, Mr. J. Stowe, gardener to R. Baker, Esq.—The best amongst which were Romaine, shaded straw; Triumphant, bright rosy; Safrano, fine; and Antheros, cream colour.

3rd Prize, 1*l.* 15*s.*, Alex. Rowland, Esq., Rosenthal, in which we did not note any very remarkable.

4th Prize, 1*l.*, Mr. Milne, gardener to C. S. Chauncey, Esq., Little Munden.—These were cultivated very successfully; we observed, as most striking, Nephetas, fine light yellow; La Belle Allamande, Las Casas, very double and good shape; and Eugene Napoleon.

Nurserymen.

1st Prize, 7*l.*, Messrs. Lane and Son, Berkhamstead.—Comprising only the very best show flowers, viz., William Jease, large rosy-purple; Cramoise Supérieure, bright rich red; Aubernon, Argo, Belle Allamande, fine; Louis Buonaparte, good; Psyche, Tea Blush, Fulgorie, Aricie, La Pactole, Prince Charles, very fine; Abbe Mionland, blush, fine; Compte de Osmond, good; Acidale, Triomphe de Flore, fine; Marjolin, good shape; Caroline, good; Eugene Beauharnois, dark; Armosa, fine; Grand Captain, brilliant red; Bougere, good; Eliza Suavage, Fabvier, and Henry V.

No 2nd prize awarded.

3rd Prize, 1*l.* 15*s.*, Mr. Stedman, Isleworth.

Single specimens in pots displaying superior cultivation.

1st Prize, 1*l.* 5*s.*, J. Dobson, gardener to Mr. Beck, Isleworth.—For Armosa, which was well cultivated in a slate-pot, but had a too artificial appearance, by being tied closely to a number of sticks.

No competitors.

Besides the above, Mr. A. Milne exhibited 25 varieties in cut blooms, some of which were well-shaped flowers; and Mr. W. P. Ayres had a specimen of the New Yellow Noisette, Cloth of Gold, which is large in size and very fragrant.

CAPE HEATHS,

In collections of 20 entirely distinct varieties.

Private Growers.

1st Prize, 10*l.*, Mr. J. Robertson, gardener to Mrs. Lawrence, Ealing Park.—The whole of the collection was remarkably fine large bushy plants: we particularly noticed *E. Cavendishii*, loaded with its beautiful yellow flowers; *Depressa*, very fine; *Persoluta alba*, 3 feet in height and 2 feet in diameter; *Linnæana nova* and *mirabilis*; *Humeana*, very pretty; *Ampullacea vittata*, fine; *Pinca*; *Thunbergia*; *Vestita alba*; *Westphalingia*; *Propendens*, very good; *Perspicua nana*, a neat plant; and the following varieties of *E. ventricosa*, viz., *v. coccinea*; *v. c. minor*; *v. carnea*; and *v. superba*.

2nd Prize, 4*l.*, Mr. May, gardener to E. Goodheart, Esq., Langley Park.—These were likewise splendid specimens, and all profusely in bloom. *Humeana* was 3 feet in height and 4 feet in diameter; *Propendens*, very large; *Aristata major*, a wonderful plant, but thinly-bloomed; *Hartnelli*, a splendid bush; *Fastigiata lutescens*, in prime order; *Mundula*, covered with bloom; *Grandinosa*, and *Ventricosa alba*, fine; with *Odora rosea*, *Perspicua nana* and *elegans*, in admirable condition; *Hybrida*, not quite in bloom; *Rubro-calyx*; *Willmoreana*; *Mirabilis*; and a small, but pretty plant of *Sprengelii*.

Nurserymen.

1st Prize, 10*l.*, Messrs. Fairbairn, Clapham.—A fine collection of immense bushes. We observed *Cavendishii* in admirable health, 3 feet in height and as much in diameter; *Intermedia*, very fine; *Metulæflora*, splendid; with very remarkable plants of *Ampullacea tricolor* and *suaveolens*; also good plants of *Ampullacea nana*, *Vestita coccinea*, *Humeana*, *Dilecta*, *Vestita alba*, and *Ventricosa carnea*, *v. alba*, and *v. coccinea minor*.

2nd Prize, 4*l.*, Messrs. Rollison, Tooting.—Among them were *Mundula*, very pretty; *Dilecta*, good; *Humeana*; *Nitida*, with clear white bells; *Fulgida superba*, a fine kind; *Vestita blanda*; and *Beaumontiana*; with *Propendens* and *Fragrans*.

3rd Prize, 1*l.* 15*s.*, Mr. Pawley, Bromley.—Among them was a fine *Cavendishii*; *Perspicua nana*, very fine; *Prægnans*, *Coccinea minor*, pretty; *Dilecta*, neat; with *Halicacaba*; *Nitida*; *Hybrida*, very pretty; and *Vestita coccinea minor*.

In collections of 12 entirely distinct varieties.

Private Growers.

1st Prize, 7*l.*, Mr. Hunt, gardener to Miss Traill, Bromley.—These were magnificent bushes, averaging from about 3½ feet high, and as much in diameter; Sprengelli, suaveolens, vestita coccinea, ventricosa prægna, Hartnelli, ampullacea rubra, were very superb.

2nd Prize, 4*l.*, Mr. G. Plumbley, gardener to C. J. Dimsdale, Esq., Essen len-place.—Containing excellent specimens of depressa, melastoma, and hybrida.

Nurserymen.

1st Prize, 7*l.*, Messrs. Frazer, Lea-bridge.—These were beautiful dwarf bushes, and profusely in bloom. Thunbergiana, Beaumontia, propendens, Bergiana, perspicua nana, and denticulata moschata, were especially striking.

In collections of 6 entirely distinct varieties.

Private Growers.

1st Prize, 4*l.*, Mr. Bruce, gardener to B. Miller, Esq.—Containing very good specimens of Cavendishii, fastigiata, and grandinosa.

2nd Prize, 1*l.* 15*s.*, Mr. Evan Jack, gardener to R. G. Lorraine, Esq., Wallington.—We observed good plants of sulphurea and suaveolens.

3rd Prize, 1*l.* 5*s.*, Mr. W. Taylor, gardener to J. Costar, Esq., Streatham.

Nurserymen.

1st Prize, 4*l.*, Mr. Dawson, Brixton.—There were good compact specimens of hybrida, mirabilis, and dilecta.

No competitors.

Single specimens displaying very superior cultivation.

Private Growers.

1st Prize, 1*l.* 15*s.*, Mr. Robertson, gardener to Mrs. Lawrence.—For propendens, a beautiful plant 3 feet high, and as much in diameter, loaded with its pretty little bell-shaped flowers.

2nd Prize, 1*l.* 5*s.*, Mr. G. Plumbley, gardener to C. J. Dimsdale, Esq., for suaveolens.

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Nurserymen.

No 1st or 2nd prize awarded.

3rd Prize, 1*l.*, Mr. Dawson, Brixton, for a compact and pretty mundula.

CALCEOLARIAS,

In collections of 6, in pots of 29 to a cast.

Private Growers.

1st Prize, 1*l.* 15*s.*, Mr. Kinghorn, gardener to A. Murray, Esq., Twickenham.—Comprising Queen Victoria, fine; King of Saxony, primrose, full of small, round, crimson spots, very beautiful; Marquis of Bute, Grandis, Vesta, and Mary Queen of Scots.

2nd Prize, 1*l.* 5*s.*, Mr. G. Stanley, gardener to H. Berns, Esq., for Fairy Queen, very good; Lane's Monarch, Rival King, Magician, Duke of Wellington, and Henrietta, very bright red.

Nurserymen.

1st Prize, 1*l.* 15*s.*, Mr. N. Gaines, Battersea.—For Standishii, Desirable, Vivid, bright crimson red; Napoleon, Eclipse, and Conductor.

No other competitor.

CLASS II.

In which all persons are admitted to equal competition.

STOVE OR GREENHOUSE PLANTS,

(from which Orchidaceæ, Pelargoniums, Fuchsias, and Calceolarias are excluded)

In collections of 40 plants.

1st Prize, 20*l.*, Mr. J. Robertson, gardener to Mrs. Lawrence.—Containing numerous extraordinary specimens, the most superior of which were, in Azaleas, lateritia, a mass of bloom; alba and Phoenicea, very large and fine; sinensis, a large plant, having a profusion of its bright orange-red blossoms. In Chorozemas was an immense bush of ovatum, and also varium, cordatum, and macrophyllum were 5 or 6 feet high and 4 or 5 feet in diameter, each adorned with multitudes of their bright and charming little flowers. Of the genus Eriostemon there were two species, viz., myophoroides and cuspidatum, of very large size, and remarkably showy. In Pimeleas was a

fine plant of *incana* and *spectabilis*, 3 feet high and 4 feet in diameter. Of Cape Heaths we noted good specimens of *propendens*, *depressa*, and *perspicua*. There were five trained specimens of *Manettia cordifolia* and *glabra*. *Lechenaultia formosa*, a large bush, 2 feet high by 3 feet diameter, though not well in bloom. *Tabernæmontana coronaria flore-pleno* was shown in excellent bloom. *Cytisus filipes* afforded an agreeable relief in the group by the colour of its pretty white flowers, which clothed the graceful branches of a large plant. *Cytisus racemosus* was exceedingly large; and a specimen of *acacia alata* might be termed a tree.

2nd Prize, 10*l.*, Mr. Barnes, gardener to G. W. Norman, Esq., Bromley.—This collection comprised many very remarkable plants, but, owing to the dulness of the weather, several best specimens were not well in bloom. We noticed a noble plant of *Daviesia saligna*, 4 feet in height and 6 feet in diameter, the branches drooping nearly to the pot, and loaded with bloom; supporting it on one side was *Erica grandinosa*, literally one dense mass of white flowers, 4 feet in height and the same in diameter; and on the other side was an immense bush, in excellent bloom, of *Epacris grandiflora*; another remarkable plant was *Podolobium staurophyllum*, 5 feet in height and 4 feet in diameter, and loaded with flowers; scarcely less interesting was a noble plant, not quite in bloom, of *Oxylobium Pultenzæ*, about 4 feet in height and 6 feet in diameter; and a dense bush of *Polygala oppositifolia*, literally one mass of bloom, 4 feet in height and 6 feet in diameter, contrasting well with the yellow flowers which surrounded it. Of the genus *Aphelexis*, *humilis* was one mass of flowers, but the day was, unfortunately, not sufficiently bright to induce it to open its flowers; *sesamoides* was nearly 4 feet in height and 3 feet in diameter, but not so full of bloom; *macrantha purpurea*, certainly the finest of the genus, had deep purple or plum-coloured bracts shaded with bright pink or rose, exposing when open a deep straw-coloured or yellow disk. *Phœnocomma prolifera*, 2 feet in height and about 4 feet in diameter, which will probably be more generally recognised under the old name of *Helichrysum proliferum*; this plant was a complete thicket, but not sufficiently in bloom. Remarkable plants were *Dillwynia rudis* and *clavata*, but though plentifully covered with flower-buds, few of them were expanded; these excellent specimens were from 3 to 4 feet in height, and proportionatel bushy.

There were also fine plants of *ericifolia* and *pungens*. *Gompholobium tenellum*, *Pimelea Hendersoni*, *Leschenaultia formosa*, and *Clerodendrum splendens* were remarkably good specimens; the *Gompholobium* was about 3 feet in height and 2 feet in diameter, but not in full bloom; *Pimelea Hendersoni* was 18 inches in height and 2 feet in diameter, in fine bloom; and the *Leschenaultia* was of about the same size, trained hemispherically, and one complete sheet of flowers. Of Cape Heaths we noted the following: *Thunbergia*, a yard in height, and as much in diameter; *intermedia*, very large, and in excellent bloom; *Hartnelli*, a fine plant; *Daphnæflora*, beautiful; *fastigiata lutescens*, admirable, but smaller; *odora rosea*, good; *prægnans coccinea minor*, in a fine state; and lovely plants of *dilecta* and *Sprengelii*; a plant of *Statice macrophylla*; the rare *Luxemburgia cilosa* was shown for the second time since its introduction into this country; a good plant, with nearly thirty heads of bloom upon it, of *Ixora grandiflora*; and large specimens of *Azalea Indica alba*, *splendens*, *Gladstonesii*, and a pretty *A. lateritia*. Also fine plants of *Zichya inophylla floribunda*, *Polygala cordifolia*, *Daviesia saligna*, *Boronia denticulata*, *Eriostemon cuspidatum*, and *Pimelea decussata*, very large.

3rd Prize, 7*l.*, Mr. Green, gardener to Sir E. Antrobus, Bart.—These, though not so rich as the preceding, nevertheless enumerated some capital specimens, particularly the following: In *Azaleas*, *Indica alba*, 5 feet high, and clothed to the bottom; a tall specimen of the double red; and *exquisitia*. In *Pimeleas*, the best was *decussata*, about 2½ feet high and 3 feet in diameter, beautifully bloomed; *rosea* was a pretty compact bush. Amongst the Cape Heaths the more deserving were *propendens*, 3 feet high, producing, as it invariably does, a great profusion of blossoms; *Beaumontiana*, very pretty blush; and *echiflora purpurea*. Very distinct and remarkable was *Daviesia latifolia*, 4 feet high, full of bloom; and equally good was *Coleonema pulchrum*; *Euthales microphylla*, a mass of yellow blossoms; *Brachysema latifolia*, trained and full of bloom; *Hovea Celsii*, also trained and very full. A well-bloomed plant of *Francescia latifolia*; and a moderate specimen of *Siphocampylus betulifolius*.

In collections of 20 plants.

1st Prize, 10*l.*, Mr. Frazer, nurseryman, Lea-bridge.—These were

all very fine plants; among them was *Podolobium staurophyllum*, a dense bush, 2 feet in height and the same in diameter. In *Pimeleas, linifolia* was an admirable plant, 4 feet in height and 5 feet in diameter; *nivea*, very neat; and a remarkably well-grown and finely-coloured *spectabilis*. *Boronia serrulata* was about 18 inches in height and the same in diameter, and as compact and thickset as could possibly be desired; a good plant of *Polygala acuminata*, with *Daviesia latifolia*, 4 feet in height and 2 in diameter; *Epacris grandiflora*, *Coleonema rubrum*, *Aphelexis speciosa*, *Chorozemas Henchmanni* and *varium*; a most admirable plant of *Boronia pinnata*, loaded with delicate pale-pink waxy blossoms; with some good *Azaleas*.

2nd Prize, 7*l.*, Mr. Hunt, gardener to Miss Traill.—This collection contained a beautifully-trained specimen of *Gompholobium polymorphum*, covering a shield-formed trellis, 4 feet high by 4 feet broad; a splendid plant of *Leschenaultia formosa*, in fine bloom; *Zichya villosa*, good; *Boronia serrulata* and *Gardoquia Hookeri*, in fine bloom; excellent plants of *Ixora grandiflora*, *Phœnocoma proliferifera*; and some good Cape Heaths, *gemmaifera*, 3 feet high and as much in diameter; *perspicua nana*, very good; and *translucens rosea*, in admirable condition.

3rd Prize, 4*l.*, Mr. W. P. Ayres, gardener to J. Cook, Esq.—Though these plants were small, they were neat and compact; among them was a good-coloured specimen of *Pimelea spectabilis*, *Azalea Indica alba*, a compact round bush in good bloom; *variegata*, in good bloom; *Poivrea coccinea*, producing several strong spikes of rich flowers; *Erica Hartnelli*, in good bloom; a pretty dwarf bush of *Ixora grandiflora*, remarkable for the high colour of its flowers, with *Gardoquia Hookeri*, *Chorozema angustifolium*, and *Leschenaultia Baxterii*.

In collections of 12 plants.

1st Prize, 7*l.*, Mr. Bruce, gardener to B. Miller, Esq.—For *Azalea Indica variegata* and *Gladstonesii*, both in fine bloom; *Aphelexis humilis* and *sesamoides*, fine; *Chorozemas Henchmanni*, *varium* and *varium elegans*, which latter appears a very free flowering variety; *Pimelea spectabilis*; *Ixora coccinea*, 5 feet high, and in fine condition; *Leschenaultia formosa*, *Euphorbia splendens*, and *Adcnandra speciosa*, 2 feet high

2nd Prize, 4*l.*, Mr. Pawley, nurseryman, Bromley.—This collection had fine plants of *Aphelexis sesamoides*; *Azalea variegata*, dwarf, and *Phoenicea*, fine; *Pimelea spectabilis*, rather past its best; *Ixora grandiflora*, in a good state; *Coleonema rubrum* and *Euphorbia splendens*; with fine plants of *Erica perspicua nana* and *ventricosa stellata*.

3rd Prize, 1*l.* 15*s.*, Mr. W. J. Epps, nurseryman, Maidstone.—Containing *Ixora grandiflora*, in good bloom; *Leschenaultia formosa*, pretty; *Azalea Indica alba*, large and in fine bloom; *Begonia parviflora*, well grown; a large specimen of *Podolobium Chorozemæ-folium*, but rather past its best. A great drawback on this collection was a poor and wretchedly naked plant of *Erica intermedia*.

In collections of 6 species.

1st Prize, 4*l.*, Mr. May, gardener to E. Goodheart, Esq.—For *Ixora coccinea*, 4 feet high, and having five heads of bloom; *Erica mundula*, a beautiful bush, 2 feet high by 3 feet across; *Polygala acuminata*, *Pimelea spectabilis*, *Horea Celsi*, 3 feet high, and full of bloom; and *Leschenaultia formosa*.

2nd Prize, 1*l.* 15*s.*, Mr. G. Stanley, gardener to H. Berens, Esq.—For *Clerodendron infortunatum*, fine; *Begonia parviflora*, *Tropæolum tricolor*, trained to a wire shield; *Zichya inophylla*, *Azalea Indica alba*, and a famous specimen of *Leschenaultia formosa*, 2 feet high and near 3 feet in diameter.

3rd Prize, 1*l.* 5*s.*, Mr. Cole, gardener to C. Lewis, Esq., Blackheath.—For *Pimelea hispida*, *Gesneria Cooperi*, an excellent plant; *Polygala undulata*, *Epacris grandiflora*, *Correa speciosa major*, good; and a *Pimelea spectabilis*, possessing remarkably fine heads of bloom.

4th Prize, 1*l.*, Mr. Evan Jack, gardener to R. G. Lorraine, Esq.—For *Azalea Gladstonesii*, *Gesneria zebrina*, *Chorozema Dicksonii*, *Elichrysum humile*, *Kennedia inophylla floribunda*, a well-bloomed plant; and a beautiful bush, 4 feet high, of the neat and pretty *Bossina linifolia*.

A second 4th Prize, 1*l.*, Mr. Glendenning, Chiswick Nursery, in which we observed a *Pimelea spectabilis* as finely bloomed as we ever saw.

5th Prize, 10*s.*, Mr. Taylor, gardener to J. Coster, Esq., in which was a good plant of the delicate *Erica Bowiana*.

STOVE OR GREENHOUSE CLIMBERS,

In collections of 6 species.

1st Prize, 4*l.*, Mr. Pawley, florist, Bromley, for very fine plants of the following: *Tropæolum grandiflora*, trained to a circular trellis, 4 feet in diameter, and full of bloom; *Gompholobium polymorphum*; a healthy plant of the fragrant *Stephanotus floribundus*, trained to an oval trellis; *Clerodendron splendens coccinea*, *Kennedia monophylla*, and *Zichya inophylla*, having a great profusion of flowers.

2nd Prize, 1*l.* 5*s.*, Mr. Frazer, nurseryman, Lea-bridge.—For *Tropæolum Jarratti*, a perfect specimen of health and beauty; *Hardenbergia ovata*, *Zichya inophylla*, *Chorozema spectabilis*, *Hardenbergia longeracemosa*, a beautiful specimen trained to a balloon-shaped trellis, and covered with its pretty lilac little blossoms; and the bright *Zichya villosa*.

3rd Prize, 1*l.*, Mr. Robertson, gardener to Mrs. Lawrence.—For *Kennedia ovata*, *Stephanotus floribundus*, a fine plant, 6 feet high, with numerous bunches of its sweet and handsome white flowers; *Chlorea ternatea*, *Kennedia monophylla*, *Tropæolum edule*, and *Thunbergia chrysops*, with two or three withered blooms.

EXOTIC ORCHIDACEÆ,

In collections of not fewer than 20 species.

1st Prize, 20*l.*, Mr. Mylam, gardener to S. Rucker, Jun., Esq., For some very fine specimens.—We observed an excellent plant of *Dendrobium densiflorum*; a fine specimen of the lovely *Sobralia macrantha*, producing several of its handsome flowers; *Chryseis bractescens*, *Vanda teres*, *Odontoglossum citrosimum*, the singular *Anguloa Clowesii*, *Coryanthes macrantha*; an immense plant of *Acanthophippium bicolor*, whose flowers covered the entire surface of the pot; *Saccolabium guttatum*, a fine plant, with three spikes of bloom; *Oncidium pulchellum*, *Cattleya Mossiæ*, *Bifrenaria tyrianthina*, *Cymbidium lancifolium*, *Oncidium pumilum*, with yellow flowers; *O. leucochilum*, *Lycaste Deppii*, *Stenia pallida*, with pale yellow flowers; and *Epidendrum macrochilum*.

2nd Prize, 10*l.*, Mr. Robertson, gardener to Mrs. Lawrence, containing, among other things, the lovely *Dendrobium Cambridgeanum*, *D. densiflorum*, a fine plant, but nearly out of flower; *Saccolabium*

guttatum, and præmorsum, with several spikes of bloom; Epidendrum bicornutum, E. vitellinum, and Bifrenaria tyrianthina.

3rd Prize, 7*l.*, Messrs. Rollisson, nurserymen, Tooting.—We observed the curious Trichopilia tortilis, Cattleya Mossiæ, Acineta Barkeri, Maxillaria Deppii, aromatica and vitellina, Aerides crispum, Cœlogyne undulata, Brassia maculata, and Maxillaria tenuifolia.

In collections of 12 species.

1st Prize, 10*l.*, Mr. Don, gardener to G. Cox, Esq., Stockwell.—We noticed three small plants of Aerides crispum, pretty; A. crispum pallidum, Brassia maculata, a new species of Oncidium, resembling O. papilio, but with the lip beautifully fringed; Lycaste Deppii, Bifrenaria aureo-fulva, very pretty; and Acineta Barkeri, an excellent specimen.

2nd Prize, 7*l.*, Mr. Williams, gardener to C. B. Warner, Esq., Hoddesden.—The most striking were, Dendrobium cærulescens, D. moschatum, Cattleya sp., very handsome; Epidendrum macrochilum and variegatum, and Aerides crispum.

In collections of 6 species.

1st Prize, 7*l.*, Messrs. Veitch and Son, nurserymen, Exeter.—These were all fine plants, particularly Dendrobium calceolaria, 4 feet in height; Cattleya Mossiæ, very fine; Oncidium ampliatum majus, in fine bloom; and Odontoglossum hastatum.

2nd Prize, 4*l.*, Mr. Eyles, gardener to Sir G. Larpent, Bart.—We noted Vanda Roxburghi and V. Roxburghi cærulea, Oncidium altissimum and luridum.

3rd Prize, 1*l.* 15*s.*, Mr. R. Plant, gardener to J. Schroeder, Esq., Brixton, containing a small specimen of Dendrobium densiflorum, with four spikes of bloom, Trichopilia tortilis, Vanda cristata, pretty; and Cattleya Skinneri.

Besides the above, Mr. Hunt, gardener to Miss Trill, showed a collection, in which was an Oncidium from Honduras, with curious dark-brown variegated flowers; O. luridum guttatum; and a large plant, not much in bloom, of Cymbidium aloifolium.

GREENHOUSE AZALEAS,

In collections of 12 distinct varieties.

1st Prize, 7*l.*, Mr. Green, gardener to Sir E. Antrobus, Bart.—

This was a collection of magnificent specimens, comprising *Indica pallida*, large pale purple, 5 feet high and full of bloom; *speciosissima*, bright rose with crimson spots, 4 feet, bushy; *Greenii*, purple with red spots, 6 feet; semi-double scarlet, fine red, having upper petal crimson, 6 feet; *Gladstonesii*, white, one of the best shaped flowers, 4 feet; *Rawsonii*, deep bright purple, 5 feet high and 4 feet in diameter; *lateritia*, light red, fine shape, 4 feet; *variegata*, 4 feet; *Indica alba*, 5 feet high and the same across; *rubra plena*, 7 feet high by 4 across; *splendens*, bright salmon red, 4 feet high and 5 feet across; and *Smithii coccinea*, 6 feet high.

2nd Prize, 4*l.*, Mr. Falconer, gardener to A. Palmer, Esq., Cheam, for a scarcely less interesting collection, consisting of *Bianca*, white; *Agnes*, red; *Theresa*, crimson; *Danieliesii*, *Emmelina*, *purpurea superba*, *Variegata*, double red, *Indica alba*, *pulchra*, *Rawsonii*, and *lateritia*.

3rd Prize, 1*l.* 15*s.*, Mr. Robertson, gardener to Mrs. Lawrence, for *Phoenicia*, *leucomegiste*, *Rawsonii*, *splendens*, *amabile*, *pulchra*, 6 feet high, very full of bloom; *conspicua purpurea*, *Indica alba*, *Danieliesii*, a mass of bloom; *speciosissima*, *variegata*, and *Smithii coccinea*.

4th Prize, 1*l.*, Mr. Gaine, nurseryman, Battersea, exhibited a collection, but as they were grown in small pots the plants were only moderate; amongst them we saw admirable *excelsa* and *delicata*.

In collections of 6 distinct varieties.

1st Prize, 4*l.*, Mr. Frazer, nurseryman, Lea-bridge, for a very pretty specimen of *lateritia*, *coccinea superba*, *Indica alba*, *sinensis*, *Phoenicia*, and *splendens*, all beautifully managed.

We did not observe any other prizes awarded. Mr. Smith, nurseryman of Norbiton, however, had a collection of small plants, in which *Alberti* and *Venusta* were striking varieties, the former salmon-red with a crimson eye; *conspicua purpurea* and *violacea superba* were good, and *Modesta* and *Edmondsi* semi-double varieties.

TALL CACTI,

In collections of not less than 6 distinct varieties.

1st Prize, 7*l.*, Mr. Green, gardener to Sir E. Antrobus, Bart., we observed a fine *Epiphyllum speciosum*, *E. Ackermanni* and *Ackermanni grandiflorum*, and *E. coccineum cæruleum*.

No 2nd Prize awarded.

3rd Prize, *l.* 15s., Mr. J. Bruce, gardener to B. Miller, Esq.—The most remarkable specimens amongst these was, *Cactus Mallisonii rosea* and *Epiphyllum speciosum*.

FUCHSIAS,

In collections of 12 very distinct varieties, of which one-half shall have a light calyx.

1st Prize, *l.* 15s., Mr. A. Kendal, nurseryman, Stoke Newington, for *Stanwilliana*, *Robusta*, *Chandlerii*, *Coronet*, *Erecta elegans*, compact and pretty; *Vesta*, *Gigantea*, *Juliet*, *Defiance*, *Globosa grandiflora*, *Young May-morn*, light salmon and crimson; and *Venus Victrix*.

2nd Prize, *l.* 5s., Mr. Gaines, nurseryman, Battersea, for a good and distinct collection of well-grown and bushy plants, deserving a better prize: the sorts were—*Duke of Wellington* (Epps), *Coccinea vera*, *Modesta*, *Coronet* (Smith), *Madonna* (Harrison), *Goldfinch* (Harrison), *Priam* (Gaines), *Britannia*, *Duke of Wellington*, *Vesta*, *Monarch*, and *Rembrandt*.

The only two collections shown.

CINERARIAS,

In collections of 12 distinct varieties.

1st Prize, *l.* 5s., Mr. Ivery, florist, Peckham, for *Beauty of Winham*, *Nosegay*, *Red Rover*, *Compacta*, *Regina Victoria*, carmine; *Wie Pet*, *Captivation*, *Criterion*, *Fanny Elsler*, *Pride of Peckham*, white with purple disk; *Beauty of Cyston*, and *Eclipse*.

2nd Prize, *l.*, Messrs. Lane and Son, nurserymen, Berkhamstead, for well-bloomed specimens of the following:—*Enchantress*, *Regina Victoria*, *Mello Park*, *Conspicua*, *Unique*, *Spectabilis*, *Tulgidum*, *Eclipse*, *Laverstonia*, white with a bright deep crimson tip and fine shape; *Diana*, good shape; and *Splendens*, a loose starry flower.

3rd Prize, 10s., Mr. Taylor, gardener to J. Coster, Esq., Streatham.—The best amongst these were *Perfecta*, *King*, *Grand Duke*, *Emperor*, *Pride of Peckham*, *Prince of Wales*, and *Beauty of Cyston*.

MISCELLANEOUS SUBJECTS.

Rhododendrons.—Collection of 10 varieties. Prize 4*l.*, Mr. Smith, nurseryman, Norbiton. These were remarkable for their strong growth and fine trusses of bloom; the flowers individually were considerably larger than those of the generality of *Rhododendrons*: the finest of them were *Elven*, fine large salmon; *Burlingtonium aureum*, lemon colour with dark orange spots; *flavum superbum*, nearly of the same colour, but a trifle darker; *ornatum*, of the same colour, slightly tipped with rose; *Jenkinsoni*, shaded with pink; *aureum superbum*, very large; *cupreum ochræ*, shaded with purple; these were the most distinct kinds, but the others may be cultivated in large collections, viz., *Salmonium*, *Broughtonianum*, and *Mundulum*.

Hydrangea japonica.—Prize 1*l.* 5*s.*, Mr. J. Robertson; a large luxuriant bush.

Statice macrophylla.—Prize 1*l.*, Messrs. Forrest and Co., nurserymen, Kensington. Of this very good variety, three remarkably healthy plants were shown, each having several spikes from 2 to 3 feet high, of fine blue-purple flowers.

Tulips.—Two stands, each of 24 blooms, were shown, but no prize awarded. Messrs. Norman, florists, Woolwich, had good blooms in their stand, of *Holmes's King*, *Goldam's Maria*, *Violet Alexandre*, *Polyphemus*, *Sir R. Peel*, and a pretty small bloom of *Triumph Royal*. Mr. Henbury, florist, Croydon, exhibited the other stand, which was only a very moderate one.

SINGLE SPECIMENS

of stove or greenhouse plants, of very superior cultivation.

Three first prizes, of 4*l.* each, were liberally awarded for most magnificent specimens of the following:—

1. *Saccolabium guttatum*, to Mr. C. Roe, gardener to J. Blandy, Esq., High Grove, Reading.—This was perhaps the finest specimen of this kind of orchidaceous plant ever seen: it was growing in a circular wire basket, 3 feet in diameter, and about 1 foot deep. This basket was filled with sphagnum, in the centre of which the plant was placed, spreading gracefully to the sides, its elegant flowers reclining upon the moss. This was one of the most remarkable features of the exhibition.

2. *Aerides odoratum*, to Mr. Basset, gardener to R. S. Holford, Esq.—This was a magnificent plant, ornamented with about 20 large spikes of bloom upon it, and being one of the loveliest species of orchideæ, was very attractive.

3. *Azalea variegata*, to Mr. Falconer, gardener to A. Palmer, Esq.—This certainly was the best bloomed specimen of this showy plant we ever saw; the plant was about 3 feet high, and from 4 to 5 feet in diameter, the branches drooping over the sides of the pot, forming a depressed cone, and covered with a complete sheet of bloom, so that scarcely a green leaf was perceptible.

No 2nd Prize was given.

3rd Prize, *1l. 5s.*, Mr. May, Woodford, for *Chorozema Henchmanni*, 2 feet, profusely in bloom.

Three 4th Prizes, of *1l.* each, were awarded to the following:—

1. *Eriostemon buxifolium*, Messrs. Veitch and Son, Exeter, in fine bloom.

2. *Boronia serrulata*, Mr. R. Pool, Leyton, 2 feet high, bushy.

3. *Ixora coccinea*, Mr. J. Bruce, gardener to B. Miller, Esq., 4 feet high.

Five 5th Prizes, of *10s.* each, were awarded:—

1. *Kennedia monophylla*, Mr. J. Hill, gardener to T. Davis, Esq., 4 feet, well bloomed.

2. *Boronia serrulata*, Mr. Hunt, gardener to Miss Traill, 4 feet high, trained in a balloon shape, full of bloom, and a good specimen of excellent culture.

3. *Brugmansia Knightii*, Mr. Cole.

4. *Thunbergia chryseops*, Mr. Green, gardener to Sir E. Antrobus.

5. Ditto ditto Mr. Robertson, gardener to Mrs. Lawrence.

In addition to the above, we observed *Gloxinea Cartonii*, a pretty variety from Mr. Beck, *Clerodendron infortunatum* from Mr. Jack, *Pimelea spectabilis* from Mr. Bruce, with some others.

NEW OR EXTREMELY RARE ORNAMENTAL PLANTS.

No 1st or 2nd Prizes were awarded.

Two 3rd Prizes, of *1l. 5s.* each, were adjudged for—

1. *Chlorcea chrysantha*, Mr. Cameron, Birmingham Botanical Garden, a rare plant, inhabiting the hills of Chile, and now blooming

for the first time in Europe; it has rich yellow flowers, and the habit of an European orchis.

2. *Franciscea Pohliana*, Messrs. Veitch and Son, Exeter, figured in our present number.

4th Prize, 1*l.*, *Daviesia cordifolia*, Mr. J. Robertson, a new and pretty flower, but wanting compactness in habit.

Three 5th Prizes, of 10*s.* each, were awarded—

1. *Odontoglossum cordatum*, Messrs. Booth, nurserymen, Hamburg, a small plant not remarkable for its beauty, but very rare.

2. *Tropæolum Lobbianum*, Messrs. Veitch and Son, an excellent new species with bright orange-scarlet flowers.

3. *Siphocampylus, nova spec.*: Messrs. Veitch and Son, of which see our description in ART. I.

In addition to the above we observed a specimen of *Tropæolum Brickwoodii* from Mr. G. Stanley (see our figure), a seedling *Zichya*, named *longipedunculata*, of good habit, and having small bright red flowers, from Mr. J. Agate, Croydon; and a seedling *Gesneria*, called *macculata*, from Mr. Stedman, Isleworth.

SEEDLING FLORIST'S FLOWERS.

1844.

Pelargonium.—Prize 1*l.*, Rosy Circle, Mr. Beck, Isleworth; a rather small but compact flower of good shape, with short well-formed petals, smooth on the edge; lower petals broad, of a rosy pink, with the centre blush-white; top petals crimson, with a dark blotch, softening to the edge and terminating in the centre without the feather; the flower is stout, and retains its form well; the plant is of good habit, an abundant bloomer, and will make a good show variety.

Ditto. Prize 1*l.*, Arabella, Mr. Beck; a fine shaped flower, with a pure white centre, the lower petals rosy colour; the upper petals have a large dark spot gradually softening towards the edge; a clear and good coloured variety, and if it can be grown free from a disposition to notch in the upper petals, which we observed in the specimen, will prove an excellent show flower.

Ditto. Prize 1*l.*, The Pearl, Mr. Catleugh, florist, Chelsea; this is a clear white flower, and as good whites are greatly wanted, we admit this to be an acquisition, though it is not so good in shape as

to have passed in a more general colour, and the crimson spot is too small.

Calceolaria.—Prize 10s., Exemplar, Mr. Kinghorn, Twickenham; a flower of fine form, the ground colour is a canary-yellow, small spots of which are seen only, the surface of the flower being nearly covered by bright-brown, and still deeper brown spots.

Cineraria.—Prize 10s., *Smithii*, Messrs. C. D. Smith and Co., Pimlico; a tolerably good flower, of a distinct purple colour.

1845.

Pelargonium.—Prize 10s., Mount Etna, Mr. Hoyle, Jersey; a flower of brilliancy and richness in colour, the lower petals deep rosy-red, the top petals have the spot surrounded by a broad margin of crimson scarlet; the flower is well formed, except some roughness about the margin of the upper petals.

Ditto. Prize 10s., *Isabella*, Mr. Hoyle; this too lacked smoothness of the margin, the top petals are deep velvety maroon, with a narrow edge of pink; centre light, with the remaining portion of the lower petals of a rosy purple.

The next exhibitions take place on June 21 and July 12.

Our next number will contain a report of the Royal Botanic Society's show.

ARTICLE VI.

ON RAISING RANUNCULUSES FROM SEED.

BY A FLORIST.

SHOULD you think the following worthy a place in your Magazine, I should feel obliged by your inserting it in an early number.

Ranuuculus seed is to be procured from semi-double flowers; care should therefore be taken to save it from such as are possessed of good properties, viz., such as have full strong stems, a considerable number of large well-formed petals, and rich good colours, chiefly preferring the darker, but not to the exclusion of the lighter coloured when their properties answer the foregoing description. The seed should remain on the plant till it has lost its verdure, and becomes brown and dry; it may then be cut off, and be spread upon paper, in a dry room, exposed to the sun, that every degree of hu-

midity may be exhaled from it, in which state it should be put into a bag, and preserved in a dry warm room till the time of sowing, otherwise it will be in danger of contracting a dampness, which will soon produce a mouldiness that will infallibly destroy it. January is the proper time to sow the seed ; and in order to prepare it, it must be separated from the stalks to which it is connected in the following manner, viz. : in the first place it should be taken out of the bag and spread thin upon paper, tea tray, &c., and placed before a moderate fire, till it is just warm, and no more ; the seed will then easily scrape off, by means of a penknife ; but great care must be taken to avoid scraping it off in lumps, or suffering any pieces of the stalk, dried petals of the flower, or other extraneous matter to be mixed with it, which would create a mouldiness, when sown, of very destructive consequence ; when the seed is scraped in a proper manner it will have the appearance of clean coarse bran, with a little brown or purple speck in the centre of each cuticle, which is the kernel.

When the seed is thus prepared, it should be sown on a shallow frame provided with glasses, similar to those made use of for cucumbers and melons ; the soil should have been previously taken out, three feet deep, and spread thin upon the ground till it has been perfectly frozen throughout, in order to destroy any vermin it may have contained. When the pit is filled up again with the frozen lumps of earth, it should remain till the whole mass has thawed and subsided to its pristine bulk, or nearly so ; its surface should then be made perfectly smooth and even, and the seed sown upon it with the utmost regularity, in such a quantity as nearly to cover it ; the glasses should be placed over it immediately, and the frame kept closely covered with them, for two or three days, till the seed begins to swell and soften ; a little light earth should then be sifted upon it, through a fine sieve, but not sufficient to cover it ; this should be repeated once or twice a week, till the greater part of the seed disappears : it is proper to remark that such seeds as happen to be covered deeper than the thickness of a half-crown piece will never vegetate, and must, of course, inevitably perish. It is necessary that the seed be kept moderately moist by gentle watering with soft water that has been exposed to the sun, but too much moisture is nevertheless injurious.

About the time that the plants begin to appear, it is requisite to stir the surface of the earth with a pin, just sufficiently to admit air, and

give liberty to the young plants to pass easily through; this operation should be very carefully performed to prevent breaking off the fibres, or raising and leaving any of the plants out of the earth, because one hour's sun upon such would certainly destroy them.

After the plants are all up, and their two interior leaves appear, more air must be given, by having hurdles or lattice work substituted for the glasses; watering must be regularly continued in the manner before described, when the long continuance of dry weather renders it necessary; but fine warm showers of rain are always preferable when they happen in due time.

This kind of management is to be continued till the roots are matured, and fit to take up, which is known by the foliage becoming brown, dry, and nearly consumed. The roots are to be dried and preserved in the usual way, and to be planted the same time as large ones in the autumn; the greater part, or such as have two or more claws, will blow in tolerable perfection the following summer.

ARTICLE VII.

ON THE CULTURE OF LOBELIAS.

BY AN AMATEUR FLORIST.

THE genus *Lobelia* comprises plants of much interest to an admirer of flowers: some of them exhibiting blossoms strikingly elegant, brilliant, and beautiful, and of a commanding figure in stature; whilst others, more humble in growth, are equally pretty and pleasing. In the former class, the plant rears up its splended spike of the richest possible hue; the other, in prostrate beauty, displays a carpet of simple, yet engaging elegance.

Thinking a few hints on the culture of a number of the *Lobelias* would be acceptable to the readers of the CABINET, induced me to draw up the remarks here transmitted for insertion therein.

The *Lobelia* was so named by that eminent French botanist Father Plumier (who discovered the first species of it in America), in honour of Dr. Lobel, a learned botanist, who published the figures of a great number of plants at Antwerp, in 1581, and two or three other gardening books before that time. The genus is now ranked in the class Pentandria, and order Monogynia, although formerly classed in

Syngenesia. The natural order is *Lobeliaceæ*, very closely allied to *Campanulaceæ*, from which their colour alone distinguishes them.

Lobelia cardinalis and *siphilitica* are natives of Virginia; *fulgens* and *splendens*, natives of Mexico; to which must be added the following hybrid productions raised in this country, viz., *fulgens multiflora*, *lateritia*, *refulgens*, *pyramidalis*, *Queen Victoria*, *grandis*, *Bathania*, *Chalmeri*, *topaz*, *longiflora*, *longifolia*, *siphilitica alba*, *Altontowriensis*, *Milleri*, *purpurea nigra*, *coccinea*, *coccinea superba*, *densiflora*, *dentata*, and *cærulea*. These are upright growing kinds in the way of *L. fulgens*; they are most beautifully distinct in colours, and blooming from the beginning of June to the end of October, are exceedingly valuable as ranking among the most striking ornaments either to adorn the greenhouse or flower garden. *Lobelia salicifolia*, *speciosa*, and *Tupa*, are handsome, but generally require the protection of a greenhouse.

All *Lobelias* are poisonous, though some have been used medicinally, as *Lobelia siphilitica*; hence its name. *L. cardinalis* is used as an Anthelmintic, or destroyer of worms. *L. inflatus*, a very active emetic,—I believe the most active known. *L. Tupa* yields a dangerous poison; the smell frequently causes headaches. *L. longiflora* is a most venomous plant; when taken inwardly nothing can stay its effects, and death is the sure consequence. I have inserted these remarks, more closely allied to botany than other parts of gardening, as a warning to any inexperienced persons (whom the splendid colour of the flower might deceive), considering that the names of all, and more especially such dangerous plants, cannot be too fully pressed upon every one's memory.

L. cardinalis and *siphilitica* can be propagated in the best manner from seeds, which ripen well in this country. All the other sorts I have named above can be propagated from seeds, offsets, and cuttings. I take off the suckers in October, and put each one in a pot, protecting them in a frame during the winter, forcing them gently on a dung hotbed, and shifting the plants into larger sized pots at various times as they require it. The compost I use is made up of yellow loam and a small quantity of leaf mould and sand mixed with it. The period when they require this repotting is from February to May. At the commencement of the latter month I remove them into a greenhouse, retaining such as I purpose for ornamenting the house during summer, and harden the others gradually to bear the full exposure of the

open air. By this time they will have just begun to push forth flower-stalks; and some of the hardened plants must then be placed in water—if there is the convenience of an Aquarium, so much the better; if not, a saucer filled with water is a very good substitute. Other plants must be planted out of pots in the open beds of the flower garden, keeping the balls as entire as can be done. They will begin to flower in June, and, if shaded, will last for many months in brilliant bloom. Shading is a general rule for all high-coloured flowers, such as *Trevirania coccinea*, *Crassula coccinea*, &c.

Propagation, by cuttings, is very frequently adopted. In June, take a young stalk, and divide it into lengths of five or six inches each; plant them under a hand glass, upon a border having an eastern exposure; water occasionally. Cuttings thus put off, strike with remarkable facility, and will be well rooted in a month, when the young plants may be managed as above directed.

As the plants always bloom the first or second year, it is the best plan to raise a good supply from seed. It should be sown immediately after it is ripe, and be protected under a frame. In the spring the seeds will begin to vegetate and the plants appear; they should be transplanted into pots, and repotted as they require it during the year. The spring following they should be put into pots sufficiently large to give full scope to their roots, when they will be in flower about July.

The suckers should be taken off every autumn; for, if this is neglected, the plant will very likely be lost, as the stem will die down and rot; thereby weakening, if not destroying, the growing plants.

With the little trouble in culture above described, they will form one of the greatest ornaments in the flower garden. I have them frequently four feet high.

ARTICLE VIII.

METHOD OF OBTAINING DWARF PLANTS OF THE CHINESE CHRYSANTHEMUM.

BY CLERICUS.

THE following easy method of obtaining dwarf plants of the above beautiful autumn flower I have practised with success last season, and I believe it is not generally known. In the month of September, when the plants have begun to show the flower-bud, take those

from which you want to have dwarf ones, and tie some moss and mould round the stalk, about a foot or half a foot (according to the height of the plant you desire) from the head of the plant; tie it round tight, and in a fortnight roots will strike to the moss, when it may be taken off and potted; by this means you will have a pretty dwarf plant at once, without much trouble. I have this season several of the tall growing kinds in pots about a foot high, looking extremely beautiful.

REVIEW.

The Lady's Country Companion, or, How to enjoy a Country Life rationally. By Mrs. Loudon, author of "Gardening for Ladies, &c.," with an Engraving on Steel, and Illustrations on Wood. London, Longman and Co., 1845.

(Continued from p. 136.)

I will now tell you how I would plant the beds. As this is the beginning of April, and as I wish your garden to look well immediately, I would advise you to get a few pots of Californian and other annuals, usually raised in pots, from the nurseryman at the neighbouring town, and to plant them, putting three potfuls in each bed, but no more. In No. 1 put Phlox Drummondii, the flowers of which are crimson of various shades, and let the stems be pegged down so as to spread over the bed. No. 2 may be *Lasthenia californica*, the flowers of which are yellow, and the stems generally procumbent; but they may be pegged down to keep them in their proper places, that is, to spread completely and regularly over the bed. No. 3 should be *Nemophila insignis*, the flowers of which are of a beautiful blue, and which will not require pegging down. No. 4 may be *Erysimum Petrowskianum*, the flowers of which are of a bright orange, but the stems must be pegged down, or they will grow tall and straggling. No. 5 may be *Nolana atriplicifolia*, the flowers of which are blue, and resemble those of a convolvulus; this is a procumbent plant, and will not require pegging. No. 6 may be *nemophila atomaria*, which has white flowers, and is a dwarf plant. No. 7 may be *Leptosiphon densiflorus*, a dwarf plant, with pale purple flowers. No. 8 may be *Gilia bicolour*, a dwarf plant, with nearly white flowers. No. 9 may be *Cliftonia pulchella*, a beautiful

little plant with blue flowers. No. 10 may be *Gilia tricolor*, a dwarf plant, the flowers of which are white and very dark purple. No. 11 may be *Leptosiphon androsaceus*, a dwarf plant, with pale lilac flowers; and No. 12 *Schizopetalon Walkeri*, the flowers of which are white, and the stems must be pegged down. These are all annuals, which, if properly treated by pegging down, and not planted too close, will produce a mass of flowers in each bed only just above the surface, and will have a pretty effect from the windows. Most of them like a poor clayey soil best, and they will only require turning out of the pots without breaking the ball, into the places prepared for them.

If you think there are too many white beds, you can substitute *Sanvitalia procumbens*, the flowers of which are yellow, for No. 8, but the seeds must have been sown the previous autumn to bring it forward, as otherwise it will not flower till late in the summer; and *Bartonia aurea*, the flowers of which are of a golden yellow, may be planted instead of No. 12. *Cladanthus arabicus*, formerly called *Anthemis arabica*, which has yellow flowers, may be planted in No. 8, if *Sanvitalia* cannot be obtained.

I do not think you have ever told me what soil yours is, and perhaps you hardly know. You will, however, easily recognise gravel or chalk; if the soil be red, it is probably, if loose, a sand, and if close, a marl; a peaty soil is black and loose, and a clay may be known by water standing in little pools after rain without running off. This is one of the worst soils for gardening purposes, but it may be improved by mixing it with sand.

I shall now give you a list of half-hardy plants for autumn, as most of the annuals will begin to look shabby in July or the beginning of August. No. 1, *Verbena Melindres*, bright scarlet; No. 2, *Oenothera Drummondii*, yellow; No. 3, *Lobelia bicolor*, blue; No. 4, *Calceolaria rugosa*, pegged down; No. 5, *Verbena Tweediana*, crimson; No. 6, common White *Petunia*; No. 7, *Verbena Arrariana*, or Henderson's purple; No. 8, *Calceolaria integrifolia*, yellow; No. 9, Purple *Petunia*; No. 10, *Verbena teucroides*, white; No. 11, *Frogmore Pelargonium*, bright scarlet; No. 12, Musk plant, yellow.

In October the following bulbs and other plants may be put in for flowering in early spring. No. 1, Von Thol Tulips; No. 2, Cloth of Gold, or common Yellow Crocuses; No. 3, Blue Hepatica;

No. 4, Yellow Crocuses, or White Anemone; No. 5, *Scilla verna* and *sibirica*, blue; No. 6, *Arabis albid*a, white; No. 7, Double Pink Hepatica; No. 8, Winter Aconite; No. 9, Purple Crocuses; No. 10, Snowdrops; No. 11, Primroses; No. 12, White Hepatica, or *Arabis alpina*.

If you do not like the plan for a garden which I have sent you, you can draw one according to your own fancy, of any figure you like; but as I believe you have not yet a regular gardener, it will be necessary to teach you how to transfer the plan you have decided upon from the paper to the ground. In the first place the ground must be dug over, raked, and made perfectly smooth. The pattern, if a complicated one, must then be drawn on Berlin paper, which is covered with regular squares, and the ground to be laid out must be covered with similar squares, but larger; the usual proportion being, that a square inch on the paper represents a square foot on the ground. The squares on the ground are usually formed by sticking in wooden pegs at regular distances, and fastening strings from peg to peg, till the whole ground is covered with a kind of latticework of string. Each string is then chalked, and made to thrill by pulling it up sharply and letting it go again, which transfers the chalk from the string to the ground. When the ground is thus covered with white squares, it is easy to trace upon it, with a sharp-pointed stick, any pattern which may have been drawn on the paper; the portion in each square on the ground being copied on a larger scale from that of the corresponding square on the paper.

Simple patterns, consisting of straight lines, need only to be measured, and pieces of string stretched from pegs put in at the proper distances, so as to form straight lines, oblongs, squares, triangles, or diamonds. If a circle is to be traced, it is done by getting a piece of string half the length of the diameter of the circle, with a piece of stick tied to each end. One stick is then driven into the ground in the centre of the circle, and a line is traced with the stick at the other extremity of the string, which is drawn out quite tight. An oval is made by tracing two circles, the circumscribing line of one of which just touches the centre of the other; short lines are afterwards made at the top and bottom, and the central lines are obliterated. A square only requires a peg at each corner, with a chalked string

drawn from peg to peg; and an oblong or parallelogram is made by joining two common squares, and taking off the corners, if required.

Suppose a garden is composed of a bed in the centre for a tree rose with a circle of dwarf roses; a gravel walk surrounds these; and there are five heart-shaped beds, which may be planted with Scarlet Pelargoniums, yellow Calceolarias, Petunias white and purple, and tall yellow Mimulus; and the crescent-shaped beds, which are on grass, may all be planted with different kinds of Verbenas. This plan is also a good design for a rosery, the roses to be planted in the beds, and in the half crescents, which must be on grass, with gravel walks between the grass plots.

All the beds intended for bulbs and half-hardy plants should be particularly well drained; and the best way of doing this is, to dig out the soil to the depth of two feet or more, and then put in a layer of brick-bats and other rubbish, to the depth of nine inches or a foot. On this should be placed a layer of rich marly soil, in which the bulbs should be planted. Dahlias, hollyhocks, and other tall-growing, showy-flowered plants, should have similar beds prepared for them, but the soil should be made very rich by the addition of the remains of an old hotbed, or some other kind of half-rotten animal manure.

You will observe, that when I give directions for planting the beds in any of the plans I send you, I merely say what may be done, and not what is absolutely necessary. Indeed, it will be better for you to vary the flowers as much as possible, according to your own taste, provided you take care that the plants are, as nearly as you can contrive it, of the same height, or that they rise gradually, and that you contrast the colours well. The rule in the latter case is, always to put one of the primitive colours (red, blue, and yellow) next another of these colours, or some colour compounded of the other two; using white wherever you cannot find any handsome plants of a colour that will suit the bed you want them for. Thus, for example, if you plant one bed with red, you may plant the next with blue, yellow, green, hair-brown, or white, but never with any shade of purple, as red enters into the composition of that colour; nor with any shade of reddish brown; purple, indeed, must always be next yellow, hair-brown, or white, but never next blue, red-brown, or red. Orange will not look well near yellow or red; and lilac must not

approach blue or pink. A little practice will do more than any lengthened details; generally speaking, you may take the same taste to guide you in arranging the colours of the flowers in your parterre that you use in choosing the colours of your dresses; and if you are in any doubt, you have only to colour the beds in the plan, and see how they look; or to stick coloured wafers on a piece of paper, for the same purpose.

When you have settled what to plant in the beds of your garden, supposing you to choose the plan, you must next think of the beds round it. I should advise these to remain unplanted, unless they are sown with mignonnette, or something of that kind. The shrubberies, I have already stated, should, I think, consist chiefly of the finer kinds of hardy evergreens; at least that should which is opposite the windows of your sitting-room. The other shrubbery, which is intended to unite the garden scenery with that of the park, may be planted with rhododendrons, acacias, and kalmias; the rhododendrons being farthest from the walk, and carried a little out into the park, so as to make a broken line, projecting in some places, and receding in others, and here and there mixed with bushes of phillyrea, alaternus, holly of various kinds, and cratægus, so as gradually to mingle with the clumps of trees in the park. On the side next your room, if there are to be beds under the windows, there should be spaces left in them which should be gravelled, so that you may throw the window open, and not only walk out on gravel, but walk round the garden on gravel also. This you will find a great convenience if the weather should be wet, though you must not mind going upon the grass, if you are to be a real gardenet, and to attend to the flowers in the regular beds. With regard to the beds near the house, I would have a *Lonicera flexuosa* trained over each window, on account of its delightful fragrance in summer; for a similar reason I would have *Chimonanthus fragrans* against the walls between the windows, and mignonnette and violets in the beds.

I think nothing can be more delightful than to throw open your window, and to inhale a refreshing odour from growing flowers when they are swept over by a balmy breeze, particularly after a slight shower; and, for this purpose, I would strongly recommend you to plant flowers near your windows which have a refreshing, but not a heavy scent. The flowers of the evergreen magnolia, and those of the

orange, have an oppressive fragrance, as have those of the heliotrope and the tuberose ; but those of the mignonnette, the lemon-scented verbena, the rose, the violet, and *Lonicera flexuosa* are refreshing, at the same time that they yield a delicious perfume.

I must now give you some hints on cultivating your flowers. To begin with the *bulbs*, as they flower first in spring. The crocuses and snowdrops should be planted, five or six together, as close as possible, so as to form little tufts ; and these, when once planted, should never be removed, unless they should grow out of bounds, so as to spoil the shape of the bed. The tulips, on the contrary, should be taken up as soon as their leaves begin to decay, and kept in a dry place till the proper time for planting them next year.*

You must observe that there are three kinds of plants which are said to have bulbous roots : those which are solid, and which should be properly called corms, such as the crocus, the corn-flag, and many of the half-hardy plants with similar half-tubular flowers ; the tunicated bulbs, which may be peeled off in scales, such as the onion, the hyacinth, and the tulip ; and the scaly bulbs, such as the lily. Now the real roots of all these plants are the long fibres sent down by the lower part of the bulb, which may be seen plainly in hyacinths grown in glasses, and in any of the kinds if taken up while in a growing state ; and what is called the bulb is, in all the corms, only a contracted stem ; but, in the tunicated and scaly bulbs, the bulbous part is formed of a contracted stem and metamorphosed leaves. If you will take the trouble to examine a hyacinth, you will find at the base of the bulb a flat fleshy substance, called the root-plate, and this is, in fact, the contracted stem of the plant ; while the tunics or scales are metamorphosed leaves. In the scaly bulb the stem is plainly perceptible in the centre, and the scales are evidently metamorphosed leaves. You will easily remember these distinctions, and you will find it useful to attend to them in cultivating your garden, as all plants having corms never flower well till they have been allowed to form a mass, which they will not do till they have been in the ground three or four years.

(*To be continued.*)

PART II.

LIST OF NEW AND RARE PLANTS.

ARCTOSTAPHYLOS NITIDA. SHINING-LEAVED BEARBERRY. (Bot. Reg. 32.) Ericaceæ. Decandria Monogynia. A hardy evergreen shrub, obtained from Mexico by G. F. Dickson, Esq. It has bloomed in the garden of the London Horticultural Society. It usually blooms in May, and again in Autumn. The shrub grows to five or six feet high. The flowers are numerous produced, in large terminal branching panicles; each blossom similar in size to the Irish Heath; and, being white, give a very pleasing appearance. It deserves a place wherever it can be grown.

BOLBOPHYLLUM CAREYANUM. DR. CAREY'S. (Bot. Mag. 4166.) Orchidaceæ. Gynandria Monogynia. A native of Nepal, and has recently bloomed in the Royal Gardens at Kew. It is more curious than showy. The flowers are very small; yellow, with red spots.

CAJANUS BICOLOR. TWO-COLOURED PIGEON PEA. (Bot. Reg. 31.) Leguminosæ. Diadelphis Decandria. (Synonym *Cytisus* Cajan.) Seeds of this Pea were collected near to the town of Jellalabad, at the period of the place being so nobly defended by a portion of the Indian army, under the command of Sir R. Sale. Plants have bloomed in the garden of the London Horticultural Society. It is a half-hardy annual, or biennial; growing half a yard high; blooming freely during the summer months. The inside of the flowers is a pale sulphur, and the outside red, with yellow streaks. Each blossom is about half the size of a Sweet Pea flower.

COMBRETUM LATIFOLIUM. BROAD-LEAVED. (Pax. Mag. Bot.) Combretaceæ. Octo-decandria. A native of the East Indies. It has bloomed vigorously in the collection of Mr. Henderson, at Pine Apple-place Nursery, London. It is an evergreen climbing shrubby plant, having a striking resemblance to *C. grandiflorum*; but the spikes of the flowers are rather shorter, and the stamens are not so long. The flowers are of a rich crimson red. The plant is much more robust than *C. grandiflorum*. It is a fine plant for covering a trellis, or a pillar.

DENDROBIUM KINGIANUM. CAPTAIN KING'S DENDROBIUM. (Pax. Mag. Bot.) Orchidaceæ. Gynandria Monandria. A native of New Holland, and has bloomed in the collection of Messrs. Loddiges. The plant is dwarf. The flower-stems rising from four to six inches high; each producing three or four blossoms; a separate flower is about an inch across, of a rosy-purple colour.

ECHINOCACTUS OXYGONUS. SHARP-ANGLED. (Bot. Mag. 4162.) Cactæ. Icosandria Monogynia. A native of South Brazil, and is in the Kew collection. It is a very free-flowering plant. The tube of the flower is trumpet-shaped, greenish, with red-brown scales, eight inches long. The petals, outside, are of deep red-rose; inside, of a pale rose. Stamens and anthers yellow. Each flower is about six inches across the front, when expanded. The plant is an abundant bloomer, and, being of the sub-globose form, with numerous deep furrows, is a very interesting object.

MASDEVALLIA PENETRATA. WINDOWED MASDEVALLIA. (Bot. Mag. 4164.) Orchidaceæ. Gynandria Monandria. Sent from Jamaica to the Kew collection. It is a dwarf plant. The flower-stem rising about four inches high, of a rich brown blood colour. Each blossom about an inch long. It blooms throughout winter.

PRONAYA ELEGANS. THE ELEGANT. (Pax. Mag. Bot.) Pittosporaceæ. Pentandria Monogynia. It is a native of New Holland; a twining smooth greenhouse plant. It is an evergreen shrub, having the aspect of *Marianthus cœrulea-punctata*, and bears a close affinity to *Sollya* and *Billardiera*. The flowers are produced in cymose heads; each blossom being about an inch and a half across, of a pretty blue-purple, with a rosy tinged centre. It is a very neat and beautiful flowering plant, well deserving a place in every greenhouse.

SCHOMBURGKIA TIBICINUS-GRANDIFLORA. LARGE-FLOWERED. (Bot. Reg. 30.) This is a noble variety of a lovely Orchideous genus. It has bloomed in the collection of Robert Haubury, Esq. The pseudo bulbs being fifteen inches long, and the flower-stem five feet high. Each blossom is near three inches high. Sepals and petals brown, with lilac-pink towards their origin. The lip is yellow, with a few streaks of red. It deserves to be in every collection.

SPIREA LINDLEYANA. DR. LINDLEY'S SPIREA. (Bot. Reg. 33.) Rosaceæ. Icosandria Pentagynia. It is a native of the Himalayas; a fine tall shrub, flowering abundantly from June to September. During three winters it stood in the open ground uninjured; but it was killed down as far as the ground; it is again shooting up. The flowers are numerous produced, in large terminal branching paniced heads; white. The shrub has bloomed in the garden of the London Horticultural Society, and well deserves to have a place in every shrub border.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON THE TREE CARNATION.—An old subscriber to the FLORICULTURAL CABINET will be obliged for some information on the culture and habits of the Tree Carnation, and if it will live in a cool greenhouse? Will the *Mandevilla suaveolens* bloom in the same situation? It has lived through the winter, and made some shoots this spring, but is always covered with the green fly.

[A strong infusion of chamomile or tobacco water, sprinkled liberally over and under-side the foliage, or suffocate by smoke, will readily kill the insects, and the plant may easily be kept free in future. Stop them at first appearance. The *Mandevilla* will bloom freely in a warm greenhouse. The Tree Carnation will do in any good greenhouse, and requires no more than the common attention of a rich loamy soil, and to have a liberal drainage. It is easily increased by layers.

CONDUCTOR.]

GERANIUMS.—Having a few good ones in my greenhouse, I am anxious to increase my collection. Will any correspondent furnish me with a list of the newest and best? likewise the best method of propagating by seed? Evesham, June 20, 1845.

M. A.

An answer in your next will oblige.

REMARKS.

OBSERVATIONS ON THE GARDENS AND COLLECTIONS OF PLANTS AT EALING PARK, NEAR LONDON.

[Continued from p. 144.]

THE following are a few, and a few only, of the plants which compose this part of the collection:—*Phœnocoma prolifera*, 3 feet high, and 3 feet across; there are two of these dense bushes, one of them is 4 feet through, and coming into bloom; *Dillwynia subumbellata*, 2 feet 6 inches high, and the same in diameter—a fine plant; *Chorozema cordatum*, 7 feet high, and 5 feet through—a monstrous plant, loaded with flowers; also *Chorozema ericoides*, fine; *Anthocercis littorea*, in flower, well grown, and 3 feet high; the old Coral-tree, 6 feet high, and 5 feet across, with 15 spikes of flower coming up, will shortly be a magnificent object; *Chironia frutescens*, very fine; and *Stylidium fasciculare*, like a huge bush; *Babingtonia camphorosma*, in good health; likewise three enormous plants of *Chorozema varium*; *Hardenbergia Comptoniana*, on a trellis,

6 feet high, covered with flowers; the scarce *Enkianthus reticulatus*, 4 feet high, and in fine health, so also is *Illicium religiosum*; *Loddigesia oxalidifolia*, is 2 feet high, and 3 feet through—a beautiful and perfect specimen; two fine *Gompholobium* polymorphums, on shield trellises, very good, and coming into bloom; on similar trellises are good plants of *Tropaeolum edule* and *tricolorum*; *Eleocarpus dentatus*, and *Podolobium trilobatum* are in fine health; so is *Scottia dentata*; *Zichya villosa*, on a shield trellis, 5 feet by 4, is really grand; *Gastrolobium spinosum*, a rather scarce plant, proves to be a most valuable acquisition to our greenhouse plants, and is here coming beautifully into bloom; *Oxylobium Pultenæ* is also finely in flower, and, by its side, forming a beautiful contrast with its violet-purple flowers, is *Prostanthera violacea*, 4 feet high by 3 feet across; close by these stand splendid plants of *Daviesia latifolia*, *Acacia pulchella*, and *Indigofera australis*, all in perfect beauty; *Dillwynia speciosa*, 3 feet by 3, in flower, contrasting with *Pimelea spectabilis*, 4 feet high, and 4 feet through—a perfect specimen of superb cultivation: *Boronia Fraseri*, 4 feet by 3, a good bushy plant, in rude health; the scarce and snifty *Merbella grandiflora* promises to make a good specimen; *Chorozeia Henchmanni* betrays skilful treatment, and will shortly be in bloom; so likewise does a plant of a new *Daviesia*, with showy flowers; the scarce *Dracophyllum gracile* deserves our especial commendation; for, although scarce in collections, no garden should be without it. The elegant *Indigofera incana* is also another subject of much interest, and will shortly be a picture of great beauty. There is a new *Gastrolobium*, which promises well, and is growing away vigorously. There are also the following very remarkable plants:—*Acacia cultriformis*, *Coleonema pulchrum*, 3 by 5 feet; *Gmidia pinifolia*, 2½ by 3 feet, a lovely plant; *Rapricis cerniflora*, with elegant white flowers, and in profuse bloom; *Diplolena Dampieri*; *Platylobium formosum*; and *Adenandra speciosa*, all large and healthy specimens; *Veronica speciosa*, an immense plant, 4 by 4 feet; *Pimelea decussata*, 4 by 3 feet, a superb bush; *Xanthosia rotundifolia*, large, and in good condition. We observed, among numerous other climbers, a superb plant of *Zichya coccinea*, trained to stakes. Indeed, the principal of the climbers are trained in this way; Mr. Robertson preferring these, both for convenience and appearance; certainly nothing could well exceed the effect produced by this plant. *Polygala bracteolata*, trained also to stakes, 4 feet high, with a corresponding diameter. Here also was the graceful *Acrophyllum venosum*, a plant of sterling interest, just throwing up numerous spikes of its feathery white flowers, 2 feet high, and 2 feet 6 inches across. *Pultenæ stricta*, *Selago Gilliesii*, and *Oxylobium retusum*, were all equally deserving of notice. The graceful and sweet-scented *Cytisus filipes*, 10 feet high, with abundance of pendant branches, covered with small white Pea blossoms, is an object of no mean beauty. In immediate connection with this stood an enormous plant of *Acacia alata*, 10 feet high, in profuse blossom. *A. platyptera*, 5 feet high; *A. pulchella*, 6 feet high, and 5 feet in diameter; and *A. verticillata*, 9 feet high. These are trees under glass far surpassing the usual inhabitants of greenhouses. *Leschenaultia biloba*, 4 by 4 feet; *L. formosa*, 2 by 4 feet through, very fine. *Eriostemon buxifolium*, of which there are two remarkable specimens, were coming into blossom freely. *Cactus House*.—The kinds usually cultivated in this house have little interest in the eye of the scientific botanist, being chiefly those profuse blooming sorts remarkable for the gorgeousness of the blossoms. We noticed numerous large specimens of the following kinds:—speciosus, speciosissimus, *Ackermanii*, *A. major*, *Jenkinsonii*, *Lawrenceanus* (seedling), *Malleoni*, *splendens*, &c. *Heath House*.—This is a lean-to building, 40 feet by 16, containing all the rare kinds of this favourite genus; several pits are also stored full of them, as the house cannot contain above one-half of the collection. The following are superbly in bloom:—*Humeana*, *Beaumontiana*, *Templeana*, and the valuable *pinca*, scarcely ever seen in collections; three grand *depressas*, and a matchless *Cavendishii*, loaded with bloom; *Banksiana*, *splendens*, two *tricolor elegans*, two *gemmifera*, *infundibuliformis*, *ampullacea vittata*, *Pattersoni*, and a monstrous plant of *ventricosa globosa*; a large *intermedia*, *ampullacea*, *vittata*, superb, *grandiflora*, *cerinthoides*, *elata*, the charming *Blandfordiana*, and a huge *inflata*, 4 feet high, and 5 feet in diameter; *radiata*, 4 by

4 feet, troscula, 3 by 3 feet, and the pretty *andromedæflora*; two *persoluta albas*, 5 feet high, and 3 feet through; *Irbyana*, in capital condition; *tricolor*, *Archeryana*, *grandinosa*, *vestita coccinea*; the useful and lovely *ovata*, together with *Thunbergiana*, *ventricosa*, *coccinea minor*, *v. carnea*, *Aitoniana*, *Solandri*, *daphnoides*, *Bonplandiana*, the beautiful *Parmenteriana rosea*, and an excellent plant of *tortulæflora*, in first-rate health; *Macnabiana* in equally fine order; so was *elegans*.

We now come to the large stove, a house 55 feet wide, with three spans to the roof, and 65 feet long; the height is nearly 20 feet. Numerous rare birds, of rich and vivid plumage are placed near the *Orchidacæ*. Gold fish swarm in a basin of water below, overhung with Ferns and huge masses of gorgeous *Orchidaceous* flowers, constituting a rich and dazzling combination of tropical vegetation, in high keeping, surrounded with luxuriant foliage; a glass screen separates the general collection of plants from the *Orchidacæ*. There was a grand plant of *Cuphea Melvilla*; a cutting struck from the plant exhibited by Mr. Robertson last season, 4 feet through; this forms a useful plant for the greenhouse in autumn. *Gloxinia tubiflora* coming into bloom. *Tabernæmontana coronaria*, and *coronaria flore pleno*, beautifully in flower. *Clitoria fulgens*, a new climber; and some large plants of *Manettia cordifolia*, *M. splendens*, *Begonia sanguinea*, and *Pleroma petiolatum*, were also fine. *Thunbergia chrysops*, trained to stakes, is rioting away most gloriously; *Saurauja spectabilis*, a plant with fine foliage, is coming into flower; *Calliandra Houstoni*, *Æschynanthus Roxburghii*, and *Inga pulcherrima* are doing well; *Pavetta caffra*, 12 feet high, and well furnished, is in admirable health; so is *Allamanda cathartica*, 8 feet in height. There is a well-grown specimen of *Hindsia longiflora*, and another on stakes of *Dipladenia crassinoda*, 4 feet high, which will shortly be a magnificent object. *Begonia parvifolia* is finely in flower, so is a wonderful specimen of *Euphorbia splendens*. *Poveria coccinea* is very large on stakes, so are two plants of *Stephanotus floribundus*, one, the original plant introduced—certainly the parent of a valuable progeny; these are really grand objects scarcely to be described by so feeble a pen. There are also the following remarkable specimens:—*Franciscea latifolia*, *F. Pohliana*, *Centradenia rosea*, *Petrea volubilis*, *Burchellia capensis*, *Ardisia crenulata*, loaded with crimson berries; *Osbeckia sinensis*, *Clitoria Ternatea*, with blue pea flowers; Turner's *ulmifolia*, *T. elegans*, several large *Clerodendrons*, *C. hastatum*, *C. Hugelii*, and *C. splendens*; *Aphelandra cristata*, *Gesnera reflexa*, a magnificent *Lemouia spectabilis*, 3 feet high, and 4 feet through. Two very good *Rondeletia speciosa*, the rare *Aphelandra aurantiaca*, *Melhania Erythroxylon*, *Laplacæa semi-serratifolia*, *Ardisia mexicana*, and several large *Ixora coccinea*; *Echites splendens* is rambling away most luxuriantly; and *Barringtonia speciosa* is putting forth his broad *Magnolia*-looking foliage in great luxuriance. Among the *Orchidacæ* were some *Sobralias* just imported; *Odontoglossum hastatum* was sending out two fine spikes; *Oncidium divaricatum* was in capital health and finely in bloom; so were *O. luridum* var. and *O. ampliatum*, *Saccolabium guttatum*, *S. præmorsum*, *Aerides affine*, *A. affine rubrum*, *Barkeria spectabilis*, *Cattleya Mossiæ*, *C. crispata*, and *Oncidium pulchellum* were thrusting out their roots and spikes of flowers most vigorously. The following *Dendrobia* were very remarkable:—*D. nobile*, *D. moschatum*, *D. crispum*, *D. cupreum*, *D. cæruleum*, *D. calceolaria*, *D. densiflorum*, superlatively fine; *D. aggregatum*, *D. taurinum*, *D. sanguinolentum*, *D. Gibsonii*, *D. Dalhousiana*, *D. fimbriatum*, *D. chrysanthemum*, *D. Cambridgeanum*, and the curious *D. comminatum*. Many of these are immense plants; so are *Oncidium altissimum*, and two *O. Lanceanums*, *O. flexuosum*, and *O. Baueri*, *Vanda teres*, *V. violacea*, and *Saccolabium Blumei*, were in excellent health. There is a wonderful mass of *Aerides odoratum*, and large plants of *Camarotis purpurea*, *Phaius Wallichii*, *Schomburgkia violacea*, *S. marginata*, *Peristeria elata*, *Cymbidium giganteum*, *Vanda unicolor*, *V. Roxburghii*, *V. cærulea*, and *V. cristata*. The beautiful *Phalenopsis amabilis* is doing well; so is *Aerides virens*, *Epidendrum rhizophorum*, and a host of others equally grand. The curious *Cephalotus follicularis*, with its little pitchers, is thriving finely.

There is a range of five other houses, principally filled with choice plants;

two of them chiefly with Azaleas. The principal Azalea house is 40 ft. long, and contains some grand specimens; several large phœniceas, from 4 ft. to 6 ft. high, clothed to the ground with foliage and flowers; several whites of similar dimensions and growth; *sinensis*, 5 ft. high and 5 ft. through, is bursting literally into a mass of bloom; *speciosissima* 5 by 3 ft., fine; *Danielsiana*, several trained like standard Apples. Fine bushes of *Smithii*, *Rawsonii*, *mirabilis*, *leucomegista*, *splendens*, 5 ft. by 5 ft., a grand plant, double red; *pulchra*, 6 by 5 ft., and *purpurea macrantha*, and various other splendid specimens. The next house contains all the finer kinds known about London, new and old kinds; amongst them we noticed *exquisita*, a noble lateritia, densely covered with bloom, just expanding; a magnificent tree of *Danielsiana*, tricolor, triumphans, *coronata*, *rosea superba*, *phœnicea alba*, *Prince Albert*, *Hibbertii*, *grandiflora rosea*, *Apollo*, *Minerva*, *Decora*, *sinensis tricolor*, *leucomegista*, and *Prima Donna*. It is scarcely possible to imagine plants in more luxuriant growth than these; many of them in this house, although only one year out of the hands of the nurseryman, are already great rude bushes in rampant growth. The succeeding house is what is termed the intermediate house, and contains some fine things. *Gompholobium polymorphum luteum* is progressing rapidly, so also is a healthy bush of *Pimelea Hendersoni*. *Roella ciliata* is 2 by 2 ft., and in superb order. *Chorozema angustifolia*, *C. ovata*, and a new species of a fine genus, are all admirable; in a similar state of health is *Lalage ornata* and *Cosmelia rubra*. *Leschenaultia Baxteri* is making a fine plant, so is *Chorozema Dicksoni*. There is a fine plant of *Chorilœna myoporoides*, 3 ft. across and 3 ft. high, growing very rapidly. The scarce and beautiful *Daviesia cordata* is just coming into bloom. There are very large specimens of *Static macrophylla* and *S. arborea*, *Siphocampylus Betulæfolius* and *lantaniifolius*. *Solanum amazonicum* and *Canavalia bonariensis* are just expanding their blossoms. There is a fine plant of *Styphelia tubiflora*, and an immense one of *Æschynanthus formosissimus*. *Zichya rotundifolia* is shooting out vigorously, so also is a curious climber from New Zealand allied to *Echites*, named *Parsonsia heterophylla*.

The next and last house comprises a collection of *Pelargoniums* which are cultivated principally for exterior decoration, as a vast number of showy plants are required during summer for vases, beds, and other situations. Finally, Mr. Robertson conducted us to what is termed the North House, a desirable and most useful building in all large establishments where plants are required to be kept in bloom for any particular purpose, as is often the case at Ealing Park, not only for the great exhibitions of the Horticultural Society, where the collections of Mrs. Lawrence form objects of prominent interest, but also for the purpose of decoration during the gay parties which are so often given here during the summer. In this house we found noble plants of *Cytisus filipes* and *C. racemosus*, the latter 10 feet high and 7 feet through—a perfect mass of bloom; *Kriostemon myoporoides*, 7 by 4 feet, just in perfection, so likewise was *K. cuspidatus*, 6 feet high, and beautifully formed; *Acacia alata*, 10 feet high and 9 feet across, a most wonderful plant to be in a pot; *Kennedyia monophylla*, trained to stakes 6 feet high, and clothed thickly to the pot, is a sheet of purple. But our space is exhausted sooner than our subject, which, to be treated properly, would require a volume.

GUANO; ITS ACTION UPON THE GROWTH OF VARIOUS PLANTS, FRUITS, &c. By J. E. TRECHMACHER.—The ultimate object of vegetable life appears to me to be the production of seed; to this purpose, and to accumulate the properties and ingredients for the formation and perfection of this seed, the root, stem, leaf, and flower are devoted, each performing its destined gradual part, until, by their united efforts, brought into action by soil, light, heat, and moisture, this object is attained; exterior vegetable action then declines until another season. Experiment has shown that plants grown on mere sand, with the assistance of water, will throw out stem, leaf, and flower, nay, even the forms of seed, but these will be mere integuments, empty vesicles, or little bladders; also that by constantly stimulating with peculiar manure, we can throw plants into such uninterrupted luxuriance of shoots and foliage, that often the flowers, and more often the seeds, do not appear within the limits of the season. Combining these

views with others on the production of double flowers, and with some suggested by various experiments on guano, it seems to me highly probable that certain manures are particularly conducive to a luxuriant growth of stem and foliage, while others are peculiarly so to the production of numerous and well-filled seeds. Suppose the nitrogenous (ammoniacal) and alkaline (potash and soda) manures to be those chiefly instrumental in producing stem and foliage, then nitrate of soda will be valuable for this purpose, and if the soil itself contain the ingredients of the seed in a fit state for absorption, the plant thus thrown into a state of luxuriance will be enabled to draw from it sufficient to make plenty of good seed. But if the soil in itself contains them very sparingly, then this excess of stem and foliage, although containing a quantity of nitrogenous and palatable food for cattle, will be deficient in rich seed. Now we know that phosphate of lime and of magnesia, with sulphurous compounds exist in all seeds useful to man and animals: these, however, do not form part of nitrate of soda and potash, hence the latter can only assist the plant in extracting them from the soil. Suppose, secondly, we use a manure combining the nitrogenous principles in the shape of urates, &c., with the alkaline phosphates, sulphates, muriates, &c., then even on the poorest soil, while the ammoniacal portion in performing its office of causing luxuriance in foliage and stem, the ingredients of the seed are offered in abundance to the root. This is exactly the predicament of guano—most of the salts in which are soluble in water—and those which are not, such as the phosphate and oxalate of lime, become so when combined near the roots with the carbonic acid furnished by the humus as well as by other portions of the manure. The use of a solution of guano in water is therefore good, when the seed is not required; but where it is, the deprivation of the insoluble phosphate of lime is very injurious. Hence, from the proper use of guano, a luxuriant vegetation is followed by the production of a large crop of fine seed. As a further elucidation of my views, I will state that the manure made use of for the purpose of producing double flowers, is the highly nitrogenous stable manure, which is used in such quantity as to prevent the roots from coming into contact with that part of the soil containing the ingredients of the seed—this manure being then chiefly favourable to the production of foliage alone, if continued through many generations will by degrees convert the stamens, pistils, and the parts destined by nature to prepare the seed, into leaves or petals, and finally obliterate the seed. These flowers, if grown in a poor soil, scarce in nitrogenous substances, will again, as is well known, revert to their normal single seed-bearing state. Several of my experiments with guano proved to me that it shortened the internodes, or portions of the stem between each leaf; this was particularly evident in seedling Orange and Lemon trees, and is a sure indication of fruit or seed-bearing; indeed the spurs, which are well known as the fruit-producing parts of many trees, are but shortened branches where the internodes are reduced to a mere nothing, and where, consequently, the axillary action is concentrated into a small space. I have, therefore, no doubt of the beneficial action of guano on fruit trees. Many experiments are, however, yet desirable; such as whether guano acts beneficially on the receptacle of the seed, which is the fruit of the Strawberry and Raspberry; whether on the exterior covering of the seed, which is the Apple, Peach, Plum, &c., or on the kernel or nut, or on the pulpy envelope of the seed, as the Gooseberry, Grape, Melon, Gourd, &c. I hope that these ideas will give rise to numerous experiments this year, and that those who make them will not hesitate freely to communicate them for the general benefit. I will merely add further, that I should consider it advisable, in all experiments on fruits, to try both the guano itself, as well as a weak solution of it in water; it is highly probable that the solution will be efficacious where the receptacle or the exterior of the seed is most valuable; whereas in Corn, Peas, Beans, &c., those phosphates which are insoluble in water, and are very necessary, would be thus lost to the plant.—*Hovey's Magazine of Horticulture.*

ON DRYING FLOWER SPECIMENS.—For several years I have paid attention to the delightful pursuit of obtaining specimens of flowers, drying them, and preparing a herbarium. A few months back I obtained some prepared paper from Messrs. Bentall and Co., of Halstead, and have tried it during the above period

with a vast number of flowers, and I can very strongly recommend it. It is very superior to blotting-paper, the specimens drying much readier, the paper seldom requiring to be changed, and the colour of the flowers, &c., much better preserved.

The plan I pursue is to have some sheets of millboard, and having laid one or two old newspapers quite smooth upon a sheet of millboard, I put a sheet of the drying paper, and lay the plant to be dried, carefully spreading the leaves and petals. I then place another sheet of the drying paper over the specimen, and a few more newspapers to absorb the moisture, and over the whole I then place a sheet of millboard; and thus proceed until I have laid out my specimens, taking care to have a sheet of the millboard between each layer of specimens.

I put a heavy weight upon the top of all, or, which is far better, put the whole in a screw press, and continue to shift the papers and increase the pressure daily. Should the plants be very succulent, the paper will require the oftener shifting and fresh paper. The plants should not be taken out until perfectly dry. The paper, when dried, will be ready for use at any future time. The size I recommend is 16 inches by 10 or 11. The drying paper is as cheap as common blotting paper, and far more useful in drying botanical specimens.

F. N. B.

ON GLASS LABELS.—"In a recent number it was suggested that hermetically-sealed glass tubes, with the names or numbers of the plants inclosed in them, might be employed as labels, the originator of the plan observing that it would be necessary to send the names or numbers to the glass-blower, which would be attended with inconvenience and expense. I also fear that when completed, the insertion of one end of the tube in the ground, while the other was exposed to the great heat of the sun in summer, would injure, if not destroy, the written or printed labels. Having made several experiments in joining glass with Jeffery's marine glue, it has occurred to me that very neat, simple, and most enduring labels might be formed by any gardener during his leisure hours, at a comparatively nominal expense, the marine glue being only 8d. per lb., and the glass the fragments or waste of the kind used for common windows. I send you three specimens, one written, one partly written and partly printed, and one wholly printed, attached to the fragments of glass in the manner I have alluded to; and I am convinced they would prove imperishable for the purpose for which they are intended. The marine glue at that part of the glass which is inserted in the earth would contract; while the part exposed to the sun would expand, and each end would suit itself to the circumstances under which it might be placed without the least injury to the labels; for moisture has no effect whatever upon the composition invented by Mr. Jeffery."

The manner of preparing them seems to be by pasting a paper label to the face of a piece of glass, then smearing another piece of the same form and size with Jeffery's marine glue, and immediately afterwards pressing the two pieces together.—*Gardener's Chronicle*.

CULTIVATION AND PLANTING OF THE RANUNCULUS.—"The soil should be trenched eighteen or twenty inches, and composed of good rich loam, to which I add one-sixth part of very old, well-rotted cow manure, and the same quantity of clay broken into small pieces; add to this a little sand, and thoroughly mix the whole; if the soil binds, add some sandy peat; make the bed on a level with the path or walks; the plants would do better if the bed was below rather than above the level. Having prepared the soil, as above, sometime during the summer or autumn, take the earliest opportunity in the succeeding spring to stir up the bed one spit deep, and take off one inch and a half of the soil; then place the plants in an upright position on the surface, six inches apart each way, and replace the soil carefully, which will cover the crown of the Ranunculus about one inch and a half; deeper planting would be injurious. After the plants appear, keep them free from weeds, and press the soil firmly around the plants after they get two inches high. If the weather prove dry, water them freely early in the morning, and shade them from the sun from 9 o'clock, A.M. to

3 o'clock, P.M. As soon as the foliage becomes yellow, take the roots up and dry them thoroughly in the shade, and keep them in a dry place. The Ranunculus loves a cool and moist situation, but no stagnant water should be permitted, nor should they be placed under the shade or dripping of trees. The morning sun, free circulation of air, and shade as directed, will ensure success."—*Hovey's Magazine*.

TO PREVENT NEWLY-PLANTED SHRUBS BEING LOOSENED BY THE WIND.—Let a few of the low branches be pegged down close to the ground, say one in each quarter. This secures the plants steady, far preferable to any other method I have seen adopted. FRUTEX.

ANSWERS.

ON BELLADONNA LILY.—Observing in a recent number of the FLORICULTURAL CABINET an inquiry made relative to the treatment required to have the beautiful Belladonna Lily bloom freely in the open border, I beg to state that I have had it bloom vigorously for many successive years, growing in the border of a south-aspected wall, planted within a few inches of the wall, in a deep rich sandy loam, on a dry subsoil. The bulbs are about six inches deep. I planted them (one dozen) in a row, at six inches apart, in the year 1830, and they have remained undisturbed ever since, and each year, from 1832, have bloomed vigorously. They do not do well when disturbed by dividing, replanting, &c., but planted in a situation like mine, and there allowed to remain, will realize every expectation.

Herts.

CLERICUS.

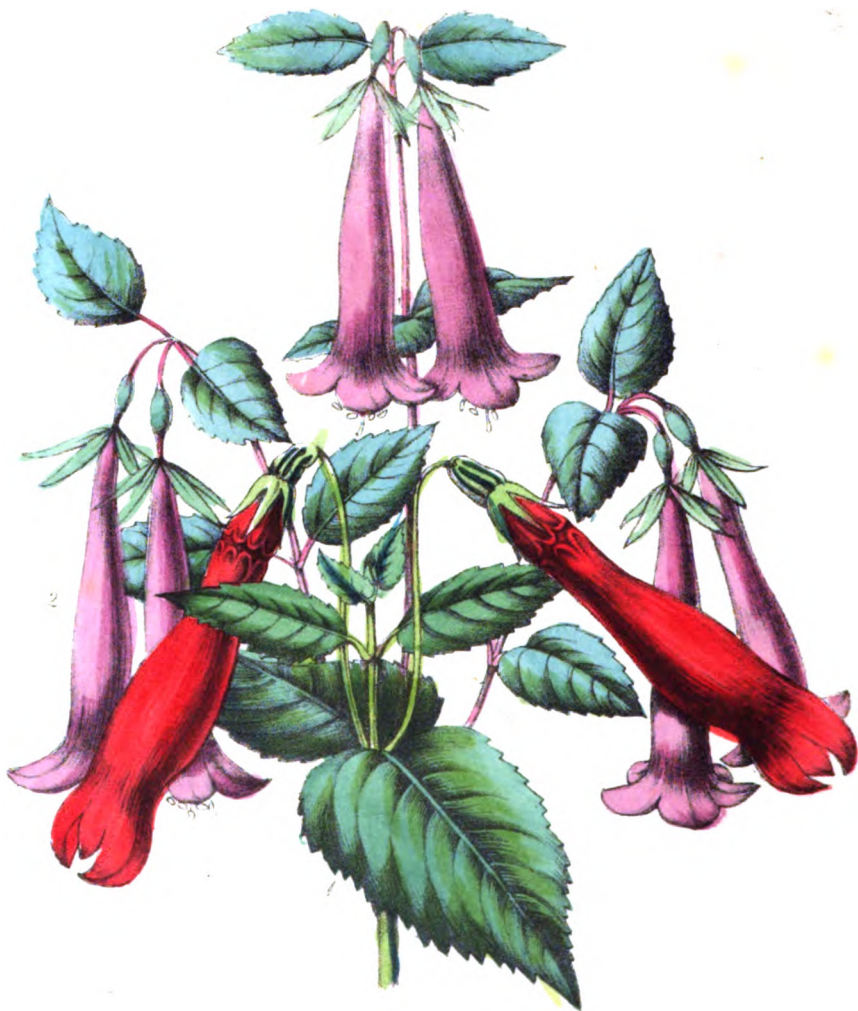
Several gentlemen having written to us to give the names of fifty Double Anemones which we consider the best, we send them, as below, for insertion in your next next number, if you think proper to insert them.

London.

T. & C. LOCKHART.

List of Fifty best Sorts of Double Anemones.

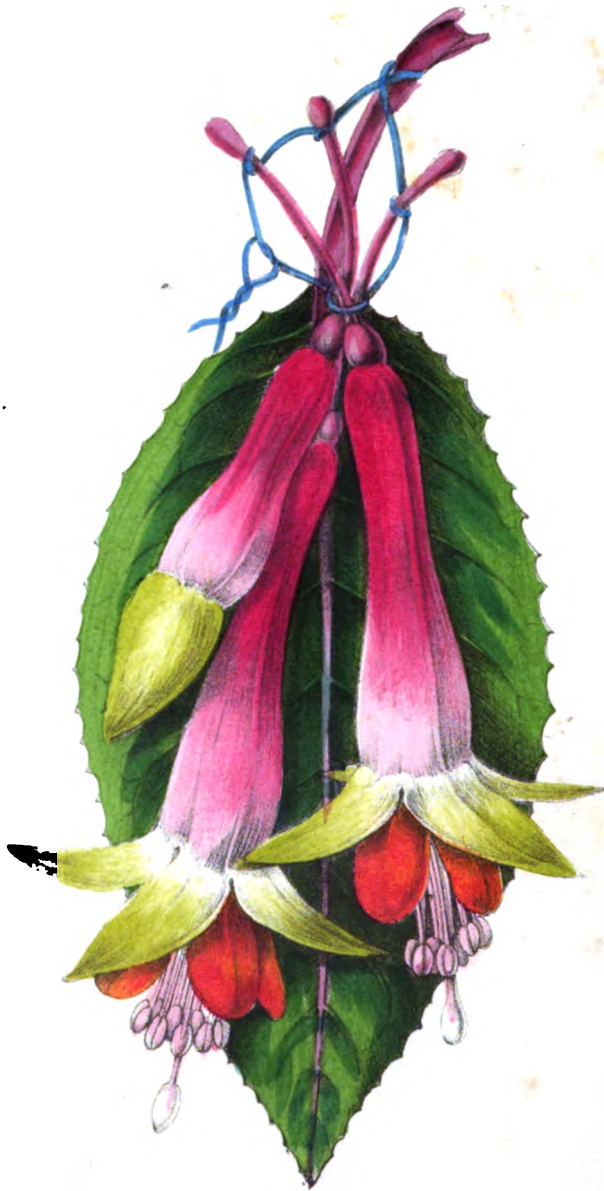
Azure Incomparable, very deep blue	Manteau Bleu
— Superbe	Miss Wright, red and rose
Arrian, white and pink	Madame Schroeder, red
Bleu Victorieuse	Navarino, blue-lilac
— Merveille	Purpurea elata, red and violet
— Ponceau, very deep	Perle d'Amour, white, red heart
Charles the Tenth, fine blue	— l'Orient, white and red
Captain Cook, rose, dark mottle	Pallas, red
— Rosa, scarlet and white	Prince Albert, scarlet
Criterion, red, green, and white	Rubis Brillant, ruby
Cœur Blanc, red and white	Ruma'dus, scarlet
— Tendre, pink and red	Rare Partout, white and rose
Constantia, red and violet	Rose de Haarlem
Comble de Richesse, extra red	— Eclatante
Euterbe, extra red	Rosalie, rose and scarlet
Euphosque, claret	Reine des Français, crimson and carmine
Evêque d'Amboise, deep red	— Vasthy, red
Feu Superbe, scarlet	Scarlet Soldier
— Carmin, carmine	Sallust, rose, variegated
Favorite Superbe, claret	Sylvia, scarlet
Grande Duchesse, variegated	Terpsichore, rose, variegated
Globe Celeste, blue	Tricolour, red, white, and green
High Admiral, velvety-scarlet	William the First, pink and red
Heroine, white and rose	Zebra, striped.
L'Oracle du Siecle, scarlet and white	
Les Sept Provinces, variegated	



1. *SIPHOCAMPYLUS NOVA SPEC.*

2. *VASALIA FLORIBUNDA.*

Floricultural Cabinet



FUCHSIA SERRATIFOLIA.

Floricultural Cabinet.

Chabot's Zinco-graphy, Skinner & P.

THE
FLORICULTURAL CABINET,

AUGUST 1st, 1845.

PART I.
EMBELLISHMENTS.

ARTICLE I.

FUCHSIA SERRATIFOLIA.

SCARCELY any tribe of plants with which we are acquainted has in so few years received such beautiful additions as have Fuchsias. Whilst the cultivator at home has perseveringly engaged in raising seedlings, almost each successive year introduces some fine species from abroad. The Fuchsia has, therefore, unquestionably now become one of the greatest ornaments with which our greenhouses and flower gardens are embellished throughout the summer and autumn.

The number of species growing in Peru alone, yet remaining to be introduced, of which we have received information, holds out the pleasing hope of still greater improvement; especially as some of the kinds are described to be very magnificent, and of the most novel and beautiful colours. Messrs. James Veitch and Son, of the Killerton Nurseries, Exeter, received the present splendid species from Peru, and bloomed the plant, from which our figure was derived, during the past summer. It is remarkably strong and vigorous in growth, and blooms freely; the flowers and leaves being produced in threes, and proceed triangularly from the stem.

The plant succeeds well with the ordinary treatment applicable to other kinds.

Vol. XIII. No. 150.

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ARTICLE II.

ON GROWING PLANTS IN ROOMS.

BY A LONDON AMATEUR GROWER.

BEING an admirer of the prevailing practice of cultivating plants in rooms, and having had numerous solicitations for advice as to their management, I am induced to draw up the accompanying remarks, judging that they may be in some degree useful to a portion at least of the readers of the FLORICULTURAL CABINET. I do not wish it to be understood that I think plants can be grown as vigorous, or blossom as freely, in rooms as those cultivated in well-constructed greenhouses; but I do not hesitate to assert that those persons who may think proper to adopt the rules hereafter laid down will find the result to answer every expectation.

Pots.—The necessity of having pots of various sizes is very obvious; the shape, however, should be uniform, in proportion as follows, viz.: five inches deep (inside measure), five inches diameter at the top, and three and a-half inches diameter at the bottom. Pans should be provided to correspond.

Draining.—Good draining is essentially requisite. Each pot, according to their different sizes, should have from two to four inches deep of coal cinders, broken to the size of a child's common play marble, laid at the bottom, first placing a piece of pot over the hole at the bottom, taking care the piece is not flat, but of that form that it will freely allow superabundant water to pass off.

Soil.—Take the top spit with the turf upon it from a common or old pasture field, not digging deeper than six inches; the soil should be entirely free from clay and if the loam be sandy it is preferable. To this soil add one-fourth of rotten horse-dung. The longer this compost is laid together the better. Before using it for planting in, it must be well chopped and broken, but not sifted at all through a riddle, as plants flourish far more freely in the soil when left open, there being a freer passage for water, heat, air, &c., to the roots. There are but five families of greenhouse plants that refuse to flourish in such a compost as the above. I do not include Camellias and Ericas (Heaths), though I have no doubt but they may be cultivated in rooms with success; the latter tribe will be found the most tenacious of injury in such an habitation.

Potting.—I consider it but superfluous saying anything about propagating plants, when the cost of a small plant is so trifling, and may be obtained at most nurseries.

To begin with a plant procured from the nursery. In the first place, examine if the roots are coming through the hole at the bottom of the pot; if so, this points out the necessity of repotting, which must be repeated until the plant has attained the size required for blooming. The size of the pot for repotting in should be about two inches more in diameter than the one the plant is taken out of.

Watering.—River or rain water is the best, and should always be of the same temperature as the room in which the plant is placed. The pot should always stand in a pan or feeder; but water should not be allowed to stand in it, excepting when a plant is pushing forth flower-shoots or stems; at which period many plants, particularly strong growing kinds, are much assisted by having a constant supply of it, not to glut them, but to allow that given to be dried up before a fresh quantity is given. Particular attention should always be paid that no plant be allowed to flag its leaves. In some stages of growth and situation there will be found plants that will require water to be given them twice in one day, and at other times not oftener than once a week. The best criterion to know when a plant requires water to be given is when the soil on the top of the pot appears dry; then a flooding over is sufficient.

Filth.—With some kinds of plants the green fly is often found very troublesome. Sprinkle them over with diluted tobacco-water, or the plants infested may be put into a packing-case, and fumigated with tobacco-paper; by either application the insects will be effectually destroyed. The tobacco-water or tobacco-paper may be procured of the tobacconists at a very trifling cost; 1s. expended in either would serve for twelve months, with a number of plants. It is necessary to keep the plants free from dust, and to pick off decayed leaves; also frequently stirring the mould on the surface with a blunted stick. They will require washing over their tops once a-week, either by means of a syringe or watering-pot. In frosty weather, watering over their tops should be performed in-doors.

Air and Light.—When the air is not frosty, a free circulation is at all times beneficial. In order to have healthful-looking plants, the branches should not be allowed to touch each other, and should

always be kept as near the light as possible, frequently turning the plants to prevent the heads being deformed, as the natural inclination is to lean towards the light.

Pruning.—Taking off the point of the main shoot of a woody plant when young causes it to grow bushy, and to be formed of a handsome shape. Also, when a plant is making shoots for flowering, taking off the points of the most luxuriant shoots tends to increase the quantity and size of the blossoms.

Ripening the Buds.—The singularly formed foliage or shape of some plants may obtain for them a place in collections; but in general most plants are admired for their blossoms. In order to have them in perfection as well as profusion, it is highly essential that the embryo, or bud, be in a mature state. Bulbous plants, as Amaryllises, Hyacinths, &c., when the flower is decayed, the foliage must be encouraged for a few weeks; after which, it may be allowed to die away and remain at rest. The pots retaining the bulbs may be placed on a shelf, where they will be dry, until the time of re-potting, which in general will be in October. Those plants which produce their blossoms upon the wood of the same season, as Pelargoniums (Geraniums), Salvias, Roses, Chrysanthemums, &c., after flowering, require their shoots to be cut back to three or four buds, taking care to preserve the form of the plant, and giving but little water during the state of rest. When the plant begins to grow in the spring, having a larger pot given, and a regular supply of water afforded, and kept in moderate warmth, the blossoms will be produced. Herbaceous plants, as most species and varieties of Calceolarias, &c., after flowering, require their tops cutting off, and but little water during their rest; a large pot is given when the plants begin to grow. Deciduous plants, as Fuchsias, Hydrangeas, &c., when the leaves begin to fall, will require but little water, and rest until spring, when a larger pot will be necessary, and the shoots to be pruned back a little. Evergreens, as Azaleas, Myrtles, &c., when done flowering, require a larger pot, and their wood encouraging until it becomes ripe. Here I include the Cactus tribe, &c. At this potting, some of the species will require their old wood thinning out.

Choice of Plants.—The taste of persons being so dissimilar, no list of plants I could furnish would be able to give entire satisfaction; I therefore think it unnecessary to attempt it here, and must

leave the amateur to suit himself, his experience and fancy being likely to afford the best directions on the choice of plants suitable for him to cultivate.

ARTICLE III.

REMARKS ON THE HEPATICA.

BY A COUNTRY CURATE.

To me the early flowers of spring possess more than ordinary interest; and one of the neatest is the humble Hepatica in its varieties; and every flower-bed or border within sight of the dwelling-house ought to be ornamented with these lovely harbingers of still more extensive displays of beauty and fertility.

I have not been possessed of a plot of ground for a garden more than three years; but since I have, I have used every means to obtain a stock of the early spring flowers. I now possess the following:—Single blue, double blue, single white, single red, single pink, and the double red. I have read of several other varieties, but cannot find them at any nursery establishment I have yet applied to. I am quite aware, if attention had been paid to the raising of seedlings, other beautiful distinct varieties might have been raised. I am now, for the first season, attempting it; and next spring I hope to have the pleasure of having raised some other good ones. I have been told there is a double white variety in existence in this country, as also a double yellow, and a single white with red anthers; but I have not yet been able to obtain them.

The following kinds I have read of, and give the descriptive list with a view to bring the lovely little flower more into notice, and to encourage the production of seedlings, as well as to get all the kinds I can additional to my present stock; and I shall be obliged if any reader of the CABINET who possesses others I have not would inform me, through the medium of the conductor of this magazine, and I shall be glad to treat for a plant of each:—

1. *The great single blue Hepatica.*—The leaves are somewhat brown, and hairy at their first coming, which after are broad; the flowers are of a fair blue colour, with many white chives or threads (stamens) in the middle.

2. *The small blue H.*—The leaves of this Hepatica are smaller by the half than the former, and grow more abundantly, or bushing thick

together; the flowers (when it showeth them, for I have had the plant half a score years, and yet never saw it bear flower above once or twice) are of a pale or bleak blue colour, not so large as the flowers of the former.

3. *The purple H.*—This Hepatica is in all things like unto the first, but only the flowers are of a deep purple, tending to a violet purple. Small and very double.

4. *The lesser white H.*—The flowers of this Hepatica are wholly white, of the bigness of the red or purple, and the leaves somewhat smaller, and of a little whiter or paler green colour; else in all other things agreeing with the former.

5. *The great white H.*—There is no other difference herein from the last, but that the flower, being as white, is much larger.

6. *The ash-coloured or Argeptrive H.*—Both the leaves and the flowers of this Hepatica are larger than any of the former except the last; the flowers hereof at the first opening seem to be of a blush ash colour, which do so abide three or four days, decaying still until it turn almost white, having yet still a show of that blush ash colour in them till the very last.

7. *The white H. with red threads (stamens).*—There is no difference between this Hepatica and the first white one, saving that the threads in the middle of the flower being white, as in the former, are tipped at the ends with a pale reddish colour, which added a great beauty to the flowers.

8. *The red H.*—The leaves of this Hepatica are of a little browner red colour, both at their first coming up and afterwards, especially in the middle of the leaf, more than any of the former; the flowers are in form like unto the rest, but of a bright blush or pale red colour, very pleasant to behold, with white threads or chives in the middle of them.

9. *The double purple H.*—The double Hepatica is in all things like unto the single purple kind, saving only that the leaves are larger, and stand upon longer foot-stalks, and that the flowers are small buttons, but very thick of leaves (petals), and as double as a flower can be, of a deep blue or purple colour, without any threads or bead in the middle, which fall away without giving any seed.

10. *The double blue H.*—In the colour of this flower consisteth the chief difference from the last, except one may say it is a little

less in the bigness of the flower, but not in doubleness of leaves (petals).

11. *The double white H.*—Hath smaller and fresher green leaves than any other; flowers snow white, very compact double.

12. *The single yellow H.*—The flowers are of a sulphur white.

13. *The peach colour H.*—Very neat and pretty.

14. *The single pink H.*—A very abundant bloomer.

All these plants with single flowers grow naturally in the woods and shadowy places of Germany, in many places, and some of them in Italy also. The double kind hath been sent out of Italy, and was also found in the woods near the Castle of Starnbeg, in Austria.

I find them grow well in a sandy loam, the subsoil being sand. They are thus in a favourable soil for enduring the severities of winter. In order to provide for casualties, I grow two or three plants of a sort in pots, which are kept in a cool frame during winter. I have not, however, lost a single plant during the last three winters. I obtained ripe seed at the end of June, 1844, and sowed it on the 18th of July. I retained the plants in their seed-pots until the end of March this year, when I planted them out in a sheltered situation at six inches apart; they have now made pretty bushy plants, and I intend them to remain in the situation they now are till they bloom the next spring. I beg very respectfully to invite other persons to attempt to increase the varieties by raising seedlings, and with a special design to obtain double flowering ones.

ARTICLE IV.

THE GRAND FLORAL EXHIBITIONS OF THE METROPOLIS.

ROYAL BOTANIC SOCIETY, *Regent's Park, June 4.*

WITH equal propriety may we apply to this exhibition of the Botanic Society the assertion made in our last Number relative to the Chiswick Show of May 24, being the best that the Horticultural Society ever had; for here, too, the numerous magnificent specimens displayed so high a state of cultivation, that it appeared impossible that many of them ever could be surpassed; and the increase upon last year of the number of competitors was also so great, that it was found

indispensable to erect a new marquee to supply the requisite accommodation. We rejoice to have to record this most gratifying fact, because it so obviously affords us evidence that not alone is the knowledge of skilful treatment making rapid extension, but that the number of spirited cultivators are proportionately progressing. The visitors to the show numbered upwards of 8000.

Her Majesty the Queen, Prince Albert, the Prince of Leiningen, and other of the Royal Family, attended before the gates were opened to the public, and spent some time in inspecting the various collections. Her Majesty particularly noticed the most striking plants, as she passed through the tents. The fine specimen of *Epiphyllum speciosum* of Mr. Green especially elicited her admiration.

The early part of the day was fine, and promised fair weather; mid-day, however, brought with it a westerly wind, threatening clouds, and occasionally slight drizzling showers till about four o'clock, when a heavy shower, of some duration, fell; but from about half-past four to the close of the exhibition, the sun shone brightly, so that the walks and lawns soon became dry, and for two hours they were crowded by a numerous and highly fashionable attendance.

By the regulations of the Society, the exhibitions are open to all competitors, whether fellows or not. But in order that the specimens received for exhibition may be properly arranged, and displayed to advantage, the exhibitors are requested to communicate their intentions to the secretary previous to the day of exhibition, specifying the probable extent of table room, in square feet or otherwise, which their plants, flowers, &c., require. Unless previous notice has been given, the exhibitors, on entering the gardens, are requested to sign a book or deliver a statement in writing, specifying in what collections their articles are to be exhibited. They are also to apply to the clerk for labels to attach to their several exhibitions; and to see that when staged they are marked with the proper letters of division; and omissions or mistakes, arising from neglect or improper entries on their part, cannot be rectified after the awards have been made. At half-past eight o'clock in the morning the gates are closed, after which no subjects for competition are on any account whatever received; nor is any person allowed to open packages containing articles for competition. The judges proceed at ten o'clock to examine the merits of the subjects exhibited, by which hour the placing and arranging

of all must be completed. Subjects of decidedly inferior quality cannot be received for competition, and such subjects the judges are empowered to reject ; and in order to uphold the value and importance of the Society's awards, the judges are authorized either to withhold or to diminish the value of the awards ; that is, to grant either first, second, or third prizes, at their discretion. The judges are also invited to recommend to the Council to increase the number or amount of the awards, and to give prizes for subjects of extraordinary merit which may be exhibited, although not specified in the schedule. It is particularly desired by the Society that all plants be distinctly labelled with their scientific names, and the places whence introduced, where practicable ; and all cut-flowers are required to be distinctly named. Should any exhibition contain one or more plants which have not been in the possession of the exhibitor two months previous to the exhibition at which the plant or plants are shown, such circumstance will disqualify the exhibitor to compete for prizes, except in the case of plants newly imported by the exhibitor, and shown as new or rare. In the event of any dispute arising from this, the exhibitor is required to sign a written declaration, which is considered final. The judges are not appointed from among the fellows, members, or officers of the Society, which is a very good rule ; nor is any person who shall accept the office of judge allowed to compete for prizes. Persons who supply subjects for competition for which prizes are offered, are granted pass-tickets, and are re-admitted to the show at two o'clock. At seven o'clock in the evening the exhibitions close, and all articles exhibited will then be delivered up to the exhibitors.

CLASS I.

MISCELLANEOUS GROUPS AND SPECIMENS.

In the collections of plants embraced in this class were numerous magnificent specimens, as will be found detailed below. In the small collections of tens and fiftens,—the former especially, in which there was nine competitors,—a decidedly inferior plant could not have been detected. No less than twenty-seven subjects were shown as specimens of superior cultivation and ornament ; and in new or rare plants some very interesting ones appeared. Particularly captivating was the excellent plant, four feet high, of the beautiful *Dipladenia crassinoda*, shown by Messrs. Lucombe and Pince ; it, indeed, fully realised our statement, that the plant well deserves to be grown in

every stove collection. Very attractive, also, was a fine plant of *Fuchsia serratifolia*, (a good figure of which illustrates our present Number,) from Messrs. Veitch and Son. The Alpine plants proved to be not without interest, although they are wanting in that brilliancy which characterises most plants brought to floral exhibitions.

STOVE AND GREENHOUSE PLANTS.

In collections of 30 species or distinct varieties; not more than 6 species or varieties of any one genus to be admitted.

Nurserymen and Private Growers.

1st Prize, 15*l.*, Mr. Barnes, gardener to G. W. Norman, Esq., Bromley.—This superb collection comprised, in *Pimelias*, *Hendersonii*, a dwarf specimen, 2 feet across, and full of its pretty pink flower heads; and *decussata*, a bush 4 feet high, and as much in diameter. In *Dillwynias* was *ericifolia*, *clavata*, and *rudis*, each a fine specimen, of 4 feet high, and full of bloom. In the genus *Aphlexis* was *sesamoides*, a cone-shaped plant, 4 feet high, studded over with its starry flowers; *humilis*, nearly as large, and equally well flowered; and *purpurea grandiflora*, a small specimen, with large deep crimson flowers; *Azalea indica alba*, a large spreading plant; and *Gladstonesii*, a small plant; *Leschenaultia formosa*, an immense mass of bloom, the plant being 2½ feet high; very healthy and fine plants of *Clerodendron splendens* and *Kempferi*; large bushes of *Polygala oppositifolia*, *P. cordifolia*, and *Phenocoma prolifera*, the latter 2 feet high and about 10 feet in circumference; a very beautiful bush of *Boronia denticulata*, 2½ feet high; *Podolobium staurophyllum*, a flat-trained plant, 4 feet by 3; *Mutaxia pungens*, *Ixora coccinea*, *Gompholobium tenellum*, *Rondeletia speciosa*, *Epacris grandiflora*, good plants of *Erica odora*, full of its pretty little white bells; *fastigata lutescens*, *elegans*, *Thunbergii*, *grandinosa* and *intermedia*, the two latter being immense specimens; and a large specimen of *Stephanotus floribundus*, but not well in bloom.

2nd Prize, 10*l.*, Mr. Hunt, gardener to Miss Trail, Hayes.—This collection contained an *Ixora coccinea*, 5 feet high, with forty-two flower-heads, most of which were expanded, and had a fine effect; *Gompholobium polymorphum*, an exceedingly good plant, on a curved shield trellis, 5 feet by 3, well filled with bloom; a magnificent plant of *Pimelia spectabilis*, 4 feet by 4, thick and well furnished, but not fully in bloom; a dense *Leschenaultia formosa*, *Boronia serrulata*, a nearly globular plant, covered with "pink stars;" *Clerodendron squamatum*, with two spikes; *Phenocoma prolifera*, *Pimelia decussata*, *Achimenes longiflora* and *grandiflora*, good pots; *Polygala oppositifolia*, large; *Kenneya villosa*, *Vinca rosea alba*, *Azalea Danielsiana*, *Polygala cordifolia*, *Oncidium flexuosum*, *O. luridum guttatum*, and *O. Devonensis*, a species with brown-mottled flowers from Honduras; *Dillwynia splendens*, and *D. clavata*; *Chorozema varium*, *Epidendrum macrophyllum*, *Gardoquia Hookeri*; and the following heaths.—*E. perspicua nana*, a beautifully-flowered bush, 2½ feet by 3 feet; *E. vestita coccinea*, large; *E. translucens rosea*, *E. gemmifera*, 3 feet across, but not quite out; *E. ventricosa prægans*, good; and *E. ventricosa superba*.

No other competitor.

In collections of 15 species or distinct varieties; not more than 4 species or varieties of any one genus to be admitted.

Nurserymen only.

1st Prize, 7*l.*, Mr. Frazer, Lea-Bridge Road.—The whole of these were remarkably well grown; *Epacris grandiflora* was a fine bush, 5 feet high by 4

feet in diameter; *Eutaxia myrtifolia* was large, and a complete mass of bloom; an excellent *Boronia pinnata*, a depressed cone, 3 feet by 3; *Coleonema pulchra*, a great bush, 5 feet by 5 or 6 feet in diameter; a very large globular plant of *Pimelia linifolia*, *Azalea sinensis*, *Chorozema Henchmanni*, *Azalea variegata*, a splendid plant; *Erica vestita coccinea*, fine; *Boronia serrulata*, a round plant, 2 feet high; a variety of *Daviesia latifolia*, on trellis, and quite full of its pretty little blossoms; *Erica Bergiana*, 3 feet by 3, good; a finely-bloomed *Chorozema varium* var. *nana*, *Polygala acuminata*, and a very nice *Pimelia spectabilis*.

2nd Prize, 4*l.*, Mr. Pawley, Bromley, for an immense *Gompholobium polymorphum*, nicely flowered; *Chorozema varium*, a large bush, 3 feet high, and full of bloom; a very large *Hardenbergia monophylla*; a cone-shaped *Erica Cavendishii*, 2 feet by 1½; *Pimelia decussata*, a 3 feet bush; *Ixora coccinea*, 2 feet high, with twenty heads of flowers; *Euphorbia splendens*, *Calanthe veratriflora*, *Azalea lateritia*, thin; *Erica perspicua nana*, a fine plant, 1½ foot each way; *Sinningia Sellenii*, *Clerodendron splendens coccinea*, *Erica ventricosa strelata*, and *Aphelexis humilis*, 2 feet high.

No other competitor.

In collections of 10 species or distinct varieties; not more than 2 species or varieties of any one genus to be admitted.

Private Growers only.

1st Prize, 5*l.*, Mr. Green, gardener to Sir E. Antrobus, Bart., Cheam, for ten superb plants, consisting of *Hovea Celsii*, trained cylindrically, 3 feet, finely bloomed; a dwarf *Pimelia decussata*, loaded with blossoms; *Calanthe veratriflora*, with ten spikes; *Coleonema pulchra*, a very handsome bush, 4 feet each way; a large *Genista bracteolata*; *Gompholobium polymorphum*, on a curved trellis; *Azalea Gledstanesii*, 5 feet by 3, very well in flower; a fine *Brachysema latifolia*, on a cylinder trellis; *Pimelia rosea*, a neat dwarf plant; and *Erica propendens*, 3 feet.

2nd Prize, 3*l.*, Mr. May, gardener to E. Goodhart, Esq., Beckenham, for a collection so nearly equal to the last, that the judges had great difficulty in deciding between them: these were *Ixora coccinea*, a splendid object, 4 feet high, with thirty-two flower-heads, nearly all of which were expanded; *Hovea Celsii*, an exceedingly good plant, 3 feet by 2, loaded with flowers; a small but very good *Pimelia spectabilis*; *Erica splendens*, 2½ feet, hardly out, but otherwise in fine order; *Erica elegans*, dwarf and good; *Leschenaultia formosa*, dwarf; *Azalea variegata*, good; and *Azalea Indica alba*; *Polygala cordifolia*, *Aphelexis purpurea grandiflora*.

3rd Prize, 2*l.*, Mr. Kyle, gardener to R. Barclay, Esq., Leyton, for *Coleonema gracilis*, a dense bush, of a most graceful character; *Azalea Danielsiana*, a dwarf standard plant, well furnished with deep coloured flowers; *Ixora coccinea*, small; a very good *Mirbelia Baxterii*, on a globular trellis, 1½ foot high; a spreading dwarf plant of *Azalea lateritia*, with large flowers, quite a blaze; *Polygala oppositifolia*; *Oncidium flexuosum*, *Aphelexis humilis*, *Erica Cavendishii*, and *Kpacris grandiflora*.

4th Prize, 1*l.*, Mr. Bruce, gardener to B. Miller, Esq., Tooting, for *Ixora coccinea*, tall; *Chorozema Henchmanni*, on a globe trellis; *Chorozema ovata*, on a small curved trellis, prettily bloomed; *Leschenaultia formosa*, and *L. biloba*; *Aphelexis sesamoides*, *Eutaxia pungens*, *Erica ventricosa carnea*, *Azalea variegata*, and *Aphelexis humilis*.

Extra Prize, Mr. Clark, gardener to W. Black, Esq., Muswell-hill, for *Boronia serrulata*, small; *Pimelia decussata*, a large bush; a large spreading double red *Azalea*; a very large plant of *Epacris grandiflora*, exceedingly well flowered; *Erica perspicua nana*, good; a dwarf *Gesnera splendens*, with fourteen flower-stems; a large old *Erica hybrida*, a thin *Aphelexis humilis*, *Leschenaultia formosa*, and *Epiphyllum Ackermannii major*, a dwarf plant, very nicely flowered.

Extra Prize, Mr. Slowe, gardener to W. R. Baker, Esq., Bayfordbury Park, for a free-grown *Coleonema gracilis*; a large *Selago Gillii*, well flowered; *Justicia carnea*, with eight flower-heads; *Pimelia hispida*, *Erica ventricosa superba*;

Rondeletia speciosa, a good plant; *Euthales macrophylla*; a thin *Aphelexis humilis*; *Vinca rosea*, a good plant, 2 feet by 2; and *Polygala cordifolia*.

Extra Prize, Mr. Ayres, gardener to J. Cook, Esq., Brooklands, for *Ixora coccinea*, a very dwarf plant, with seventeen flower-heads; a very large *Pentas carnea*, with abundance of bloom; *Erica propendens*, small and good; *Begonia parvifolia*, a dense mass of flowers and foliage; *Polygala oppositifolia*; *Azalea variegata*, small, densely grown; *Boronia serrulata*, 3 feet; *Leschenaultia formosa*, a dwarf plant, flat at top; *Pimelia spectabilis*, a very good small plant; and *Erica tricolor*.

Extra Prize, Mr. Cockburn, gardener to the Earl of Mansfield, Kenwood.—This collection comprised *Kennedyia macrophylla*, on a flat trellis, 3 feet by 2; *Euthales macrophylla*, bushy, 3 feet; *Chorozema Henchmanni*, on a two-foot globe trellis; a large *Genista bracteolata*; *Stephanotus floribundus*, on three-foot cylinder, with few flowers; *Epiphyllum fulgidum*, full of flower buds, but not out; *Hydrangea japonica*; a dense bush of *Cassia corymbosa*; a very nice *Eriostemon buxifolium*, forming a four-foot cone, with plenty of its starry blossoms; and *Zichya glabrata*, 4 feet by 3, on a flat trellis.

Besides the above, a collection was also shown by Mr. Kaye, gardener to B. D. Colvin, Esq., Norwood.

SPECIMEN PLANTS.

In new or old kinds; but plants only of decided merit, as objects of ornament, can be allowed to compete.

Nurserymen and Private Growers.

1st Prize 2*l.*, Mr. Rae, gardener to J. J. Blandy, Esq., Reading, for *Aerides odoratum*; a magnificent plant, with eighteen large spikes of flowers.

2nd Prize, 1*l.*, Messrs. Lucombe, Pince, and Co., Exeter, for a fine *Cyrtoceras reflexum*, trained 3 feet high to a cylindrical trellis, and having numerous bunches of its singular yellowish flowers.

3rd Prize, 10*s.*, Mr. Pawley, Bromley, for *Stephanotus floribundus*, on a flat trellis 6 feet high by 5 feet in diameter, and beautifully flowered.

4th Prize, 10*s.*, Messrs. Veitch and Son, Exeter, for *Erica Cavendishii*; a good plant, 2 feet high and 9 feet in circumference at the base.

Extra Prize, Messrs. Veitch, for *Xanthosia rotundifolia*, a large bush, 4 feet by 3.

Two extra Prizes, Mr. Bruce, for *Pimelia spectabilis*, 2 feet by 3, very full of flowers; and for *Aphelexis humilis*, a fine plant, 3 feet high by 2 feet broad.

Extra Prize, Mr. Franklin, Hampstead, for a large plant of a *Pelargonium*, named *Frankliniana*.

Two extra Prizes to Mr. Barnes, for *Aphelexis humilis*, 2 feet by 2, very good; and for a young and vigorous plant of *Leschenaultia formosa*.

Extra Prize, J. B. Crasswell, Esq., Exeter, for a large plant, 4 feet high, of *Pavetta caffra*, pretty well flowered.

Extra Prize, Messrs. Lucombe, Pince, and Co., for a large *Erica intermedia*.

Other plants exhibited in this section were—from Mr. Barnett, gardener to J. Buckle, Esq., York, a small *Erica aristata* major; from Mr. Beck, Isleworth, *Achimenes picta*, with beautiful foliage, but not much in flower; from Mr. Franklin, a small *Azalea ledifolia*; from Mr. Piper, gardener to A. Ward, Esq., Holloway, *Calceolaria*, *Lady Constable*; from Mr. Pamplin, Walthamstow, a very good *Prostranthera violacea*; from Messrs. Veitch and Son, *Dracophyllum secundum*, 3 feet; from Messrs. Henderson, *Erica Albertii* superb, a variety with small flame-coloured vestita-like flowers; from Messrs. Lucombe and Co., a large *Fabiana imbricata*; from Mr. Chalmers, gardener to E. Johnson, Esq., Waltham, a very pretty *Azalea Danielesia*, with a circular flat sloping face, 3 feet across; from Mr. Crisp, Leyton, a very fine *Aphalexis speciosa*, 2 feet; from Mr. Torrest, Kensington, three *Statice macrophylla*; from Mr. Wells, Leyton, a small *Azalea lateritia*; from Mr. Dickenson, gardener, Noel House, Twickenham, a plant of Miller's *Petunia punctata*; and from Mr. Don, a large scarlet *Pelargonium*, named *Smithii*.

NEW OR RARE PLANTS.

In bloom. No plant will be considered as new which has previously been exhibited at the Society's exhibition.

1st Prize, 2*l.*, Messrs. Lucombe, Pince, and Co., for *Dipladenia crassinoda*, of which lovely plant we gave a figure and description last month.

2nd Prize (first), 1*l.*, Messrs. Lucombe, Pince, and Co., for *Vesalia floribunda*, of which also we gave a figure last month, and a description in page 146.

2nd Prize (second), 1*l.*, Messrs. Veitch and Son, for *Fuchsia serratifolia*; figured and described in our present number.

3rd Prize (first), 10*s.*, Messrs. Veitch and Son, for *Vesalia floribunda*.

3rd Prize (second), 10*s.*, Messrs. Veitch and Son, for *Siphocampylus coccineus*; see our third plate of last month, and description in page 146.

3rd Prize (third), 10*s.*, Mr. Jack, gardener to R. G. Lorraine, Esq., Carshalton, for *Dipladenia crassinoda*.

Extra Prize, Mr. Barnes, for *Luxemburgia ciliosa*, 2 feet high.

Extra Prize, Mr. Plant, for *Petasostylis (Lisianthus) nigrescens*, with small very dark maroon flowers, and of graceful habit.

In addition to the above, Messrs. Lucombe and Co. showed *Burtonia brunoides*, a plant with woolly linear leaves, and heads of yellow lotus-like flowers. From Mr. Henchman, of Edmonton, was *Gastrolobium spinosum*, a shrubby plant of rather straggling habit; the flowers are produced in heads of about 18, and of a yellow and deep red colour.

From Mr. Beck was *Achimenes multiflora*; and from J. Allnutt, Esq., Clapham, was a small plant of a crimson semi-double *Azalea*, named *Grandiflora*.

Not in bloom, but remarkable for the beauty of their foliage or habit of growth.

1st Prize, 2*l.*, Messrs. Lucomb and Co., for *Drimys Winterii*, a fine hardy greenhouse plant, from Straits Magalhaens, the foliage of a rich green colour, and as large as *Magnolia grandiflora*.

2nd Prize, 1*l.*, Mr. Stowe, for a large bush, 3 or 4 feet high, by as much in diameter, of that fine shrub *Veronica speciosa*.

No other prize awarded.

There were in addition, from Messrs. Veitch, a small plant of *Anæctochilus setaceus*, so remarkable for the beauty of its foliage, having brownish green velvety leaves, closely netted over with golden and copper-coloured veins; from Mr. Bunney, Stratford, was a tall plant of *Phyllocladus trichomanoides*; and from Mr. Henchman were small plants of *Brachysema villosa*, *Bossia Hookerii*, *Gastrolobium nova species*, and *Oxylobium nova species*.

ALPINE PLANTS.

In collections of 24 rare species.

Nurserymen and Private Growers.

1st Prize, 1*l.* 10*s.*, Mr. Wood, nurseryman, Norwood. This was a very neat collection of plants; amongst them we observed *Linaria pilosa*, *L. Hepaticifolia*, and *L. pyrenaica*; *Anthyllis montana*, *Stachys Corsica*, *Galium Græcum*, *Alyssum minimum*, and *Saxifraga Aizoon*, with several others.

No other competitor.]

CLASS II.

NATURAL GROUPS.

The exhibitions in this class are chiefly intended to display the effect of natural classification, by representing the habits and affinities of natural orders or of genera. The Cape Heaths were not only

numerous, but displayed very fine condition. The plant of Cavendishii, shown by Messrs. Fairbairn, was a splendid specimen and deserving of particular mention.

The Orchidaceous plants were likewise generally very good. The season for greenhouse Azaleas being nearly past, but two collections were produced.

The Cactaceous plants, from their gorgeous appearance; always have great effect at Floral exhibitions; only two collections, however, were here shown, but these were very good.

CACTACEOUS PLANTS.

In collections of 6 species or varieties of the tall growing kinds, including Epiphyllum, Cereus, &c.

Nurserymen and Private Growers.

1st Prize, 5*l.*, Mr. Green, gardener to Sir E. Antrobus, Bart. This collection consisted of a splendid plant of Epiphyllum speciosum; large plants, 5 or 6 feet high, of Epiphyllum Ackermannii and Cereus speciosissimus, both well flowered; Epiphyllum coccineum multiflora, and E. coccineum cœruleum, each about 3 feet high, and a perfect mass of bloom; there was also another plant, of some unnamed Epiphyllum, rather smaller, but equally well bloomed.

2nd Prize, 3*l.*, Mr. Bruce, for smaller plants, but scarcely less beautiful, of Epiphyllum Jenkinsonii, E. Ackermannii major, E. speciosum, E. speciosum grandiflorum, the latter with deeper pink flowers than the old kind, and having a tinge of scarlet in the colouring; Cereus speciosissimus, and a standard plant of C. flagelliformis, with a crown of deep pink blossoms.

ERICACEOUS PLANTS.

In collections of 15 species or distinct varieties.

Private Growers only.

1st Prize, 8*l.*, Mr. May, gardener to E. Goodhart, Esq., for Erica perspicua nana, 2 feet by 2, good; E. denticulata moschata, a large mass of flower; E. mundula, 2 feet, very densely branched and flowered; an excellent E. propendens, a yard each way; a large E. Thunbergia, 4 feet; E. Beaumontiana a very dense bush of E. grandinosa; E. ventricosa superba, well furnished, but the flowers hardly out; E. mirabilis; a dense bush of E. Humeana, 3 feet by 3; E. ventricosa alba, very fine; E. odorata, rather thin, but well bloomed; E. hybrida, large; a very large E. vestita alba; and E. Westphalingia.

2nd Prize, 5*l.*, Mr. Barnes, for Erica elegans, dwarf, very good; E. favoides elegans; an excellent E. mundula, 2 feet across; E. ventricosa coccinea minor, very finely bloomed; E. ventricosa superba, and E. ventricosa cruciflora, good plants; E. densa, not out; a bad E. propendens; E. gemmifera, very fine; E. Westphalingia, old; a small nicely-flowered E. Sprengelii; E. fastigiata lutescens; E. Humeana, a dense mass, 1½ foot through; E. Templeana, thin but neat; and E. daphnæflora, 2 feet by 2.

3rd Prize, 3*l.*, Mr. Taylor, gardener to J. Costar, Esq., Streatham, for a collection of very neat and mostly small plants of E. ventricosa superba, E. ventricosa carnea, E. ventricosa coccinea, and E. ventricosa coccinea nana, E. depressa, E. gemmifera; E. splendens, thin; E. campanulata, E. Cavendishii, E. ovata, E. Humeana, E. Bergiana, E. nigrita, E. vestita alba, and a larger old plant of E. Bowieana.

*In collections of 12 distinct species or varieties.**Nurserymen only.*

1st Prize, 4*l.*, Messrs. Fairbairn, Clapham. This collection contained a splendid *E. Cavendishii*, a yard high, and as much through at the base; *E. ventricosa alba*, *E. ventricosa carnea*, and *E. ventricosa coccinea minor*, beautifully flowered plants; *E. Westphalingia*, 2½ feet through; *E. tricolor*, 1½ foot by 2 feet across, good; *E. tricolor nova*, and *E. tricolor elegans*; *E. vestita coccinea*, a very fine plant, 2 feet by 3 feet in diameter; *E. Humeana*, *E. jasminoides*, and *E. odora rosea*.

2nd Prize, 3*l.*, Mr. Fraser, Lea Bridge, who had a good *E. Thunbergia*, 2 feet by 2; *E. Bergiana*, about the same size; *E. ventricosa coccinea minor*, 1½ foot through, and about 1 foot high; *E. intermedia*; *E. campanulata*, 2 feet high and a yard through; *E. suaveolens*; *E. ventricosa stellata*; *E. Beaumontiana*, 9 inches high, densely covered with flowers; *E. mirabilis*, *E. mundula*, and *E. perspicua nana*, each about 18 inches through, and quite dwarf; and *E. propendens*, a moderate-sized but magnificently-bloomed plant.

No other competitor.

*In collections of 8 species or very distinct varieties.**Private Growers only.*

1st Prize, 4*l.*, Mr. Hunt, for *E. Sprengelii*, 2 feet by 2; *E. tricolor*, rather shorter and as much through; and a variety of *E. tricolor*; *E. suaveolens*, 3 feet; *E. perspicua nana*, 1½ foot by 2; *E. ventricosa tricolor*, and *E. Westphalingia*, each 3 feet by 2; and a good *E. odorata*. These plants were generally free-grown thin plants, but well flowered.

2nd Prize, 2*l.* 10*s.*, Mr. Green, consisting of *E. intermedia*; *E. gelida*, and *E. suaveolens*, large old plants; *E. Beaumontiana*; *E. Cavendishii*, not out; a good *E. ventricosa coccinea nana*, 1 foot by 2; *E. jasminiflora*, well flowered; and a very good *E. perspicua nana*.

No other competitors.

*In collections of 6 species, or very distinct varieties, grown in No. 24 or 16-sized pots.**Private Growers only.*

1st Prize, 2*l.*, Mr. Bruce, for *E. Cavendishii*, 2 feet by 2; *E. Bergiana*, a beautiful little plant with drooping branches, 1½ foot high; *E. propendens*, 2 feet by 2, good; *E. ventricosa coccinea minor*, very dwarf; *E. intermedia*; and *E. perspicua nana*, very dwarf, and covered with flowers. These were all very pretty plants.

2nd Prize, 1*l.*, Mr. Roser, gardener to J. Norris, Esq., Streatham. These were particularly dwarf compact plants of *E. Westphalingia*, *E. ventricosa coccinea minor*, *E. ventricosa coccinea nana*, *E. ventricosa superba*, *E. Bergiana*, and *E. hybrida*.

Extra Prize, Mr. Reid, gardener to E. Wigam, Esq., Walthamstow, for dwarf nicely-bloomed plants of *E. perspicua nana*, *E. ventricosa prægnans coccinea*, and *E. ventricosa coccinea minor*; *E. ampullacea vittata*, *E. denticulata moschata*, and *E. florida*.

In addition to the above, Mr. Kyle had a collection of similar plants of *E. ventricosa coccinea*, *E. ventricosa alba*, and *E. ventricosa prægnans coccinea*, *E. Beaumontiana*, *E. perspicua nana*, and *E. propendens*. Mr. Slowe also had a collection of plants equally compact, of the following kinds:—*E. florida*, *E. Beaumontiana*, *E. ovata*, *E. Bergiana*, *E. ventricosa coccinea minor*, and *E. vestita alba*. These small plants, in many cases not more than from 9 inches to 1 foot high, and quite as much through, completely enveloped in blossoms, were perhaps equally interesting with the more valuable and magnificent specimens of giant growth.

GREENHOUSE AZALEAS.

In collections of 10 plants, very distinct kinds.

Nurserymen and Private Growers.

1st Prize, 5*l.*, Mr. Green, for *Rawsonii*, *aurantia*, *leucomigista*, *sinensis*, *pallida*, *rubra plena*, *ledifolia*, and very full-flowered plants of *variegata* and *lateritia*.

3rd Prize, 1*l.* 10*s.*, Mr. Gaines, for small thin plants of *decora*, *grandis*, *aurantia superb*, *Victoria*, *delicata*, *admirable*, *carnea*, *brilliant*, *nymph*, and *King of Saxony*.

ORCHIDACEOUS PLANTS.

In collections of not less than 15 exotic species or distinct varieties.

Nurserymen and Private Growers.

1st Prize, 15*l.*, Mr. Mylam, gardener to S. Rucker, Esq., Wandsworth. This collection contained many fine plants, and was much admired; we noticed *Anguloa uniflora*, with four flowers; *Brassia Lawrenceana*, two spikes; *Lycaste Deppii*, *Catleya Mossii*, and some varieties: *Lycaste aromatica*; *L. cruenta*, and *L. tyrianthina*; *Cypripedium barbatum*, with two flowers; a species of *Epidendrum*, with green flowers; *E. macrochylum*, *E. selligerum*, *E. patens*, *E. aloifolium*, and *E. elatum*; *Brassia verrucosa*, four spikes; *Huntleya violacea*; *Camarotis purpurea*, with five spikes; *Coryanthes speciosa*, with a spike of two flowers; *Oncidium leucochylum*, *O. pumilum*, four spikes; *O. pulchellum*, four spikes; *O. pulvinatum*, and *O. divaricatum*; *Cirrhea atropurpurea*, with the rim of the pot hidden by its numerous drooping spikes of sad-coloured flowers; *Calanthe veratrifolia*, three spikes; *Vanda teres*; *Peristeria stapelioides*; *Stanhopea saccata*, with seven flower spikes; *Stanhopea grandiflora*, three spikes; *S. tigrina*, four spikes; a remarkable plant of *Sobralia macrantha*, with eight expanded flowers of large size, and rich deep purple colour; *Saccolabium guttatum*, with three spikes; an immense mass of *Acanthophippium bicolor*; *Stenia pallida*, three flowers; and *Eria Dillwynia*, with two spikes.

2nd Prize, 7*l.*, Mr. Robertson, gardener to Mrs. Lawrence, Ealing Park, for a large *Dendrobium moschatum*, thinly flowered; *C. densiflorum*; *Lycaste tyrianthina*; *Epidendrum patens*; *E. Crassifolium*; *E. Selligerum*; and *E. vitellinum*; *Saccolabium guttatum*, with four spikes; and *S. præmorsum*, with three; *Oncidium ampliatum major*; *O. flexuosum*, large; and *O. pulchellum*; *Catleya Mossii*; *Broughtonia sanguinea*, with five spikes; *Huntleya violacea*; *Barkeria spectabilis*; *Maxillaria tetragona*; *Cyrtochilum hastatum*; and a species of *Cymbidium*, with four spikes of light green flowers.

In collections of 10 exotic species or varieties.

Nurserymen and Private Growers.

1st Prize, 10*l.*, Messrs. Veitch and Son, Exeter. This collection contained *Stanhopea saccata*; *Anguloa uniflora*; *Cyrtochilum hastatum*; and *C. stellatum*; *Oncidium ampliatum major*; and *O. pulvinatum*; *Dendrobium calceolaria*, with seven spikes open; *Gongora Bufonia*, with three spikes; *Barkeria spectabilis*, two spikes; and *Aerides crispum*.

2nd Prize, 5*l.*, Mr. Don, gardener to F. G. Cox, Esq., Stockwell, for *Aerides crispum*, and *A. odoratum*; a minute species of *Cirrhopetalum*; *Oncidium flexuosum*; *O. leucochylum*; and *O. pulvinatum*; *Saccolabium guttatum*; *Vanda Roxburghii*; *Brassia caudata*, with two spikes; *Stanhopea oculata*; and *S. quadricornis*, each with two spikes; *Bifrenaria aureo-fulva*; *Aerides crispum*, and *A. crispum pallidum*; *E. pidendrum glumaceum*; and *E. luridum*; *Gongora maculata alba*; and *Lycaste Deppii*.

Extra Prize, Messrs. Henderson, Edgeware Road, for *Zygopetalum rostratum*; *Stanhopea quadricornis*, and *S. tigrina*; *Oncidium leucochylum*; *O. luridum*;

O. longifolium; and *O. altissimum*; *Epidendrum aromaticum*; *Barkeria spectabilis*; and *Stanhopea oculata*, with three spikes.

In collections of 6 exotic species or distinct varieties.

2nd Prize, 4*l.*, Mr. R. Plant, gardener to J. Schroder, Esq., Stratford, for *Aerides crispum*, *Lycaste aromatica*, *Vanda cristata*, *Calanthe veratrifolia*, *Trichopilia tortilis*, with some very large flowers; and *Cattleya intermedia*.

The only competitor.

BRITISH FERNS.

In collections of 30 species, cultivated in pots.

Nurserymen and Private Growers.

1st Prize, 2*l.*, Mr. Smith, gardener to J. Anderson, Esq., Regent's Park. This was a very good collection of this interesting and singular tribe of plants, and contained fifty species and varieties, amongst which we noticed the rare and beautiful *Trichomanes speciosum*; *Hymenophyllum Tunbridgensis*, *H. Wilsoni*, *Woodsiæ ilvensis*, *Botrychium lunaria*, *Asplenium alternifolium*, *A. marinum*, *A. fontanum*, *A. viride*, and *A. Adiantum nigrum*; *Cænopteris alpina*, &c. &c.

2nd Prize, 1*l.*, Mr. Taylor, whose collection comprised 36 species and varieties.

(*To be continued.*)

PART II.

LIST OF NEW AND RARE PLANTS.

APHELANDRA AURANTIACA. ORANGE-SCARLET FLOWERED. (Pax. Mag. Bot.) Acanthaceæ. *Didynamia Angiospermia*. A native of Mexico, which has bloomed with Mr. Low, of the Clapton Nursery, and with Messrs. Henderson and Rollisson. The plant blooms while very dwarf, not exceeding a foot high, and such profusely in flower. When the flowers first open they are yellow, but soon change to a vivid orange-scarlet. They are produced in large dense spikes, each blossom being about two inches across. It is a very showy hot-house plant, and well deserves a place wherever practicable.

BEGONIA ALBO-COCCINEA. SCARLET AND WHITE FLOWERED. (Bot. Mag. 4172.) Begoniaceæ. *Monœcia Polyandria*. Seeds of this very pretty species were received from India to the Royal Gardens at Kew, where it has recently bloomed, in the very fine collection of this lovely tribe of stove-plants. The flower scape rises half a yard high, producing a numerously branching panicle of flowers. The branches are red, as is the exterior of the flowers, whilst the inside is white with a slight tinge of blush. The leaves are of a deep green, smooth, oval. It is a very interesting species, well meriting cultivation.

CHIROMIA FLORIBUNDA. ABUNDANT FLOWERING. (Pax. Mag. Bot.) Gentianaceæ. *Pentandria Monogynia*. It is a native of the Cape of Good Hope, now in the collections of Mr. Jackson of Kingston, and Messrs. Rollisson of Tooting. It is a greenhouse shrub, growing low, numerously branching, and forms a compact plant. Each shoot produces flowers near to the extremity. Each blossom is about an inch across, of a rosy-red with a small yellow centre of pistil and stamens. It blooms most of the summer season.

CROCI AUTUMNALES. AUTUMNAL CROCUS. (Bot. Reg. 37.) Iridaceæ. *Triandria Monogynia*.

1. *C. Damascenus*, very light blue.
2. *C. Byzantinus*, purple.
3. *C. Tournefortianus*, very light blue with white anthers.

4. *C. Cambessedianus*, white striped with deep purple.
5. *C. Medius*, deep purple with darker stripes.
6. *C. Cartwrightianus*, white with dark stripes in an early stage, but afterwards of a light blue with darker stripes.
7. _____ *Creticus*, pale blue, with patches of white.
8. *C. Clusianus*, violet-blue.

Notes of the above are given by the Dean of Manchester, Hon. and Rev. W. Herbert. These pretty flowers appearing in autumn produce a lively interest, and render them deserving a place in every flower-bed near to a dwelling house.

GOMPHOLOBIUM BARBIGERUM. FRINGE-KEELED. (Bot. Mag. 4171.) Leguminosæ. Decandria Monogynia. A native of New Holland, and one of the most beautiful greenhouse plants. It is a moderate sized shrub, with twiggy erect smooth branches, flowering most profusely. Each blossom is near two inches across, of a very rich yellow. It has been introduced by Messrs. Lucombe and Pince, of Exeter. It deserves to be in every greenhouse.

IRIS IMBRICATA. IMBRICATED (CONVEX BRACTS.) (Bot. Reg. 35.) Iridacæ. Triandria Monogynia. It is a showy perennial, hardy. The flowers are of a pretty lemon-colour. The Dean of Manchester communicated the specimen, &c.

LEIANTHUS LONGIFOLIUS. LONG-LEAVED. (Bot. Mag. 4169.) Gentianæ. Pentandria Monogynia (Synonym, *Lisianthus erectus*.) A small half-shrubby plant, growing to two or three feet high, having spreading, drooping branches, which are clothed with drooping flowers. Each blossom is funnel shaped, tube an inch and a half long, of a pale-yellow colour. It is in the collection of Messrs. Lee, of Hammersmith Nursery, where it flourishes in the stove.

ODONTOGLOSSUM CERVANTESII. TOOTH-TONGUE. Orchidacæ. Gynandria Monandria. (Bot. Reg. 36.) This very beautiful *Odontoglossum* belongs to the white-lipped section, and has been introduced by Messrs. Loddiges from Oaxaca. The ground colour of the entire flower is a delicate flesh, with band like marks towards the centre of a brownish-crimson, and the petals have a yellow streak up the centre. Each flower is two inches across, and has a delightful almond fragrance.

ONCIDIUM EPILOPTERUM. SPOT-WINGED. (Bot. Reg. 40.) Orchidacæ. Monandria. A native of Mexico, which has bloomed in the collection of Messrs. Loddiges. It is a beautiful species, appearing to be intermediate between *O. lanceanum* and *Carthaginense*. The flower grows erect. Each blossom is a little more than an inch across. Petals and sepals of a rich brownish-purple. Lip very large, of a fine clear yellow, with slight spots of crimson at the base.

PLEROMA KUNTHIANA. MR. KUNTH'S PLEROMA. (Pax. Mag. Bot.) Melastomacæ. Decandria Monogynia. Mr. Gardner discovered this fine flowering species in boggy situations on the Organ Mountains of Brazil, and sent it to the Glasgow Botanic Garden. It has recently bloomed in the garden of R. G. Loraine, at Wallington Lodge. It is an evergreen shrubby plant, producing its flowers in large thyrsoid panicles at the extremities of the branches. Each blossom is about three inches across, of a rich violet-blue in their early stage, changing to purple up the centre of the petals, and a pale violet at the edges. It is a fine hothouse plant, and well merits cultivation. Like several others of the Melastomacæ, which grow naked, it requires to be cut in after blooming, so as to induce laterals, and make the plant bushy.

PHYLLARTHROM BOJERIANUM. MR. BOJER'S. (Bot. Mag. 4173.) Bignoniacæ. Didynamia Gymnosperma. A native of Madagascar; a small singular-looking shrub, having long and broad leaf-like petioles, but no real leaves. The flowers are produced on a very short raceme, of two or three in each. A separate blossom is about an inch and a-half across, funnel-shaped, of a pretty rosy flesh-colour, having two broad yellow lines in the throat.

RIBES SANGUINEUM FLORE PLENO. DOUBLE BLOOD-FLOWERED CURRANT. (Pax. Mag. Bot.) It has been raised from seed in the garden of the Earl of

Selkirk, at St. Mary's Isle, Kircudbright, in Scotland. Mr. Dick, the gardener, states that about one hundred seedling *Ribes* had been raised there in 1838, and in 1839 he had them planted out in the open ground, and among them was one, a double-flowering variety, and though no other had the least tendency to being double, there were several distinct colours of single-flowering varieties. The double variety has since then bloomed beautifully, and about three weeks later than the common varieties of *Ribes*. Its growth is as free, and its blooming as profuse, as the single blood-flowered, and it is as easily propagated.

The racemes of flowers vary from three to six inches in length. It is a valuable addition to this lovely tribe and species; and deserves to be an ornament in every garden. It is a fine plant, too, for forcing.

RHUS DIVERSILOBA. VARIOUS-LEAVED POISON OAK. (Bot. Reg. 38.) Anacardiaceæ. Polygamia Monœcia. A native of California, where it is a common bush. It proves to be a hardy deciduous shrub in this country, and has stood last winter against the wall in the London Horticultural Society's Garden at Chiswick. The flowers are very small, white, produced in short racemes.

SIDA (ABUTILON) PÆONIFLORA. PÆONY-FLOWERED. (Bot. Mag. 4170.) A native of the Organ Mountains of Brazil, and was sent by Mr. Lobb to Messrs. Veitch's, of Exeter, in whose plant-stove it recently bloomed. It appears to be a tall shrub or small tree. The flowers are produced towards the extremities of the shoots, two or three together, at the axils of the leaves. Each flower has the petals turning inwards, forming nearly a globe, of a beautiful red-rose colour with pale veins; the centre yellow. It is a pretty addition, and would make a fine conservatory plant.

STRELITZIA AUGUSTA. GREAT WHITE-FLOWERED. A native of South Africa. The trunk grows to the height of eight or ten yards; a fine plant has recently bloomed at the Royal Gardens, Kew. The flower stalks are of a fine purple colour, and the flowers white.

NOTICED IN THE BOTANICAL REGISTER, NOT FIGURED.

EPIDENDRUM LINDENII. Discovered on rocks, near Merida, by Mr. Linden. From the particulars attached to three varieties of it Mr. Linden sent, are, 1, flowers a bright carmine; 2, rose coloured; and, 3, a yellowish-orange. Messrs. Loddiges' possess a fourth, which has flowers whose centre is rose-coloured, and the upper half of the sepals and petals is a pleasing salmon colour. The habit of the plant is very like that of *E. elongatum*.

SEEN IN NURSERIES, &c.

HINDSIA LONGIFLORA ALBA. The flowers are pure white, and of the size of the original blue species, produced in large heads, and of a sweet fragrance. Five plants are in bloom at Messrs. Henderson's.

BURTONIA BRUNIODES. A small New Holland shrub, producing terminal heads of yellow flowers. Messrs. Lucombe and Pince possess the plant.

HYDROLEA SPINOSA. From South America, and requires a stove or warm greenhouse. It is a shrubby plant, the trunk rising three feet high, numerous branching, producing a profusion of brilliant blue convolvulus-shaped flowers. It blooms beautifully in the collection at Kew Gardens, and well deserves to be in every hothouse collection.

CHENOSTOMA POLYANTHUM. A very neat dwarf, and handsome flowering greenhouse plant, producing numerous loose racemes of small salvia-shaped flowers, of a pretty light blue colour with an orange throat. It blooms nearly all the spring, summer, and autumn.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON CARNATIONS AND PICOTEEES.—Having last season procured some slips of good Carnations and Picotees, yellow and other handsome varieties (originally raised from hybridized seed), the plants which were extremely healthy were this spring turned into beds previously prepared with the following compost, viz.—common earth, a small quantity of sand and of well rotted cow dung, and the same proportion of rubbish from old buildings of cob and lime. They are all now in bloom, producing only small single flowers of bad colours, the majority white. An answer in an early number by some grower of this class of flowers, as to the cause of such change, will much oblige.

North Devon; 19th July, 1845.

AN OLD SUBSCRIBER.

ON SCARLET PELARGONIUMS.—I procured, early this spring, some scarlet-flowered Geraniums for planting out in beds, and had them turned into a very rich loamy soil. They grow tremendously, and the leaves are six inches across, but few flowers are produced, and the beds are nearly all green vigorous foliage to appearance. It appears to me that the sort supplied me is of too vigorous a growth. I had not a name with it. Are there not some kinds properly suited for beds, if so, please name them and where to be obtained.

A BEGINNER.

[Frogmore Scarlet is peculiarly adapted for the open beds. It is of a dwarfish habit, a most profuse bloomer, and of an intense rich scarlet colour. The new dwarf, General Tom Thumb, is also an excellent kind for the purpose; it grows very dwarf, blooms profusely, and of a deep rich scarlet. Another kind called the Huntsman, is very much in the way of the Frogmore Scarlet, but a little more vigorous. The above kinds are the best, and every way suited. They may be had at the general nursery establishments at a low price.—CONDUCTOR.]

REMARKS.

ON STOCKS.—In a recent number of the CABINET an article on Stocks was given, and the following additional ones being extracted from the "Gardeners' Chronicle," if inserted, will I hope further tend to the successful cultivation of this lovely flower:—

"There are few but must have been struck with the beauty of the Stocks which are occasionally to be seen in the well managed garden of the cottager—the result of his care and attention, and which is a lovely proof of the quiet and domestic habits of the inmates. Indeed, I never see a fine bed of Stocks, but it recalls the early scenes of my youth, when the seed of emulation first began to develop itself, and when hope shed a cheering ray over youthful anticipations. The cottager sows his Brompton or Giant Stock in March; he has thus a strong growth before winter, and if he has successfully preserved them until spring he will then be rewarded with what is the characteristic trait of the variety—a splendid spike of flowers. The gardener and others, who have various and better means for the preservation of their Stocks, will sow the Brompton Stock in the latter end of June or beginning of July, and Scarlet 10-week and German varieties in the second week in August; and to prevent disappointment from any variation of the season, he will again sow about the 1st of September. The practical gardener will require no detailed directions how to preserve his Stocks through the winter; he will use those means at his command best adapted for the purpose; they require simply to be kept in a dry and sheltered situation with protection from severe frost, and to be shaded from the sun whilst frosty weather continues. My own practice, however, is to pot the scarlet, Brompton or Giant, three in a pot, and the 10-weeks from five to seven in a pot, and before

the frost sets in the pots are plunged in dry coal-ashes, in a frame, giving abundance of air at every favourable opportunity.

"As soon as the severity of the winter is past, and the plants begin to make a fresh growth, holes are dug out in the borders to the depth of 18 inches, and filled up with two-thirds of old or decomposed turfs, which have been used in the frames for the growth of Melons, &c. To this is added one-third of burnt clay, or whatever may be at hand, such as vegetable refuse, the scourings of ditches—after undergoing the process of burning. The plants are turned out of the pots with the ball entire and are placed in the compost, which is firmly pressed against the ball with the foot, to prevent rapid growth, a firm compact stem being essential to support the noble spikes of bloom which the double flowering plants of the scarlet Brompton Stocks produce.

"Complaints have been frequently made that the German varieties of the Stock cannot be kept true to their kinds from seed saved in this country; but with the selected sorts which I have grown, I have never found the least difficulty, both in regard to the distinctness of the sorts, and the number of plants producing double flowers; these, in fact, were equal to those in every respect which were raised from imported seed. Every one acquainted with the culture of the Stock must have observed the length of time it requires to mature its seed; hence, we seldom can obtain good seed from spring sown 10-week Stocks. Besides, if several varieties are grown closely together, at the advanced period of the season in which they bloom, most of the winged insects will have undergone their various transformations; and their nectar-sipping propensities will explain the cause of the complaint already alluded to."

"It will, however, be expected that I should state the method I adopt to obtain good seed to produce double flowering plants; and here I would remark, that the greatest difficulty is with the scarlet Brompton. It is well known that a bloom of the single Stock has only four petals, but where proper attention has been previously paid to the saving of the seed, a disposition to double flowering of the single ones will frequently take place; the plants are, therefore, carefully examined, and those flowers that have five or six petals are only allowed to produce seed-pods; but as it frequently happens that a sufficient number cannot be obtained to produce a sufficient quantity of seed, those plants are selected which grow beside double flowering ones. The first seven or eight blooms are picked off from the bottom of the spike; the next seven are left to produce seed-pods; and to prevent exhaustion the upper part of the spike, after the pods are well formed, is broken off. The lateral shoots continue to produce blossom, but none are allowed to produce seed-pods. All that is required in saving seed from the 10-week, &c., is not to permit more than seven or eight pods to mature their seed on one plant; after the seed is ripe, it is best preserved in the seed-vessels until it is required to be sown."—*Gardeners' Chronicle*.

LONDON HORTICULTURAL SOCIETY, REGENT-STREET.

June 3.

Of new plants a very pretty variety of the handsome greenhouse plant *Hindsia violacea* was produced by Messrs. Henderson, of Pine Apple-place. There was no material difference between this and the species just mentioned, except in the flowers, which instead of being of a fine porcelain blue were white, a colour into which blue is very liable to change. It was said to be very fragrant, and will no doubt form a very interesting variety. From the same collection was also a yellow variety of *Gompholobium polymorphum*, a pretty twining New Holland plant. A certificate was awarded for the *Hindsia*.—Messrs. Veitch and Son, of Exeter, sent *Calceolaria floribunda*, a Peruvian species, having small yellow flowers, and a cut specimen of a *Eucalyptus*, bearing little tufts of white blossoms. The latter was said to have been taken from a tree 14 feet in height, and was stated to have stood the winter, such as it is in Devonshire, without injury, for six years in an exposed situation, in their nursery at Exeter. All the kinds that have been tried having proved too tender to stand the severity of the weather without protection in the Society's garden at Chiswick, and some *Eucalypti* being much more hardy than others, it is worth ascertaining in dif-

ferent parts of the country what sorts are best adapted to our climate. A certificate was awarded for the *Calceolaria*.—From Mr. Piper, gardener to A. Ward, Esq., was an exceedingly well-grown plant of the *Calceolaria Lady Constable*, covered with flowers, and three *Schizanthus retusus*. A certificate was awarded for the *Calceolaria*.—Mr. Conway, of Brompton, sent a plant of his Cactus called Conway's Giant, a kind distinguished for the large size of the flowers, and for the bright red colour which they possess.—From Mr. Jackson, of Kingston, were *Ononis rotundifolia*, an *Epidendrum* from Guatemala, and two plants of *Comarostaphylis*, a nearly hardy Mexican shrub closely related to *Arbutus*. In the fruiting season it is covered with pretty dark purple berries, which give the plant a remarkable appearance.—From the garden of the Society were *Stanhopea oculata*, remarkable for its strong odour. *Cypripedium barbatum*, the useful *Epidendrum gladiatum*, a fine *Brassia guttata*, three *Begonias*, a good *Erica intermedia*, and several well-grown *Cinerarias*, [together with *Glossocomia ovata*, a hardy Indian herbaceous plant, producing pretty pale-coloured bell-shaped flowers, which are elevated on long stalks above the foliage. Along with these was the Persian annual *Cochlearia acaulis*, a species of stemless Scurvy-grass, which forms little green patches closely studded with small pale starlike flowers.—Finally, a Hyacinth bulb was produced which had been grown in water, and which had had the base all rotted away. On the decayed part being removed, however, and the bulb placed under circumstances favourable to vegetation, nearly all the remaining portions of the scales produced young bulbs; thus showing with what facility such things may be increased by any part of the scales, even when the portion from which the young bulbs usually grow has been removed.

DRAINAGE FOR POTS.—I am but a novice and amateur; yet little as my experience is, I have found in it the incalculable good effects of perfect drainage, and have long used a material that I have not anywhere seen noticed, although amongst the wise men of the profession it may be quite familiar—that of using the round cinder that falls from steam-engine furnace-fires. It is clean and half vitrified, and agrees with the health of plants. I first place a few crocks to keep the hole free, then one or two inches of these ashes, then a little Moss, and, lastly, the lumpy soil, &c.; by which I effect in a superior way all that is needed. The advantage that the plan possesses is, that no worms will go through these ashes, and they make a most perfect drainage.—*Gardeners' Chronicle*.

ON LUCULIA GRATISSIMA.—In a former Number of the CABINET, in 1844, I observed a valuable article inserted on the culture of the *Luculia gratissima*, but as there are many persons who have not the means at command to grow it in a conservatory, &c., I beg to remark that by the following attention I grow it admirably in a pot. I find it is a point specially to be attended to, not to stimulate it to grow in spring and the early part of summer, as it is not naturally inclined to do. I keep my plants in the greenhouse till about the middle of June, then plant them out balls entire in the open border, in a situation that is warm, but shaded from mid-day sun. I take them up again, keeping all the small fibrous roots I can uninjured, the first week in September, putting them into additional sized pots, and place them in a vinery and plant-stove of moderate temperature; they grow strongly and soon produce heads for blooming, which display their beauty and fragrance nearly through winter.

Hants.

SENEX.

ON WIREWORM.—To destroy this pest most effectually :—Towards the end of last year, when my Carnations and other plants had all been removed from my flower-beds, and previous to the latter being turned up for exposure to the winter frosts, I took sulphuric acid, in the proportion of one gallon to twenty of water, and applied the mixture plentifully to the soil. In two days I again repeated the operation, having previously turned up the soil and seen that it had been well pulverized. After the lapse of ten or fourteen days I gave a plentiful appli-

cation of powdered lime, and shortly after turned the soil up in ridges as usual. The result has been, that it is now a rare thing to see a wireworm where previously I had often killed a hundred in half an hour, and where my plants were eaten up in a wholesale manner. Let any one collect a number of these most destructive pests and put them among soil in a box, and then apply the above mixture. Let him look for them next morning and communicate the result; or, indeed, in half an hour after. This can be used on a large scale as well as on small flower-beds.—*Gardeners' Chronicle*.

ON SOME OF THE FINEST HOTHOUSE PLANTS.—Most of the superb flowering hothouse kinds of Gardenias, Thunbergias, Gloxinias, Clerodendrons, Begonias, Russelias, Ruellias, Achimenes, &c., with many of the fine Orchideous plants, if grown in the usual higher temperature until the blossom buds are about half grown, may then be brought into the greenhouse, or conservatory in the summer months, where they will display their beauties to more than double the extent of time which they would do in the hothouse, and thus form a brilliant ornament to the greenhouse, &c. I have adopted the plan for the last two summers, and so far on the present, with perfect success. It is well worth the trial.

CLERICUS.

ON HYBRID LILIES.—The Dean of Manchester, in a recent visit to Ghent, states that he saw in the nursery of Mr. Van Houtte the finest Orange Lily that has been produced, and which had been raised from *Lilium atropunctatum*, fertilized by a strong orange lily called *L. croceum*. The new variety is of middle stature, large heads of flowers, and the blossoms very large and brilliant, and will prove to be a very valuable acquisition to the flower garden. We remarked in one of our previous volumes that Mr. Groom, florist, of Clapham, near London, had paid considerable attention to the impregnating lilies of the hardy kinds with the more delicate sorts, with a view to obtain the most brilliant and distinct varieties, and his success was highly encouraging. He had the most beautiful kinds we ever saw, deserving to be in every flower garden. We do hope further attention will be given to raising hybrids of this now so extensive and splendid family of flowers. The various forms, colours, habit, &c., give a very ample field for satisfactory attempts, in combining, too, the many sorts of Martagons, japan kinds, orange, white, Jacobææ, Guernsey, &c. The most inferior variety that could be raised would be an ornament, and deserving a place in the flower border, whilst the probabilities would be great of producing superb novelties.

Now that glass is so cheap, a bed might be covered to afford facilities for successfully impregnating an entire bed of mixtures, and obtain well-ripened seed. The result would amply repay.—CONDUCTOR.

ON THE FINE BLUE DWARF GENTIAN.—Noticing in the 11th volume of the CABINET some suitable remarks on the culture of the above named lovely plant, I pursued the plan recommended with success. Last season, however, I divided my plants the first week in July, but not into very small patches, and replanted two beds into a rich sandy loamy soil. I shaded them for several days; they soon struck fresh roots, were finely established before winter, endured that without injury, and bloomed vigorously and profusely this spring. To divide and replant at the season mentioned I am persuaded is the proper time, and not in autumn as is generally done, or in early spring as done by some. My double daisies I treated the same, and they succeeded admirably.

CLERICUS.

ON CANNA IRIDIFLORA.—This fine crimson-flowered species is generally grown in the hot-house, and is seldom seen in vigour, the flowers being small. I had several plants, and last year I grew two in a greenhouse, and they flowered freely and vigorously; two others I planted out in the conservatory border, and they flourished amazingly, the flower stems rising four yards high. Its large

noble leaves and splendid flowers made it magnificent. I have had two plants grown in the greenhouse till the middle of June, and then turned them out into the open border of a south wall, near to the angle of a hot-house, and the plants are now seven feet high, showing admirably for bloom. In warm situations I am fully satisfied it will make one of the noblest out-door summer ornaments.

A FLOWER GARDENER.

FLORICULTURAL CALENDAR FOR AUGUST.

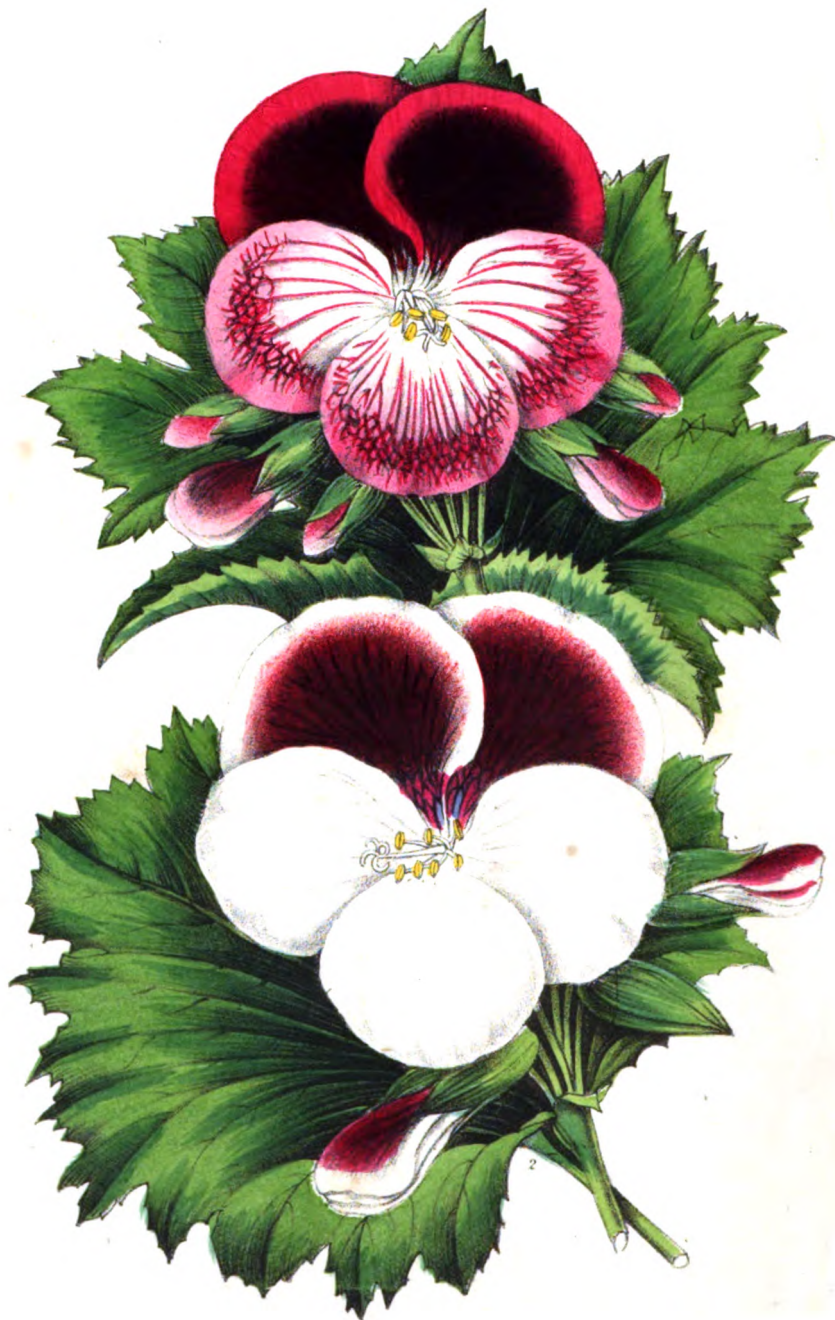
GREENHOUSE PLANTS.—All exotic trees and shrubs belonging to this department, that are in want of larger pots, or refreshment of new soil, should (if not permitted last month) immediately be done.

Pelargoniums—Plants done blooming should now be cut down; this will induce them to push fresh shoots; when they become two inches long, the plants should be repotted (not before), shaking off the old soil, and replacing it with fresh compost. The young shoots thus produced will require thinning, those cut away clean may be struck where required. *Calceolarias* should be increased. *Verbenas* should now be increased in order to get well established plants to endure winter. This is the proper time to propagate *Aloes*, *Sedums*, and all others of a succulent nature, by means of suckers or bottom offsets; when detached from the parent, they should be potted singly into small pots, using light dry compost, and watering sparingly till they have taken root. In the first or second week at furthest, inoculation may be performed on any kinds of the *Citrus* genus. *Camellias*, to bloom early, should be placed in the greenhouse.

FLOWER GARDEN.—Propagate by means of slips, and parting the roots of any double-flowered and other desirous fibrous-rooted perennial plants done flowering. *Auriculas* should be cleared of all dead leaves, and shifted into fresh pots; prick out of the seed-bed, where it was omitted last month, Seedling *Auriculas* and *Polyanthuses*, and place in a shady situation; seeds may also be sown of both kinds in boxes or pans. *Carnations* may still be layered; also double *Sweet-Williams*; the earlier in the month the better. Those which were layered four or five weeks ago will now be sufficiently rooted to be taken away and planted in beds or pots. Also plant out *Pink pipings*, which were put in in June, or slips may be taken off and struck (see Vol. XII., article on doing it successfully). Sow seeds of all kinds of bulbous-rooted plants in pans or boxes, such as *Spring Cyclamen*, *Anemones*, *Ranunculuses*, &c. &c. Those kind of bulbs wanted to increase should be taken up if the leaves be decayed, and the offsets taken off. Transplant into nursery beds seedling, perennial, and biennial plants sown in spring. In dry weather gather those flower-seeds that are ripe of any desired kinds. Plant out such kinds of autumn flowering bulbs as yet remain unplanted. *Heartsease*, towards the end of the month, should be propagated by slips, put into a shady border, and kept quite moist till they have taken root; these will form fine strong plants for blooming the spring following. Buds of *Roses* may still be put in; the earlier the better. Any budded early and looking fresh may have the bandage loosened to allow room for swelling. All shoots below the bud should be rubbed off. *Chrysanthemums* should be topped, if not done last month, in order to form compact heads of flowers. The tops put in make dwarf, late blooming plants. *Mignonette* to bloom during winter should now be sown in pots.

Ranunculuses, &c., roots of, should now be taken up, and gradually and well dried.

DAHLIAS.—Thin out the shoots where large flowers are required. Water should be given copiously every evening during dry weather. A strata of manure should be laid over the roots, which tends to promote the vigour of the plants.



1. HEIDOS (HOYLE)

PELARGONIUMS.

2. DESDEMONA (BECK)

Floricultural Cabinet.

Pub. by Z. Neumann, Neuenhagen.

THE
FLORICULTURAL CABINET,
SEPTEMBER 1st, 1845.

PART I.
EMBELLISHMENTS.

ARTICLE I.

PELARGONIUMS—1. HEIDOS (HOVLK's). 2. DESDEMONA (BRECK's).

THE original species of Pelargoniums were, with but a small number of exceptions, entirely introduced from the Cape of Good Hope—amounting to upwards of 200 species—and many of them are regarded with esteem, being adorned with gay-coloured flowers, and invariably having fragrant foliage. They, however, possessed none of the regularity, richness of colour, or delicate shades, which so greatly distinguish those varieties that are now, during a long season in the year, the most captivating ornaments the cultivator possesses: thanks to the zeal of the skilful hybridizer, who has so transferred the loose and simple garb of this stranger from a foreign clime, to the uniform and beautiful dress of our present family; whose colours are not only novel and of singular beauty, but of every gradation of tints and depth which one can well imagine.

The two varieties represented in the accompanying embellishment we have not so distinguished, because they possess *all* the most desirable qualities of a first-rate flower, but on account of their combining with several good points in shape, a novelty and distinction of character which will render each an attractive object, either in collections at exhibitions or in the greenhouse. Both kinds will, we believe, be offered for sale in the ensuing season: Heidos is a seedling

raised by Mr. Hoyle of Guernsey; and *Desdemona* is one of the many beautiful seedlings raised by Mr. Beck of Isleworth.

The cultivation of *Pelargoniums* has already been so fully treated on in our pages, that it is unnecessary we should here add any observations thereon.

ARTICLE II.

THE GRAND FLORAL EXHIBITIONS OF THE METROPOLIS.

ROYAL BOTANIC SOCIETY, *Regent's Park.*

(*Continued from p. 209.*)

CLASS III.

FLORIST'S FLOWERS, IN POTS.

THE most engaging plants in this class, and indeed we may say at the exhibition, was the *Pelargoniums*; by which almost an entire tent of 120 feet long was occupied; presenting a very brilliant effect, and the superior condition in which nearly every plant was produced testified that their cultivation and management, has reached a high degree of perfection. The *Fuchsia* having now become a very popular flower, and being too so exceedingly graceful and ornamental in appearance, we hope to see their exhibition better encouraged another season. In the present schedule of the Society is offered an award of 3*l.* for the best half dozen *Calceolarias*, whilst only 2*l.* is offered for twelve *Fuchsias*. Surely they are deserving of a better proportion than this. Four collections of them were shown, the plants in those which obtained the two highest prizes, presented the appearance of having been carefully and excellently treated, each being a compact bush of from two to three feet high, by nearly as much in diameter.

PELARGONIUMS.

In collections of 12 new and distinct varieties, grown in No. 24 pots.

Private Growers.

1st Prize, 7*l.*, Mr. E. Beck, Isleworth, for exceedingly well bloomed plants of the following: *Conflagration*, *Zanzummin*, *Sir R. Peel*, *Pulchellum* (Foster's), fine; *Sultana*, *Susannah*, *Leonora* (Beck), good; *Mark Anthony* (Beck), fine; *Matilda* (Foster), *Lord Chancellor*, *Favourite* (Beck), and *Lurida* (Beck).

2nd Prize, 4l., Mr. R. Staines, New Road, Paddington, for scarcely less deserving plants of Alice Gray (Wilson's), Adonis (Staines), Superba (Wilson's), Sunrise, Hebe, Erectum, Duke of Cornwall, Enchantress (Wilson's), Lady Sale (Gaines), Sunbeam (Staines), Madeline (Lumsden's), and Roulette (Garth's), fine.

3rd Prize, 2l., Mr. Cock, Chiswick, for Cyrus, Duke of Cornwall, Erectum, Emma, Unit, Sir R. Peel, Hector (Cock's), fine; Symmetry, Rosetta superb, Eliza Sauvage, good; Jupiter, and Angelica.

Nurserymen.

1st Prize, 7l. Mr. N. Gaines, Battersea, for Priory King, Excelsa, Pirate^d Lady Mildmay, Cotherstone, Ackbar, fine; Neptune, Lady Sale, Achilles, fine; Madeline, King of Beauties, and Hermione.

No other competitor.

In collections of 12 distinct varieties grown in No. 12 pots.

Private Growers.

1st Prize, 6l., Mr. Parker, gardener to J. H. Oughton, Esq., Roehampton. The varieties were, Priory Queen, a fine specimen; Gipsy Queen, Erectum, Caroline, Bridesmaid, Master Humphrey, Emperor, Hebe, Mabel, fine, with large trusses; Virgo, Duke of Cornwall, and Superb. All very successfully cultivated.

No other competitor.

Nurserymen.

1st Prize, 6l., Mr. N. Gaines, Battersea, for Madeline, Coronation, Lady Sale, Lady Isabella Douglas, Albina, Erectum, Caroline, Nymph, Una, Comte de Paris, Juba, and Victory. All well grown.

2nd Prize, 3l. 10s., Mr. Pamplin, Walthamstow, for tolerably grown plants, though not well in bloom, of the following kinds: Alice Grey, Sir Walter Scott, Ajax, Superba, Prince Ernest, Achilles, Anna, Enchantress, Countess of Wilton, Vesta, Hesperis, and Camilla.

No other competitor.

In collections of 8 varieties.

Private Growers only who do not compete in the larger collections.

1st Prize, 8l. 10s., Mr. Coyah, gardener to R. Hudson, Esq., Clapham, for Matilda, Phillis, Witch, Flash, Hebe, Madeline, Nymph, and Enchantress.

2nd Prize, 2l., Mr. E. Bell, Chelsea, for Luna, Paragon, Alice Grey, Nymph, Arabella, Superb, and Roulette.

ROSES.

In collections of 20 distinct varieties grown in pots.

Nurserymen and Private Growers.

1st Prize, 7l., Messrs. Paul and Son, Nurserymen, Cheshunt, for compact plants, profusely in bloom of the following: Auburnon, pale crimson; Great Western, bright red, crimson, large, globular, and good; Louis Buonaparte, bright rose; Edward Jessie, light purple crimson, good; Belle Marie, large, rose; Lord John Russell, La Victorieux, good; Madame Laffay, large, crimson; General Allard, rose, good size and shape; Velours Episcopal, deep crimson purple; Taglioni, white, creamy centre, good; Coup d'Hebe, flesh pink, globular, and beautiful; Duchess of Sutherland, blush; Madame Plantier, white; Rivers, rosy pink; De Neuilly, ozy carmine, cupped and fine; Comte de Paris, lilac crimson, fine; Lane, shaded crimson; Comtesse de Latapede, and Isaune Labelle.

2nd Prize, 4l., Messrs. Lane and Son, Nurserymen, Berkhamstead, for Eliza Sauvage, large deep straw; Emilie Courtier, bright crimson; Caroline, delicate pink, deeper centre; Psyche, small crimson; Lane, Marjolin, good deep

crimson; *Theresita*, bright carmine; *Comte de Paris*, *Josephine Malton*, straw with buff centre; *Phoenix*, purplish red; *Queen (Bourbon)*, small, delicate salmon; *Armosa*, rosy blush, fine; *Proserpine*, reddish crimson; *Acidalie*, white, regular and very double; *Henry V.*, bright red; *Augustine Marget*, light rose; *William Jesse*, lilac and crimson shaded, globular, large, and very good; *Theresé Isabelle*, white; *Queen (perpetual)*, bright crimson; and *Louis Buona-parté*.

3rd Prize, 2*l.*, Mr. Laing, Nurseryman, Twickenham, for *Mima*, cream, fine; *General Soyex*, light crimson, fine; *Lady Alice Peel*, rosy crimson, fine; *Augustine Mouchelet*, crimson, cupped and good; *Bride of Abydos*, blush-white, large; *Clara Sylvain*, white; *Triomphaut*, rosy crimson: *Triumph de Gand*, *Abbe Muiland*, crimson red, very good; *Mont St. Bernard*, flush; *Dr. Marx*, rosy lilac; *Duchesse de Montebello*, pink; *Belle Emilie*, Mrs. Bosanquet, creamy white, large; *Cramoisie superieuse*, reddish crimson; *La Renomme*, *Cels Multiflora*, *Armosa*, and the common *Provence*.

Extra Prize, Mr. Steadman, Isleworth, amongst which, we observed tolerable blooms of *Devoniensis*, *Harrisonia*, and *Prince Albert*.

In collections of 10 distinct varieties grown in pots.

Private Growers only.

1st Prize, 4*l.*, Mr. E. Beck, Isleworth, for superior grown plants of the following: *Caroline*, *Nouvelle Heloise*, compact, shaded blush; *Madame Joly*, blush white; *Queen (Bourbon)*, *Devoniensis*, *Armosa*, *Lyonnais*, fine; *Celimine*, delicate pink, cupped; *Pauline Plantier*, and *Augustine Marget*.

No 2nd or 3rd Prizes awarded.

Extra Prize, A. Rowland, Esq., Lewisham, for moderately good specimens of *Madame Laffay*, *Eugene Hardy*, blush; *Reine de Naples*, *Triomphe*, *Lane*, *Armosa*, *Reine de la Guillotiere*, shaded-red crimson; *Mrs. Bosanquet*, *Marquise Boccella*, pale pink; and *Lavinia Duval*.

CALCEOLARIAS.

In collections of 6 distinct varieties, grown in No. 12 sized pots.

Private Growers.

1st Prize, 3*l.*, Mr. Garrod, gardener to R. B. Forman, Esq., Hampstead, for *Magician*, fine; *Sir R. Sale*, *Queen Victoria*, *Corymbiflora*, and *Queen of Beauties*.

2nd Prize, 2*l.*, Mr. Wren, gardener to J. Huskisson, Esq., Holloway, for *Standishii*, *King*, *Lady Sale*, *Lady Constable*, fine; *Corymbiflora*, and *Artilleryman*.

3rd Prize, 1*l.*, Mr. Kinghorn, gardener to A. Murray, Esq., Twickenham, for the following superior kinds:—*Grandis*, *Mary Queen of Scots*, *Marquis of Bute*, *General Robertson*, extra; *King of Saxony*, beautiful; and *Vesta*.

Nurserymen.

1st Prize, 3*l.*, Messrs. Hendersons, Edgware-road, for well-managed plants, each about two feet high and as much in diameter, of *Standishii*, *Lady Sale*, *Andromache*, *Lady Sale (Standish's)*, *Prince Albert (Green's)*, and *Rosea grandiflora*, fine.

2nd Prize, 2*l.*, Mr. N. Gaines, Battersea, for compact specimens of *Standishii*, *Desirable*, *Sunbeam*, *Candidate*, *Jamie Forrest*, fine; and *Conductor*.

No other competitor.

FUCHSIAS.

In collections of 12 distinct varieties, grown in No. 12 sized pots.

Nurserymen and Private Growers.

1st Prize, 2*l.*, Messrs. H. Laue and Son, nurserymen, Berkhamstead, for *Paragon*, *Montypenni*, *Venus Victrix*, *Gem*, *Beauty Supreme*, *Norfolk Hero*, *Achillea*, *Britannia*, *Rogersiana*, *Grovehillii*, *Mrs. Lane*, fine; and *Brockmanii*.

2nd Prize, 1l., Mr. N. Gaines, nurseryman, Battersea, for fine bushy plants, 2½ feet high by 2 feet across, of Favourite (Gaines), a rather pretty little flower, after way of Venus Victrix; Duke of Wellington, Vesta, Coccinea Vera (Smith's), Goldfinch (Harrison's), Reflexa, Coronet, Madonna (Harrison's), Cassandra, a good light flower; Priam, Britannia, and Monarch.

Extra Prize, Mr. Kendal, nurseryman, Stoke Newington, for Goldfinch (Harrison's), Stanwelliana, Coronet, Young May Morn, pretty; Robusta, Vesta, Erecta elegans, Gigantea, with some immense blooms; Chandleri, Globosa grandiflora, Defiance, and Venus Victrix.

Extra Prize, Mr. Robinson, gardener to J. Simpson, Esq., Pimlico, for Vesta (Smith's), Goldfinch (Harrison's), Iveryana, Queen (Pawley's), pretty; Formosa elegans, Chandlerii, Hope (Barues's), Exoniensis, Eppsi, Modesta, Venus Victrix, and Coronet.

CINERARIAS.

*In collections of 4 distinct varieties, grown in No. 12 sized pots.
Nurserymen and Private Growers.*

1st Prize, 1l., Messrs. Lane and Son, Berkhamstead, for Laverstonia, fine; Eclipse, Diana, and Splendens.

2nd Prize, 10s., Mr. Gaines, Battersea, for Matilda, General Tom Thumb, Britannia, and Compacta.

Extra Prize, Messrs. Henderson, Edgeware-road, Paddington, for Fanny Elser, Beauty of Wortham, white, with a slight pink tip, pretty; Washington, and Kuchantress Superb.

CLASS IV.

CUT FLOWERS.

In this class the competition was principally confined to the Pansies, the collections of which contained some fine blooms, especially those of Messrs. Brown of Slough, and Turner of Chalvey; to the former of which the first prize was given, although there were no names of the varieties attached, and the 10th rule of the Society should, therefore, have excluded them. We hope the Society will in future direct the judges strictly to enforce this rule in all cases, however meritorious the productions may otherwise be, because the mere information of the name of a successful competitor is of no value whatever to that portion of the public who have not attended the show; and those persons who are present feel mortified instead of gratified in seeing the flower of a fine variety, which they would like to possess, without a chance of knowing its name. In results of this nature we may readily see the reason why the interest and usefulness of some Floral Societies, who permitted such exhibitions, so soon ceased.

PANSIES.

In stands of 36 varieties.

Nurserymen and Private Growers.

2nd Prize, 10s., Mr. Turner, florist, Chalvey.—We observed some excellent blooms of these fine varieties: Purple Perfection, Rubicon, Hannibal, Eclipse, Curion, extra; Malibran, Regulator, Triumph, and Pizarro.

Extra Prize, Mr. Bragg, florist, Slough.—Amongst these were large blooms of Exquisite, Belæro, very fine; Malibran, Cyclops superb, Jehu, Prince Albert, and Sulphurea elegans.

Extra Prize, Mr. Parsons, gardener to A. George, Esq., Enfield.—These were good blooms; but we did not observe any particular variety.

Besides the above, stands were exhibited from Messrs. Brown and Attwell, nurserymen, Uxbridge; Mr. Henbury, florist, Croydon; Mr. May, florist, Tottenham; Mr. Hall, Enfield; and Mr. Blake, Wadernill.

VERBENAS.

In stands of 24 varieties, each variety to be shown in a single truss.

Nurserymen and Private Growers.

Extra Prize, Mr. Turner, florist, Chalvey, for Fortune-teller, Excelsa, Giant, Jesse, Orange Perfection, Alba Superba, Longiflora, Boule de Feu, Princess Royal, Enchantress, Rose d'Amour, Atropurpurea, Charlwoodii, Amethyst, Princess Alice, Minstrel Boy, Atrosanguinea, Ignescens, Messenger, Elegans, Rosea multiflora, Splendens, Neillii, and Zeuxes.

No competitors.

DEVICES OF CUT FLOWERS.

In length each device not to occupy more than 8 feet by 4 feet in width; and the flowers to be so placed as best to illustrate the principles of arrangement and combination of colours, as published by acknowledged authors.

1st Prize, 3*l.* Mr. W. Burton, Fitzroy-place.—This design was tolerably well managed, and embraced, besides the flower-garden, some reekery and rattle work.

No competitors.

BRITISH PLANTS.

In collections of not less than 25 different fresh and wild specimens, illustrating the exogenous portion of the British Flora.

1st Prize, 3*l.*, Mr. Smith, gardener to J. Anderson, Esq., Regent's Park.

2nd Prize, 2*l.*, Mr. D. Spriggins, Hertford.

In addition to the above, seven other collections were exhibited, some of which were not properly classified.

In collections of not less than 25 species, illustrating the endogenous portion of the British Flora.

1st Prize, 3*l.* Mr. Smith, gardener to J. Anderson, Esq.

2nd Prize, 2*l.*, Mr. A. Williamson, Kew Gardens.

There were three other competitors.

CLASS V.

SEEDLINGS.

These were somewhat numerous, especially Calceolarias, no less than forty-nine of them being shown: a slight improvement in some of the varieties was discernible, but their general character was too much in the old spotted style. Mr. Kinghorn's flower, which re-

ceived the first prize, and which also had the first prize at the Horticultural Society's show in May last, was the most distinct in character, and of very good shape. The Pelargonium prizes were all obtained by Mr. Beck, of Isleworth, who certainly has been very fortunate in raising so many really good varieties. Four prizes were awarded to seedlings of 1844, and we should have liked the judges to have been more liberal by adding two others, one to Othello and the other to Desdemona, because they not only possess an excellent shape, but are of colours much wanted. Othello is a distinct light purple, with very dark maroon upper petals, very smooth, too, and regular. Desdemona possesses very delicate blush-white lower petals, and upper ones of a deep rich velvety crimson-red colour, surrounded with a white belt; it has a little too much unevenness about it, but the distinct and beautiful appearance of its character is sure to make it a favourite, both for show and greenhouse. None of the Cinerarias were considered by the judges as worthy of a prize; their prevailing fault was a looseness in shape, caused by the petals not growing close enough together, which is one of the most requisite qualifications to a good flower. Many of the Pansies had scarcely a redeeming quality in them. The production of a flower, however, allows the exhibitor free admission to the show; and we dare say this may occasionally explain the appearance of worthless varieties.

PELARGONIUMS.

Bloomed in 1844.

1st Prize, 1*l.*, Mr. E. Beck, Isleworth.—With Aurora, a very smooth and even flower, of a bright clear crimson-red colour, with a large dark spot in the upper petals; it is of good size, and will become an esteemed show flower. It was exhibited last year at the South London July Show.

2nd Prize, 15*s.*, Mr. E. Beck, for Arabella, described in our last Number, p. 173, it having been awarded a prize at the Horticultural Society's Show.

Extra Prize, Mr. E. Beck, for Rosy Circle. This obtained the first prize at the Horticultural Society's Show, and a description of it is also given in p. 173.

Extra Prize, Mr. E. Beck, for Bellona, a good shaped flower, of a rosy-crimson colour, with dark clouded upper petals. The texture is smooth, and the form appeared to be well retained.

In addition to the above, Mr. Beck showed Othello, Desdemona, and Sunset; the latter possesses light rosy-red lower petals, and deep red upper ones, with a good spot. It is a well-shaped flower. Mr. Blake exhibited a rose-coloured flower, named Mrs. Hanbury.

Bloomed in 1845.

1st Prize, 1*l.*, Mr. E. Beck, for Competitor, a very smooth and even flower, and of superior shape; the petals appear, too, of good substance; very bright pink is the colour of the lower petals, and the upper ones are rich crimson maroon.

Extra Prize, Mr. E. Beck, for Caliph, bright purplish-rose lower petals, with nearly black upper ones, a clear and fine-shaped flower.

Besides the above, Mr. Golledge, of Stratford, exhibited *Essex Pet*; and Mr. Robinson, Kitty Fisher, Duchess de Nemours, and Refraction.

CALCEOLARIAS.

1st Prize, 15s. Mr. Kinghorn, Twickenham, for Exemplar, described in p. 174 of our last Number.

Extra Prize, Mr. Garrod, gardener to G. Forman, Esq., for *Lacerata*, a bright yellow, chequered with deep crimson, and well shaped.

Extra Prize, Mr. N. Gaines, Battersea, for *Climax*, yellow, with crimson blotches and marblings.

Extra Prize, Mr. N. Gaines, for *Louis Philippe*, bright yellow, with crimson markings and streaky spots.

Besides the above, the following were shown:—By Mr. Kinghorn, *Midas*, *Emily*, *Rosina*, *Symmetry*, *Miss Houston*, yellow-crimson, chequered; and *Hope*, tawny-ground colour, chequered. Mr. Widnall, of Cambridge, had *Picta* superb. Mr. Ansell, of Camden Town, had *Idas*, *Daniel O'Connell*, yellow, sparingly chequered; Mrs. Ansell, *Merry Monarch*, *Queen of Fairies*, *Fair Maid of Camden*, cream colour, faintly chequered; *Unique*, *Lady Platt*, yellow, lightly chequered; *Letitia*, and *Queen of Gypsies*. Mr. Gaines had *Picta*, *Tricolor*, *Delicata*, cream colour, lightly chequered; *Conspicua*, *Novelty*, purplish rose, with dark-crimson chequered markings, novel; *Brilliant*, *Perspicua*, orange, with dark-crimson markings; *Attraction*, *Flora*, *Florida*, *Vanguard*, yellow, with streaky spots, and dotted margin; *Isabella*, and *Elegans*. Mr. Garrod had *Garrodii*, *Orange Perfection*, *Leopold*, and *Claritos*. Mr. Holder, of Eton College, had *Beauty of Eton*, rose colour, with dark-crimson blotch, novel. Mr. Harley had *General Tom Thumb*. Mr. Liddiard had *Salthill Rival*. Mr. Barnes had *Constellation*, *Minerva*, and *Midas*; and Mr. Henchman had *Aurantia*, *Magdalena*, *Spotted Rival*, and *Annette*.

PANSIES.

No Prizes were awarded.

Messrs. Brown and Attwell exhibited *Desirable*, *Queen of Beauties*, *Huntsman*, *Monarch*, *Tippo Saib*, and *Black Prince*. Mr. Backhouse had a stand of a seedling, named *Earl of Zetland*. Mr. Turner had *Dido*. Mr. Burdett, of Hayes, had *Magnet*. Mr. Henbury, of Croydon, a dark flower, named *Rajah*. Mr. Bragg had *Goliah*. Mr. Collison, of Bath, had *Mercury* and *Shiloh*.

CINERARIAS.

Extra Prize, Mr. Pearson, of Hampstead, for a tolerable flower, named *Paragon*.

In addition, Mr. Pearson showed *Magnet*, *Duke of Cornwall*, *Pomona*, *Lady Milo*, and *Bridesmaid*. Mr. Smith, of Pimlico, had *Royal Standard*, *Louis Philippe*, *Sultana*, *Queen Mab*, *Hornsby*, and *Paragon*. Mr. Bunney, of Stratford, had *Atrocœrulea* and *Alba-cœrulea*. Mr. Pamplin, of Lea-bridge, had *Rotundiflora*, *Purpurascens*, and *Elegantissima*.

VERBENAS.

No Prizes given.

Mr. Pearson, of Hampstead, showed two—*Avalanche*, a pure white, and *Defiance*, rose crimson.

AZALEAS.

No Prizes awarded.

Mr. Ivery, of Betchworth, produced *Rosea elegans* and *Striata formosissima*, the latter in the way of *Gledstanesii*, the former a good-formed pale rose variety. Mr. Gaines had *Elegans nova*, light rose colour, and *Rosea superba*.

MISCELLANEOUS SEEDLINGS.

Extra Prizes to Mr. Bunney, of Stratford, for two prettily spotted light *Rhododendrons*, named *Medora* and *Coronet*. Mr. Bruce also showed a seedling.

called *Atropurpurea*, with crimson purple flowers, having a blotch, distinct dark spots. A seedling Heath from Messrs. Lucombe, Pince, and Co., of Exeter, named *Pinea major*. Mr. Widnall showed a Cactus, called *Magnifica*; but it is not sufficiently distinct. Mr. Steadman showed a *Gesneria*, which he named *Maculata*; in size and colour it is similar to *Cooperi*, but has several spots at the throat.

In plants of a miscellaneous character we noticed,

Three plants of *Schizanthus Grahami*, from Mr. Piper. Six small plants of *Erica depressa multiflora*, from Messrs. Veitch. Five *Ericas*, *Pinifolia*, *Thunbergia*, *Tortuliflora*, *Jasminiflora*, and *Florida compacta*, from Messrs. Henderson. A basket of British Orchidæ, from Mr. Keiler, Eltham, Kent: this collection consisted of *Orchis mascula*, *O. morio*, *O. fusca*, and *O. ustulata*; *Ophrys apifera* and *O. aranifera*, *Aceras anthropophora*, *Listera ovata*, and *Platanthera bifolia*; an extra prize was given them. A collection of ten small plants of *Proteacea*, from Mr. Henchman, obtained an extra prize; they consisted of *Banksia sphaerocarpa*, *B. Brunonia*, *B. Hookerii*, *B. repens*, *B. prostrata*, *Diplophragma bipinnata*, *Dryandra Fraserii*, *D. tenuifolia*, and two other species of *Dryandra*. J. Allnutt, Esq., sent *Chorozema varium* and *C. Dicksonii*, *Erica ventricosa coccinea minor*, and *E. vent. carnea*. From Mr. T. Moore was a pot of new and undescribed British grass, allied to *Glyceria fluitans*. From Mr. T. Banks, of New Kent road, was an extensive collection of dried Ferns and other British plants: extra prizes were awarded both to the Ferns and *Phænogamous* plants.

ARTICLE III.

ON SOWING THE SEEDS OF EXOTIC PLANTS, &c.

BY THE FOREMAN OF A LONDON NURSERY.

A CORRESPONDENT in the CABINET having recently asked for information on sowing exotic seeds, induces me to send the following particulars thereon. The method is the result of long and successful practice.

I premise the article by saying that it is necessary to be provided with a stock of soil of different sorts. Whatever mould is wanted for this purpose should be moderately dry, and finely sifted before used. The sifting should be performed with two sieves, one of which must be particularly fine, to procure surfacing and covering mould for the finer seeds.

The month of February is the most proper season for sowing these seeds, as they soon vegetate at this time, and make strong handsome plants by the latter end of the ensuing summer, which is an object of the first consideration in this business; for when sowed later, the greater part, and more especially the tenderer species, will be too weak to part into separate pots, and therefore are liable to suffer by damps and rottenness, during the winter following, by being left in the seed pots; and should they be attempted to be removed at this

late season, which some will do sooner than suffer them to take their chance as they are, they seldom prove more fortunate. Whereas those sown about the latter end of January, or any time in the following month, will for the greater part be fit to pot separately in May or June, and therefore have the whole summer to establish themselves; and even such of them as are more slow will have at least sufficient strength and woodiness to withstand the casualties of winter, should they be left in the seed pots, much better than the soft herb-like produce of later sowings.

As an exception to the above rule, may be mentioned *Erica*, and such like seeds, which are at first slow of growth, and produce firm, woody, though perhaps small stems; these, from their nature, not being so liable to suffer from damp as gross, quick-growing articles, may be sown, with every prospect of success, in the autumn. Indeed, for heaths, I prefer a September sowing, towards the end of the month. If the seeds are good they soon vegetate, and will acquire sufficient strength to carry them through the winter; and being so small, they stand more detached; therefore they do not damp or rot each other: whereas, if they are sown in spring, they are not fit for potting off until it is too late in the autumn to attempt it, and consequently they are left for the winter in their seed pots; when, from their increased size, they will have become so close as to inevitably injure each other, perhaps even to the destruction of the whole crop. Those sown in the autumn are not of sufficient size to be potted off until July or August in the ensuing year.

The day being resolved on, let a quantity of the different sized pots be filled with the mould best suited to the nature of the seed to be sown. As on other similar occasions, it must be pressed down pretty tight to about half an inch below the rim of the pot, adding more if requisite. On this may be sown any of the coarse large seeds, which should in general be covered one-fourth or half an inch, according to their size; but if the seeds are small and curious kinds, such as heath, &c., a little more nicety is required. For these the pots must be surfaced with some very fine mould, in depth about a quarter of an inch, which will raise it to the same distance below the rim; on this, it being perfectly level and firm, let the seeds be sown neatly and even; then, with the same fine machine, sift a very light covering over them, and press it gently down with the hand. If the

parcels of seed are small, two, three, or more kinds may be sown distinctly in the same pot, distinguishing each by a small painted stick, to be set perpendicular in the centre of the pot, with the name or number inscribed thereon.

The sowing being finished, give the pots a gentle watering with the rose of a water-pot, to be repeated three or four times, until the mould therein becomes sufficiently moist for vegetation; let them be then set in the most convenient, dry, airy part of the greenhouse, where they can be regularly attended as to watering and weeding. Watering they will require at least once a day, in a greater or less degree; for if they are not kept properly moist, the seeds will not by any means vegetate freely, if at all; however, the other extreme is to be studiously avoided. The weeds should be regularly pulled out before they attain any size, else, besides the top smothering the young seedlings which may have started, the roots, in getting them out afterwards, not only disturb them, but also the remaining seeds that may be perhaps on the point of bursting their embryo; by which means it not unfrequently happens, in places where this strict attention is not paid, that the greater part of the crop is thereby destroyed.

As the spring advances, it will be necessary to lay a few sheets of strong paper over the pots for two or three hours in the middle of the day, if the weather happens to be clear, and the sun acts forcibly on them, particularly those in which the finer seeds are sown, in order to prevent the surface getting over dry and powder-like; or, otherwise, if the mould happens to be pretty moist, it is liable to form a mossy crust, which might be particularly injurious, by preventing the young seedling ushering itself into the light, from penetrating through it with that ease which is requisite.

It is not advisable to keep these small kinds of seed too long unsown, therefore foreign seed should for the most part be sown as soon as received, on account of the length of time they are in general on their passage home; yet there are some, such as heath, and other firm, hard seeds, which will keep very well for a year or two, a part of which may generally be reserved for future sowings.

In this manner must they be managed until the beginning or middle of June, at which season the greenhouse will in general be found to be too drying a situation for them; they must therefore be

removed, particularly the larger kinds of seed, to some shady border, where they can be plunged nearly up to the rim in coal ashes or sand, which will greatly assist to keep them in a proper moist state. Here all the care they will require is to be kept clear from weeds and regularly watered morning and evening, if requisite, but never when the sun shines strong upon them, lest the tender leaves of the young plants should get scorched; it will be also necessary to have a careful eye, daily, for slugs, worms, &c., otherwise they will be liable to suffer much from the depredations of these insects, particularly in the evenings. Should there be any fine light-covered seeds, such as heaths, &c., they must be set in such manner that they may be covered with a common hotbed frame, in a moderately exposed situation, so that, in case of sudden or heavy showers, which might otherwise wash the seeds out of the pots, they may be occasionally covered, to preserve them from such violence; yet they may be exposed to gentle rains at times, but never long together, lest they become over wet, which would soon perish them in this tender state. They will likewise require to be shaded with a mat in clear weather, or even a double mat in the very hottest season.

Early in July, many of them will be growing pretty fast, and will require to be potted off into separate pots, as it is much preferable to do this while they are young and small, before their roots become matted together, than it is afterwards; besides that they have a considerable portion of the growing season before them to establish themselves, before the winter stops their career.

In performing this work care should be taken to match the pot to the size of the plants, and nature of the species to be potted, as over-potting these seedlings might be of the worst consequence. The largest sized pots I would recommend for this use (unless the plants be particularly strong) are what are called small sixties, or halfpenny pots; but for heaths, and such like very small articles, a still less size is to be provided; these are known by the very appropriate name of thimble pots, on account of their diminutive size.

Being provided with a quantity of these, and the different sorts of mould properly prepared that may be requisite for the kinds to be done, proceed to part the plants, in doing which let the nicest care be taken to preserve as much roots and earth to each plant as can possibly be done without injuring the others. Let them be neatly potted

in the proper mould, which must be gently pressed to the roots, that they may the sooner incorporate themselves with it. In this manner pot as many as may be thought sufficient for the present purpose, at the same time allowing a few for mischances. They must then be well watered, in the manner already directed for seedlings, and set in a cool frame, on coal ashes well rolled, or any other hard substance that will prevent the worms getting so freely into them as they otherwise would. The lights must be kept constantly on, and close, for a few days, more or less, as circumstances may require; and it will be also necessary to shade them very securely from the strong rays of the sun at first; however, in a little time, the lights may be taken off at night, if fine, having them on, and shading in the day, until by degrees the plants are so hardened as to be able to withstand the full power of the sun; thus, in the space of a fortnight or so, they will be fit to be set in the clumps along with the other plants.

This business should not be undertaken later than the middle of August, for if executed at a more advanced season the plants will not have time to establish themselves, and consequently will not succeed to the wishes of the proprietor; therefore, any that may remain in the pots, not strong enough to be parted by that period, should be removed into the greenhouse early in September, and there placed in their proper situation in that department until the spring following. Indeed, there are some seeds which absolutely require to be kept for that term before they will vegetate, whereby it becomes necessary to examine with care, when removing them to the greenhouse, whatever pots have not by that time shown any signs of vegetation, and those which are found alive must be saved, and treated in the same manner as fresh-sown seeds; those which have failed should be emptied, and taken to their place at once.

The pots set in the house will require nearly the same treatment as usual, viz., to be kept perfectly clear from weeds, and regularly watered. Water should now be given in the morning only, as any damps it may occasion will have time sufficient to evaporate in course of the ensuing day; whereas, if given in the evening, it causes a chillness about their tender leaves, and from the necessary closeness of the house at night, not having free exhalation, it may do a material injury, not only to the seedlings themselves, but likewise to

the adjacent plants, by tending to increase the general damp of the house.

When first housed, if the weather prove clear, they must be shaded for two or three hours at mid-day; but this practice must not be followed too closely, as the influence of the sun is but seldom too powerful for them at this season, and during the winter months the more sun they receive the better: it is also necessary to be particular in observing that no slugs, snails, or any other insect, harbour about them, as before mentioned; otherwise, they may perhaps destroy all the hopes of the season in one night; which is to them, as well as to most other insects and animals of prey, a convenient time for their depredations.

By a careful attention to the above rules, adapting them as place, time, or circumstance will permit, one may expect in the ensuing spring to see their remaining seeds of last season's sowing begin to vegetate very fast; that is, such of them as still have the germ of life sound, which can at any time be easily ascertained. They will, when grown to a proper size, require to be parted, and potted separately, in the manner I have before directed; but, as it is there noticed, they must not be permitted to grow too large before this operation is performed, on account of the roots being liable to interweave with each other, and by that means render it more difficult to be well executed; besides, it may be injurious in another manner, by occasioning the plants unavoidably to harbour damps, slugs, &c., the evil tendency of which has been already, I presume, sufficiently explained.

There is one thing necessary to be remarked before I have done with this article, which is, that those seeds received from New South Wales, in general, as well as many others of the South Sea Islands, and also several, particularly of the larger sorts, from the interior parts of the Cape of Good Hope, from the warmer countries of America, and, in short, any of the climes in, or approaching the same latitudes, although the plants when grown will flourish and come to perfection in the greenhouse, yet the seeds will require the aid of a hotbed when first sown to set them in vegetation, and until they are parted and established in their separate pots, then to be hardened by degrees to the open air; from which time they may be treated as directed for the more hardy and common sorts of seedlings.

ARTICLE IV.

ON BUDDING THE ROSE.

BY W. W.

THE most certain time to bud the rose is from the beginning to the end of August, the sap then being in full force, more especially so if the weather be moist after a drougthy season ; whether early or late in the month will be pointed out by the season being an early or late one. The desideratum in the plant is, that the bark will most easily separate from the wood, exhibiting at the inside a free supply of sap.

If the season be drougthy the sap will not flow so freely, unless a good soaking of rain falls, or the stocks have a free watering a week previously to budding, and if this be repeated it will be an additional stimulus.

If it happens that there is a cloudy day to perform the operation of budding in, take advantage of it ; if not, to bud towards the close of the afternoon will be the best part of a sunny day. I have budded ten kinds of roses upon one stock, all of which succeeded, and have bloomed most singularly beautiful. Care was taken to have those kinds which were of a similar habit in growth, for a vigorous growing kind and a weakly one are unsuited together ; the former would by its luxuriant growth prevent the other from having due support, and eventually would, in a few years, perish.

In selecting a bud for insertion, choose a strong and healthy shoot ; cut away that part which has pushed since June, and from it select a bud for the desired purpose. A plump one should be taken ; that is, it should be full, round, quite closed (i. e. not pushed). Such a bud may generally be had about midway up the shoot, the lower ones being more dormant, and the upper ones scarcely perfected enough. The bud is situated in the axillæ of the leaf.

The shoot having been cut from the plant, take it in the left hand, holding the thickest part inwards ; then with a very sharp knife, begin to enter the shoot about three quarters of an inch above the bud, cutting downwards about half way through the shoot, and bring out the knife about the same distance below the bud, in which case the bud is contained in the portion cut off, "which is termed a shield," and is formed as a segment of a circle. Then take the shield betwixt the finger and thumb, holding the bud downwards ; that is, in a different

form to that it had grown in; press the shield so as to be held firmly, then gently twist the upper end of the shield, "which is nearest you," and this will loosen the wood from the shield. The wood must be taken out with the right hand, whilst the shield is held by the left. The separation of the wood from the shield must always begin at the upper end as it had grown. It will then be necessary to see that no vacuum be in the inside of the bud; if there be, the root of it is gone, *and it will not grow*; though the bark might unite, no shoot could be produced. If there be no hollow inside the bud it is fit for use. If the shield does not separate freely from the wood the shoot might be soaked for an hour, and it would assist the shield and wood to separate more readily. The edges of the bark of the shield must be quite smooth and clean, on no account to be left jagged. The leaf, in the axilla of which is the bud, must have one half of it cut away, for the evaporation of the whole would much weaken the bud, and rather prevent its growth. The shield having been thus prepared, lay it in water till the incision is ready for its reception.

The side shoots must be left to bud upon; on the upper side of a shoot of the present year an incision must be made through the bark an inch and a half long; the lowest point of the incision to be about a quarter of an inch from the trunk of the stock; that is, from the origin of the shoot. At the upper point of the incision already made a cross cut must be made through the bark, as long as it will admit the shield readily under it. With the ivory end of the budding knife proceed to open the edges of the bark at the upper part of the incision, and very carefully proceed downwards; which, if the tree be in a proper state, will separate readily. This being done, slip in the shield, and carefully force it down, so that all the shield may be inclosed under the bark, excepting about the eighth of an inch of the upper part of it, which must be left outside, and that portion must be cut across, so as to make it fit to the inside of the cross cut in the incision, so that the bark of the shoot above the incision, and the bark of the upper part of the shield, may come in even and close contact; this is very necessary, because the first union takes place *there*, by the descending of the sap coming in contact with the top of the shield.

The bud being thus carefully inserted *must not* be removed from

its position ; immediately some wet bass matting must be bound tight round the stem, beginning at the bottom part of the incision, crossing the ligature front and back, and terminating above the cross cut. The bud and leaf must be left clear, but only just to peep out. Let the bass be secured at the top in a knot, and that to be at the opposite side of the shoot to the bud ; in other words *behind it*. If the knot were made at the same side as the bud, it would hold wet, and be liable to damp off the bud in a rainy season. It is of advantage to shade the bud, which is easily done by taking a laurel leaf and forming it so, that by tying the ends together and cutting out a portion to fit it to the stock, it will form an arch over, and thus protect it from the injurious effects of wind, sun, or wet ; all of which should be particularly guarded against for a time, in order to secure certain success.

If it be desirable to have the name retained of each kind of rose inserted, this must now be attended to by affixing a sheet lead, or other label thereto, by means of copper wire, with the name or number to signify it.

Persons who have not been accustomed to budding should previously experiment a little upon willow shoots, the bark of which easily moves, and affords facilities for such attempts.

If, after budding, the weather should be droughty, the stocks should have an occasional watering at the roots, which will greatly contribute towards success.

If a bud should fail, and it be discovered in time, such a shoot may be supplied by inserting another bud.

Buds may be very successfully inserted into the main trunk of a stock ; one or more buds may be put into it ; the bud is found to succeed best about half way up the stock ; the younger the stock the better it will succeed.

If the operation of budding has been properly performed, and the stocks suitably supplied with wet, from rain or otherwise, in about a month from the time of budding, the bass ligature may be taken away, and one tied round in a looseish manner. This admits the bark to swell, whilst it prevents the edges from being drawn open.

If the weather should be droughty, the first placed ligatures must be kept too for six weeks, and, in case of continued drought, even till spring.

When the stocks have ceased growing, which will generally be the case by the end of October, the branches of the stock must be cut, in order to strengthen them, and make them neat.

In shortening them, leave about six inches of each above the bud which has been inserted.

If the ground round the roots be covered a few inches deep with some strawy manure, during winter, it will be of some service to do it.

No other attention is required till spring, excepting to have the stocks properly secured against winds.

I shall, therefore, have an article drawn up in time for the second season's management.

Note.—In preparing the bud it is unnecessary to remove the bit of wood attached to the bark. Omitting to do so saves trouble, prevents the bud from being damaged, and more than equally insures success.

ARTICLE V.

A FEW WORDS ON THE WEATHER.

BY ANAEL.

THE science of meteorology is to no one of greater importance than to the gardener; I hope, therefore, a few words on the subject may not be deemed inapplicable to your pages; and as at the present day the attention of many able scientific men is attracted to its consideration, I hope the period is not far distant when they will be enabled to give us some rules, whereby we may discern forthcoming changes; this would indeed be a boon of no ordinary character.

The sources from whence indications of meteorological phenomena are derivable are various; even in the vegetable and animal creation many sensitive indications are afforded, which, doubtless, numerous of your readers have with myself observed. Philosophical instruments too have been invented and contrived purposely to foretel approaching variations in the atmosphere. The source, however, capable of producing those changes ought first to have our especial attention, and seeing then that the whole universe is but one connected series of bodies, all obeying the same laws, and each acting in concert with the rest, may we not believe that the laws of climate are as fixed and certain as are those of physical astronomy, and con-

sequently that every change in the weather is the effect of some determinate cause? That this cause proceeds more or less from the influence of the heavenly bodies, by the rapidity of their motions, or by their essential and physical characters, is now acknowledged by many observers. I was first induced to take cognizance of this effect of the sun and planets over our atmosphere a-year or two ago, and I have repeatedly observed very decided changes take place near the time when these bodies arrived at such positions or angles capable of reflecting their rays to the greatest advantage; some observations upon which shall be the subject of another paper, for insertion in the CABINET, and as the consideration involves a subject of so much interest to us all, I hope they may merit your approbation. The sole purport of my addressing you on this occasion is to admonish my gardening friends to adopt such precautionary measures as are requisite to the protection of their tender plants from destruction, by a great increase of cold and *sharp frost*, which I venture to predict we shall have about the *First* of October next; and I invite particular attention to my prediction, as upon its verification I shall claim the indulgence of being allowed one of your pages in a future number for some further observations.

PART II.

LIST OF NEW AND RARE PLANTS.

ACHIMENES ARGYROSTIGMA. Silvery-spotted. (Bot. Mag. 4175.) Gesneraceæ. Didynamia Angiospermia.—The collector sent out from the Royal Botanic Gardens at Kew, discovered this new species in New Grenada. The leaves are peculiarly beautiful, of a rich velvety dark green, with a tinge of purple, spotted with white, very similar as in the silver-spotted Begonia. The flower-stems rise to about a foot high, having a spike of flowers about half the length. Each flower is about a quarter of an inch across, of a white-cream colour. The plant blooms during the whole of summer. It flourishes best by rearing it in a moist and hot stove, and when arrived at some vigour to remove it to a cooler place; thus treated, it continues in beauty a much longer period. It requires a general treatment similar to the other species previously in our collection.

BEGONIA MARTIANA. VON MARTIN'S ELEPHANT'S EAR. (Pax. Mag. Bot.) Begoniaceæ, Monœcia Polyandria.—It is a perennial plant, having tuberous roots; the stems are beautifully striated and transparent, like the clearest balsam. The flowers are large, produced in racemous heads. Each flower is about two inches across, of a pretty rosy-crimson colour. It is in the collection of plants in the garden of R. G. Loraine, Esq., of Wallington Lodge. It is a stove plant, and well deserves a place in every one.

BOLBOPHYLLUM UMBELLATUM. UMBEL-FLOWERED. (Bot. Reg. 44.) Orchidaceæ. Gynandria Monandria. It is a native of Nepal, and is in the collection at Chatsworth. The flowers are straw-coloured, spotted with purple. Each flower is about half an inch across.

CALLIPSYCHE EUCROSIHOIDES. TWO-COLOURED FAIRY BLOOM. (Bot. Reg. 45.) Amaryllidaceæ. Hexandria Monogynia. A native of the West Coast of Mexico. The flower-stem rises to about two and a-half feet high, terminating with a scape of ten flowers, of a scarlet red colour, about an inch long. It is in the collection at Spofforth.

ECHINOACTUS MYRIOSTIGMA. MANY-SPOTTED. (Bot. Mag. 4177.) Cactaceæ. Icosandra Monogynia. A native of Mexico. One of the large-angled kinds, forming five or six deep furrows, and as many broad projecting angles; the whole surface covered with white scale-like dots. The flowers are produced at the top of the plant, each about an inch across, of a delicate straw colour.

EPIDENDRUM RADICANS. THE ROOTING. (Pax. Mag. Bot.) Orchidaceæ. Gynandria Monandria. Received into this country from Guatemala, and bloomed for the first time in the superb collection of Mrs. Lawrence, at Kaling Park, and, subsequently, in the collection of Mrs. Wray, at Oakfield, near Cheltenham; the plant growing in a wire basket, and completely covering it with its long stems, each crowned with a head of numerous flowers. It blooms from September to February. In its native situation it grows among long grass and dried leaves. Each flower is about an inch and a-half across, of a bright orange-scarlet. It is a very neat and beautiful species.

SELAGO DISTANS. LOOSE-FLOWERED. (Bot. Reg. 46.) Selaginaceæ. Didynamia Angiosperma. It is a very neat and pretty greenhouse plant, which begins to bloom early in the season, and continues long. The foliage is heath-like. The flowers are small white, and produced in loose spikes.

TASMANNIA AROMATICA. THE AROMATIC. Magnoliaceæ. Polygamia Monocia. (Bot. Reg. 43.) Collected on the mountains of Van Diemen's Land by Brown. It is a handsome, hardy, evergreen, greenhouse bush, with purple branches. It blooms freely in April; each blossom is about half an inch across, white; produced in a corymbose head, at the termination of the shoots. The entire plant is very aromatic.

WHITFIELDIA LATERITA. BRICK-COLOURED. (Pax. Mag. Bot.) Acanthaceæ. Didynamia Angiosperma. It was sent from Sierra Leone to the gardens at the Earl of Derby's, Knowsley Park, near Prescot. It has also bloomed in the Kew Collection. It is a low evergreen shrub, much branched. The flowers are produced in terminal racemes. Each flower is between campanulate and funnel-shape, about an inch and a-half long, and half as much across the mouth. The calyx is brick-red, and the corolla of an orange-red. It is a very interesting plant, and will be a valuable ornament to a stove collection.

PORPHYROCOMA LANCEOLATA. LANCE-LEAVED. (Bot. Mag. 4176.) Acanthaceæ. Didynamia Angiosperma. It is a hothouse plant of the sub-tribe Justiciae. The leaves are five inches long, lance-shaped, drooping. The flowers are produced in very richly-coloured spikes, of a deep purple, violet, and red. It is a very fine showy hothouse plant, which blooms during the spring and summer months. It deserves a place in every one. It has bloomed in the gardens of the London Horticultural Society.

NEW PLANTS SEEN IN NURSERIES.

FEDIA GRAULIFLORA. A new and handsome annual received from Algiers. It has large heads of pink flowers, and blooms most of the summer. It is a very suitable plant for a bed, or for creeping over rock-work.

CALANDRINIA UMBELLATA. Messrs. Veitch's, of Exeter Nursery, introduced this from Chili. The flowers are of a rich purple colour, and, being a profuse bloomer, renders it very showy.

PHLOMIS CASHMIRIANA. A very fine herbaceous species; the flowers are large, and of a pretty flesh colour. It has bloomed beautifully in the Chiswick Gardens.

STATICE (NOVÆ SPECIES). A new species, sent to this country by the collector of the London Horticultural Society; has bloomed in Mr. Glendinning's nursery at Chiswick. The flowers are white and yellow.

SALPICHROA GLANDULOSA. MESSRS. VEITCH obtained it from Chili. It is a greenhouse shrub. The flowers are bell-shaped, large, of a greenish-yellow colour; very pretty.

PHYSIANTHUS AURICOMUS. A hothouse, twining, shrubby plant; blooming very similar to the *Stephanotus floribundus*, but of a pretty cream colour. It is in bloom in the nursery of Mr. Knight, King's Road, Chelsea.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON GLYCINE HARRISONIA, &c.—An old Subscriber would be much obliged for some information on the culture of the *Glycine Harrisonii* (or *Harrisoniana*), which he has had in a border of his greenhouse for a year, without the plant making the smallest progress in growth, much less in coming to a flowering state.

Is it usual for the *Erica mirabilis* to push its young shoots through the faded flower?

[If the plant has not yet pushed, it would be best to withhold water from it; so that the soil is but barely kept moist. In this condition it must remain till the end of February; then take it up, plant it in a pot, and place it in a hot-bed frame, or plant-stove, which, most likely, will induce it to push. When the plant has commenced growing, then it may be planted out entire into the border. It flourishes best when there is a little bottom heat; in such a situation we have seen it grow twenty feet in one year, and bloom profusely. We never saw the *Erica* bloom in the manner described.—CONDUCTOR.]

ON DESIGNS FOR FLOWER STANDS IN ROOMS.—As a reader of your *FLORICULTURAL CABINET*, I shall feel obliged by your mentioning, in your next Number, where designs for flower-stands for rooms can be procured. A. B.

Barnstaple, near Devon.

[If informed where to send some plans, we will do so by post.—CONDUCTOR.]

ON HOVEAS.—I have four kinds of greenhouse Hoveas, and I cannot grow or bloom them to satisfaction. How am I to proceed to be successful?

[Have a liberal drainage of broken pots, upon which some rough turfy peat, and plant in sandy heath mould, having some bits of pot or stone scattered indiscriminately among it. Keep the plants in a dry airy part of the greenhouse. In damp weather use but little water, but, in dry, water freely. They only require to be just kept from frost. To have the plants bushy, pinch off the leads to induce lateral shoots.—CONDUCTOR.]

REMARKS.

BRUGMANSIA PARVIFLORA (OR B. FLORIBUNDA OF SOME).—Dr. Hooker informs us that this plant is the *Juanulloa parasitica* mentioned in Ruiz and Pavon's *Flora Peruviana*, vol. ii. p. 47, fig. 185, which is a very different genus from the *Brugmansia*. It is a parasitical plant, or, more properly, an epiphyte, and grows on the branches of trees in Peru.

ON CUTTING DOWN TOO LONG OR STRAGGLING PELARGONIUMS.—When these are headed down late in the season there is much danger of the plants dying; but if cut down not later than the second week in September, but the earlier the

better, they push new lateral shoots, which become tolerably firm before winter, and thus form bushy plants for next year's blooming. The cuttings, too, *now* taken off can be struck before winter sets in. This early heading back-window plants is indispensable to having nice *bushy* plants for the next year; and where there are more than one of a kind, they can be generally spared.

CLERICUS.

ON AN INSECT INFESTING FRAME PLANTS.—In your June Cabinet, page 140, 1841, I promised to send you the result of my experiments respecting an insect. In reverting to that subject, I am sorry to inform you, that all my trouble has been of little avail, I have still the mortification of finding the insignificant looking, but destructive, insect, baffle every expedient that I could devise for its extermination; for the last two months I have been as much troubled with it as ever. With respect to the introduction, my opinion since I last wrote to you is altered, I am led to believe that this insect is indigenous to the common fern, (*pleris aquilina*.) which article we use bountifully for litter, and which no doubt is the cause of the annual visits of that minute tormentor. Perhaps some of your numerous readers that have suffered with the spot on balsams, cucumbers, and other frame-plants similar to myself, will be kind enough to examine the underside of the foliage with a microscope, and send you word whether they find any insects resembling those I mentioned, and whether they are any fern or not. The insect is not so readily found at this season of the year, as it is the early part of the summer, I sent some of the insects to a gentleman in London to beg the favour of the name, the following is the reply.—Mr. Thomas Webster's minute insects, which have infested his cucumbers and other frame-plants for three years, are some species of *Ixodes*, supposed to have been introduced with the fern which is used for litter. It might easily be mistaken for the red spider, but evidently does not belong to the same genus. As *Ixodes ricinus* attacks dogs, and yet is abundant amongst fern, it would be rather singular to find an animal so nearly allied, if not the same, abstracting its nourishment from plants.

TO PROMOTE THE VEGETATION OF SEEDS.—If seeds be steeped in a solution of Sulphate of Ammonia, they not only come up more quickly but much more certainly. This I have tried in several instances, and it is valuable to persons obtaining seeds from distant countries.

LUCY.

TO DESTROY THE THRIP.—Take a peck and a half of soot and put it into a hogshead of soft water, stirring it well with an old broom or batten every day, for ten days or a fortnight. Then strain off the water through a fine sieve or piece of canvas into another tub, on a peck of charcoal, and drop into it afterwards one or two lumps, or about three pounds of fresh lime; in about two days after strain it again, and it is then clear enough to syringe any plant or plants with it. It will not only extirpate the thrip, but also many other troublesome insects; it also induces the more vigorous growth and healthiness of the plants. Where it is practicable to dip the plant overhead in the liquid, it is best; and one or two such applications will prove an effectual remedy. When plants are in pots and too large to dip, lay them in a slanting direction for effectual syringing. This has been tried by several extensively practical men and fully realized expectations.—*Gardener's Journal*.

ON GROWING MIGNONETTE IN POTS.—In reply to the wishes of a correspondent in a recent number of the CABINET, on the London florists' mode of growing Mignonette in pots, I beg to state that for first-blooming pots of it the seed is sown the last week in September; these bloom from March following; the 1st of February for plants to bloom from the middle of April; and at this latter period for plants to bloom from the beginning of July; in August, for plants to bloom from October through the winter. About twenty plants is enough to come up. The pots are well drained with crocks and rough soil, and then filled with good rich loam and leaf mould, on which the seed is sown. At an early

stage the plants are thinned to one-half, and in a fortnight after to half again. The seed being sown, the pots are placed in a gentle hot-bed frame, kept close shaded, till the plants are up; then a proportionate increase of air is admitted, avoiding, at the season, cold wind. When hot sun occurs, a little shading is adopted. A lighter soil is used for the plants to grow in for winter blooming; the water more readily passes through, and the plants are not so liable to rot at that dull period. Water, too, is not applied over-head, but the foliage is kept as dry as possible.

The pots are plunged to the rim in cold frames during the warmer period of the year, and in winter where a *very slight* warmth is afforded. Thick reeded covers are used to protect in winter, and in severe weather a foot thick of dry straw under the reed covers. When the plants are about three inches high, a few slender twigs, or strips of wood, are fixed round the pot, and in the interior; a piece of matting is then secured round, and this repeated afterwards as required, so as to prevent the plants bowing down.

It is by this attention the fine vigorous pots of the London growers are produced, and at all periods of the year.

AN EXTENSIVE MIGNONETTE GROWER.

ON AN INSECT, OR WHATEVER IT IS, THAT DESTROYS THE INSIDE OF THE BUD OF THE CINERARIA.—I should feel much obliged to the Conductor to inform me, in the FLORICULTURAL CABINET, whether he has ever observed the destruction of the bud of the Cinerarias. The whole of the inside of the bud is destroyed just before the flowering, leaving the green cup perfect. All my plants have been attacked this winter, and they now begin to look sickly all over. I have placed them in three different places, namely, my greenhouse, with temperature about 40, in forcing pits, and in a room, but they are all affected alike, and I cannot find any insect, although I have searched well with a magnifying glass. I should be glad to be informed how to prevent it, for my disappointment has been very great this winter, as I had many healthy plants all ready for blooming early in January, and they have all gone off as I have described.

A VERY GREAT ADMIRER OF THE FLORICULTURAL CABINET.

[Our own Cinerarias have never so suffered, nor have we seen any elsewhere. Where ants infest plant-houses, we have observed them eat out the embryo blooms at a very early stage, especially those of the Fuchsia. If the plants of our Correspondent were placed during the earlier part of winter where they would be liable to be injured by ants, or other similar enemy, in the embryo stage, the flower buds might be destroyed; and on the removal of the plants as mentioned, and arriving at the more matured state, they would alike develop the injury when the calyx began to expand, whether placed in greenhouse, pit, or room.—CONDUCTOR.]

FLORICULTURAL CALENDAR FOR SEPTEMBER.

Annual Flower Seeds, as Clarkia, Collinsia, Schizanthuses, Ten Week Stocks, &c., now sown in pots, and kept in a cool frame or greenhouse during winter, will be suitable for planting out in open borders next April. Such plants bloom early and fine, and their flowering season is generally closing when spring-sown plants are coming into bloom. Seeds of many kinds now sown in the open borders endure winter and bloom vigorously early next season.

Camellias.—Thin the flower buds, which will tend to preserve more certainly those for blooming, and cause them to be vigorous. Place some in the greenhouse early, that are desired to bloom in December, or before, in some cases.

Carnation Layers should immediately be potted off.

China Rose Cuttings now strike very freely; buds may still be put in successfully.

Dahlias.—Where the laterals are very numerous, they should be thinned out so as to have vigorous blooms. Towards the end of the month collect seeds of the early-blown flowers.

Greenhouse plants will generally require to be taken in by the end of the

month. If allowed to remain out much longer, the foliage will often turn brown from the effect of cold air. The earlier succulents are the better.

Lobelias.—Offsets should be potted off, so as to have them well rooted before winter.

Mignonette may now be sown in pots, to bloom in winter.

Pelargoniums, cuttings of, may now be put off; plants of which will bloom in May.

If *Pelargoniums* have not been headed down, they should now be done, the shoots may push a little before re-potting for winter. Plants which have been headed down, and have pushed shoots two inches long should be re-potted.

Pinks, pipings of, if struck, may be taken off and planted in the situations intended for blooming in next season.

Plants of Herbaceous Calceolarias should now be divided, taking off offsets and planting them in small pots. Cut off the flower stems of such as have done blooming, to induce shoots to be vigorous.

Plants of Chinese *Chrysanthemums* should be re-potted if necessary; for if done later, the blossom will be small. Use the richest soil. Pinch off the heads to cause the production of laterals, so as to have a head of flowers.

Plants of *Pentstemons* should be divided by taking off offsets, or increased by striking slips. They should be struck in heat.

Pansies.—The tops and slips of *Pansies* should now be cut off, and be inserted under a hand-glass, or where they can be shaded a little. They will root freely, and be good plants for next season.

Polyanthus and *Auricula* seed should be sown immediately, or otherwise be kept till spring.

Ranunculus beds should now be prepared as follows:—The depth of soil to be two feet and a half, of a rich clayey, friable loam, retentive of moisture; about six or eight inches from the surface to be a rich light loam, of a sandy nature. Remove the whole of the soil with the remains of the dung given last year, and turn up the subsoil a whole spade in depth, breaking it well. If the beds are allowed to remain in this state for a day or two to sweeten the subsoil, it will be an advantage. Then place upon the subsoil a layer of cow-dung, at least one year old, four inches thick; then scatter over it the fine powder of new-slaked lime, to correct any acidity and destroy the worms. Then fill up with new light soil, taken from the surface of the old tulip-bed or potato-ground, which has been frequently turned to sweeten it.

Sweet William seed now sown will soon strike and the plants bloom next season.

Seeds of many kinds of flowers will be ripe for gathering this month.

Tigridia, *Commellina*, and similar roots, may be taken up about the end of the month.

Verbenas.—Runners of this plant should now be taken off, planting them in small pots, half filled with potsherds, and the rest with good loamy soil, then placing them in a shady situation. It should be attended to as early in the month as convenient. When taken into a cold frame or greenhouse for winter protection, much of the success depends on being kept near the glass; or sink a box or two, half filled with potsherds, and the other good loamy soil, round the plant, so that the runners, being pegged down to the soil, will soon take root at the joints. When a sufficient number are rooted, separate the stems from the parent plant, and those in the boxes will be well established, and, being removed before frost, are easily preserved in winter, as done with those in pots.

When *Lilies*, *Crown Imperials*, *Narcissuses*, &c., require dividing, take them up now, and replant immediately; also plant *Hyacinths* and *Crocuses*, &c., either in beds or in pots for forcing.

When *Petunias*, *Heliotropium*, *Salvias*, *Pelargoniums*, (*Geraniums*), &c., that have been grown in open borders, and it is desirable to have bushy plants for the same purpose the next year, it is now the proper time to take off slips (select the short and well-ripened ones), and insert a number in a pot; afterwards place them in a hot-bed frame, or other situation having the command of heat. When struck root, they may be placed in a greenhouse or cool frame to preserve them from frost during winter. When divided and planted out the ensuing May in open borders of rich soil, the plants will be stocky, and bloom profusely.



1. TURNER'S MASTERPIECE, PINK.

2. CHAENOSTOMA POLYANTHA.

3. TREMANDRIA HUGELLII.

Floricultural Cabinet.

Orbit's Zootography, Skinner Street.

THE
FLORICULTURAL CABINET,

OCTOBER 1st, 1845.

PART I.
EMBELLISHMENTS.

ARTICLE I.

TURNER'S MASTERPIECE, PINK.

THIS variety was raised by Mr. Turner, Florist, Chalvey, and was exhibited by him on the 2nd of July last at the Royal Botanic Society's exhibition, Regent's Park, and received a prize.

It is a very good flower, the white being pure, the lacing regular, and the petals, as will be seen by our figure, are not much serrated on the margin, and are well rounded, which latter are two of the most necessary qualities, and of which the generality of pinks are much defective in. We believe it will shortly be offered for sale, and the cultivator will find it well worth adding to his collection.

ARTICLE II.

ON THE CULTURE OF THE CYCLAMEN PERSICUM.

BY FLORA.

I do not remember ever to have met with (but perhaps you may attribute this to a very limited research) any specific directions for the treatment of that beautiful plant, the *Cyclamen Persicum*.

Being myself an admirer of this plant, not only on account of its general elegance of growth, but from its producing its flowers at a

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very early season, which thrive and retain their luxuriance even in the atmosphere of a room, I have turned my attention to its general culture.

The plan of treatment pursued by me, I have much pleasure in communicating.

The *Cyclamen Persicum* begins to show its flower early in the year, and may be said to be in beauty throughout the months of March and April. As soon as the flowers fade and droop, the pots containing the plants are placed on their sides, (as a precaution against their being watered,) in a corner of the greenhouse. In August, the roots are taken out of the pots, and the earth adhering to them being first carefully shaken off, they are planted in an open, but sheltered border of the garden, where they are allowed to remain until the cold forebodes frost; they are then taken up, the fibres being carefully preserved, and are put into pots proportioned to the size of each root; the crown of the plant is well covered with earth, and the compost used consists of two parts leaf-mould, one ditto sandy-peat, one ditto ashes of burnt vegetables, and a small portion of thoroughly rotted dung. The plants thus potted are then arranged in a cold frame, and plunged to the rim in coal ashes. In mild weather, the glass is taken off; but by night, protection from frost, and by day from cold and rough winds, is indispensable. On the flowers appearing, the plants are removed to the greenhouse, and are placed as near the windows as possible, to have the advantage both of sun and air; they are abundantly watered with soft water, of the same temperature as the atmosphere they are growing in, the leaves also are occasionally well sprinkled; but this operation is gone through in the morning, and the windows of the house are immediately opened, otherwise the leaves would damp off, and the root decay. The pots are well drained with pieces of brick.

In recommending this treatment in the culture of the Persian *Cyclamen*, I can speak with confidence, having, among other good specimens, one plant on which, a few days since, I numbered *eighty-seven* flowers.

The dividing the roots to increase the stock of plants is bad; the roots are a long time recovering the wound then given, and do not afterwards flower so strong. Young plants are obtained very easily from seed.

ARTICLE III.

THE METROPOLITAN FLORAL EXHIBITIONS.

SOUTH LONDON FLORICULTURAL SOCIETY, SEPTEMBER 17.

THIS was the last show of this society for the season, and was held in the Surrey Zoological Gardens. Unfortunately the weather was very unpropitious, the showers descending frequent and most copiously; and the intervals of their cessation presented such a threatening appearance that only from amongst the more ardent devotees to Flora was the number of visitors comprised. The collections of plants, too, were not numerous, arising, doubtless, from the same cause; in those which were produced, however, some very good and well-blown specimens appeared, but as there was nothing very new amongst them, and it being our intention to be very brief in these remarks this month, we need not particularize the kinds. Amongst specimen plants one or two were very fine; we will mention *Erica Irbyana*, three feet and a half high, by as much in diameter at the base, forming a cone, and^l abundantly in bloom. *Wistenia corymbosa* was shown by Mr. J. Bruce, of Merton, bearing a multitude of its lovely azure-coloured blossoms, and was three feet high by three feet across. A number of fine plants of *Lisianthus Russellianus* was exhibited by Mr. James Cuthill, of Camberwell, each growing to the height of near four feet, and freely adorned with their superb purple blossoms. The branches of the plants, to the number of eight or ten, were spread out to the sides of the pots, and trained to sticks placed around its margin; and the luxuriant appearance of all the plants testified to their judicious treatment, for which Mr. Cuthill has become so renowned.

Collections of Fuchsias were shown in well-made selections, and in good condition; one of the best and newest was a seedling named *British Queen*, having a deep salmon-coloured tube and sepals, with a bright dark crimson corolla.

Two large stands of cut roses was displayed, which were very good, especially at so late a period of the season, and merited the general admiration they elicited. Messrs. Lane and Son, of Birkhampstead, obtained the first prize; in whose collection we observed fine blooms of *La Biche*, *Infidelite de Lisette*, *Malibran*, *Augustine Marget*, Hon.

Levison Gower, Strombio, Souvenir de Malmaison, William Jesse, Robin Hood, Devoniensis, Moire, and the beautiful yellow Chromatella. The second prize was awarded to Messrs. Paul and Son, of Cheshunt.

Dahlias were of course the chief feature of the exhibition, and their display was very good. The first prize, a gold medal, for twenty-four blooms open to amateur competitors only, was obtained by Mr. J. S. Proctor, sen., for the following kinds, viz. :—Antagonist (Bragg), Perpetual Grand (Brown), Queen of Roses (Widnall), Pickwick (Cormack), Nonpariel (Proctor), Consolation (Widnall), Beauty of Sussex (Mitchell), Indispensable (Girling), Favourite (Dod), Vivid (Thompson), Mrs. Shelley (Mitchell), Standard of Perfection (Keynes), Beeswing (Drummond), Essex Triumph (Turville), Raphael (Brown), Lady St. Maur (Brown), Unique (Ansell), Lord Howden (Harrison), Victory of Sussex (Stanford), Competitor (Hodge), Admiral Stopford (Trentfield), Eclipse (Catleugh), Sir R. Sale (Smith), and Blue Bonnet (Brown). The second prize was given to Mr. Cook; the third to Mr. Trentfield; the fourth to Mr. Legg; and the fifth to J. Edwards, Esq. Besides these were four other competitors.

In the amateurs collection of twelve blooms, the first prize, of a silver medal, was awarded to H. W. Collison, esq., of Bath, for some superb blooms of the following, viz. :—Lady St. Maur (Brown), Aurantia (Sperry), Nonpariel (Proctor), Blue Bonnet (Brown), Princess Royal (Hudson), Victory of Sussex (Stanford), Essex Champion (Turville), Eximia (Girling), Beeswing (Drummond), Cleopatra (Attwell), Gloria Mundi (Headley), and an excellently grown bloom of Northern Beauty (Robinson). Mr. Cousins received the second prize, Mr. Wick third, Mr. Hatchman fourth, and Mr. Wildman fifth; in addition to these there were sixteen other competitors.

In the nurserymen's class of twenty-four blooms, Mr. Turner, of Chalvey, was deservedly awarded the gold medal for the best collection, comprising superb blooms of the following kinds, viz. :—Perpetual Grand (Brown); Princess Royal (Hudson), a fine specimen, and got well up in the centre; Victory of Sussex (Stanford), large; La Grand Bauduin (Low); Alice Hawthorn (Drummond); Beeswing (Drummond); Competitor (Hodge); Admiral Stopford (Trentfield); Indispensable (Girling), fine; Beauty of the Plain

(Sporry), a magnificent bloom; Springfield Rival (Inwood); Aurantia (Sporry); Gloria Mundi (Headley); President of the West (Whale); Cleopatra (Attwell); Raphael (Brown); Ophir (Edward); Standard of Perfection (Keynes); Essex Triumph (Turville), a beautifully shaded bloom; Mrs. Shelley (Mitchell); Bermondsey Bee (Proctor); Mrs. James Richardson (Edward); Pickwick, (Cormack); and Nonpareil (Proctor). Mr. Widnall, of Granchester, obtained the second prize; Mr. Brown, of Slough, third; and Mr. Girling, of Stowmarket, fourth: there were also five other exhibitors. A prominent fault with many of the stands was, that they contained such a number of low and imperfect centered flowers. We regret the prevailing appearance of this imperfection because it is a great one, and exhibitors, in selecting the blooms for their stands, ought always to give especial consideration to the importance of a good centre, as from it, all the arrangements of the flower proceeds, and unless it is sufficiently elevated above all other parts, such flower is bad in the first point, and however regular its disposition may otherwise be, it is not fit for show.

In the seedling class a number of candidates were presented for approbation. Of those raised in 1844, which are to be offered for sale in the ensuing season, the following were selected for first-class prizes by the judges, viz. :—

Sir Edmund Antrobus.—Mr. Keynes, Salisbury: a flower of medium size and of a deep rich red colour; the flower is full, the petals being rather small, but very symmetrically arranged; outline, perfect; centre, somewhat too flat.

Not named.—Mr. Gaines, Battersea: white laced with deep purple, but fading to the outside; a good shaped flower, with the centre tolerably high.

Queen of Perpetuals.—Mr. Girling, Stowmarket: deep pencilled silvery lilac; and, although in one or two of the flowers there was a thinness around the eye, we have no doubt it is a very desirable flower.

Lady Stopford.—Mr. Trentfield: crimson-red colour; not above medium size; well and regularly cupped; outline perfect; centre not well up.

Newington Rival.—Mr. Smith: deep crimson; the arrangement pretty good, but the flower appears to want depth.

Prometheus.—Mr. Smith; crimson; rather thin of petals, and no improvement upon similar flowers already out.

In addition to the above, there were shown, not for prizes,—

Marchioness of Cornwallis.—Mr. Whale, Elcot: white, tolerably pure, but from the appearance we apprehend it inclines to blush unless bloomed in shade; the flower is full and the petals very regularly disposed; the centre rather flat. A good and true white flower is greatly wanted, and this we think is the best yet produced, though one or two of the blooms presented an uncertain appearance in the eye, after the way of Antagonist.

Marquis of Aylesbury.—Mr. Sparry, Denford: distinct lively purple; well cupped, fine smooth petals and regularly arranged; the outline complete, and in size rather above the medium; centre, tolerably good. This flower is also a seedling raised by Mr. Whale, and purchased of him by Mr. Sparry.

Miss Prettyman.—Mr. Turner, of Chalvey: blush, tinged white, the underside of the petals tipped with light purple, which gives a darker appearance around the centre as the petals are unfolding; only one bloom was shown, which was well up in the centre and of a good size; the details too were well disposed, and the circle good.

Mrs. Caudle.—Mr. Turner: novel nankeen-orange colour; the petals are very regularly arranged and well rounded, though by being rather over much folded around the centre, they there present too angular an appearance; the centre is well up and the flower will be generally liked; we do not expect, however, that Turner's Mrs. Caudle will become so celebrated as Mr. Jerrold's lady of the same name.

Vanguard.—Mr. Turner: light crimson, shaded down the centre of each petal with a darker colour; the shape is after Pickwick, but it has a broader and better petal.

Magician.—Mr. Turner: light salmon-red colour; good petal, and well arranged, but is deficient in depth.

In the seedlings of this year we saw nothing particularly good; the judges however awarded a first-class prize to H. W. Collison, Esq., for Andromeda, a pale ochre-coloured flower having a purple tinge at the margin of the petals; around the eye the petals appear too much quilled, and on that account we do not like it. A certificate of merit was awarded to Mr. Brown for a bright rosy coloured

flower; very full, but the petals are too small and not around enough. Another certificate of merit was given to Mr. Bushell for a rosy lilac-coloured flower, deeper on the under side; and which in shape appeared much better and more promising than the other two.

Several stands of Heartsease and Verbenas were shown, and other miscellaneous plants which our space forbids us to enumerate,

ARTICLE IV.

ON THE PROPAGATION OF PELARGONIUMS.

BY A LONDON GROWER, AND A SUCCESSFUL EXHIBITOR.

OBSERVING a Subscriber requests information on the best method of increasing what is usually called Geraniums, I forward the following particulars of the method I pursue in raising at least ten thousand each season:—

Early in June I take a sufficient quantity of cuttings of the different varieties, and after carefully preparing them, by taking off the lower leaf, and cutting horizontally through the stem just below a joint, I insert each sort separate, in pots previously filled with a mixture of three parts sharp sand, and one part sandy loam, using plenty of drainage at the bottom. After the cuttings are all put in, I give a good watering, and then remove them to a moderate hot-bed, and plunge the pots to the rim; I keep the lights shut close, except in the morning, when I admit a little air, and with due attention to shading and watering, I find them to be well rooted in about a month. Those kinds in which we abound I prepare cuttings as above described, and prick them out in a bed of finely sifted soil, in a warm situation in the open air. By shading them for a short time they soon strike root. When this is perceived to be the case, I pot them singly into small 60's, shifting at the same time those that were inserted in the small pots. In potting I use a compost of equal parts of sandy loam, peat, and well decomposed manure, adding about one eighth part of sand; when potted I place them in a frame, where the lights are put on in the day time, in order to throw a mat over them to shade the young plants from the sun; the lights are taken off in the evening, and the plants supplied with water, until they have struck fresh root, when this is found to be the case, the lights are removed altogether, and the plants duly supplied with water.

they remain in this state till the middle of August, when I carefully examine them, and shift those which have made sufficient roots into one size larger pots, being careful in this, as in all other shiftings, to use a sufficient quantity of drainage to carry off the superfluous moisture. Those plants not sufficiently rooted by that period, I defer shifting till the spring, as they succeed better when shifted at that time. After thus looking over all the plants, they are replaced in the frame, and treated the same as before, with this exception, that the lights are put on at night, and during heavy showers. About the first week in October they are removed to the greenhouse, where they receive all the air that can be admitted with a regular, but moderate supply of water. Fire heat is not used except to repel frost, or the dry damps arising from watering or other causes; to avoid damps in a measure I find it best to water in the morning, so that the air admitted during the day assists to carry off the superabundant moisture. The surface soil in the pot is frequently stirred, and occasionally some of the old removed and renewed; all decayed leaves are removed, both on account of the well-being of the plants, and to preserve neatness and order.

Potting.—The time of performing this operation is partly regulated by the state of the plants; those that were shifted in August, do not require shifting again till the middle of February, and again early in April, whilst those that were not shifted in the autumn require their first shift in February. In each successive shift I use one size larger, taking care to put plenty of drainage into the bottom, and to press the soil firm in the pots. I find the following compost to answer well:—two barrowsfull of light hazel loam, (from the surface of a rich pasture, which should be collected at least a twelvemonth before it is used,) one and a half barrowful of well rotted hot-bed manure, one barrowful of turfy peat, half a barrowful of pigeon's dung, two or three years old, and a quarter barrowful of sand, the whole being mixed in the autumn, and put under an open shed. In using it I do not sift it, but it is chopped fine with a spade. As the spring advances I allow a more copious supply of water, and I find that by using liquid manure once a week after they begin to grow, the plants are greatly strengthened, and the size of the flowers increased. When the flowers begin to expand, I shade them from the sun, by rolling a canvas over the roof of the house, which contributes to

heighten the colours, and they remain much longer in bloom. The plants are placed on stages, which are constructed so that the surface of the plants are not more than five feet from the glass, and a free admission of air being admitted at the sides of the double-roofed houses, as well as at the roof, the plants are stiff and robust. Attention is paid to placing the plants at a greater distance from each other, as they advance in growth, and thinning away the shoots so as to leave them regularly placed and properly tied to sticks so as to splay around and form compact heads.

In June the plants are removed from the greenhouses to an appropriate situation in the open air, where they receive the full influence of the sun till eleven o'clock, and by attention to watering, many of them continue to bloom through the summer. Early in September, the plants are cut down to within a few inches of the pots; and they flower well the second year.

ARTICLE V.

OBSERVATIONS ON THE PLEASURE GARDEN.

BY A COUNTRY CURATE, NORTHAMPTONSHIRE.

I HAVE read with much interest several communications which have been inserted in recent numbers of the *CABINET*, on forming the outlines of plantations, clumps, walks, &c., in the pleasure garden, and having lately met with the following remarks on a similar subject, I was so pleased with them that I transcribed the entire, in order to have them recorded in your magazine:—

“The pleasure garden seems to own its creation to the idea that our sublime poet formed of Eden. It originated in England, and is as peculiar to the British nation as landscape planting. Whilst other arts have been derived from ancient, or borrowed from modern inventions, this has indisputably sprung from the genius of our soil, and is perhaps one of the most delightful as well as most beneficial of all that claim the name of elegant.

“Ornamental plantations are now so universally spread over the face of this country, that our island may be compared to a vase emerging from the ocean, into which the *Sylvans* of every region have set their favourite plants, and the *Flora* of every climate poured her choicest gifts, for the embellishment of the spot round which Neptune

throws his fostering arms. Our ambition leads us to hope that we may add pleasure to the pleasure-ground, by pointing out the beauties of the shrubbery, which must render vegetation an object of admiration and veneration to all classes. I wish to attract attention to the peculiar pleasing properties of each plant, by the remarks of the ingenious, the anecdotes of the ancients, the harmony of the poets, the observations of the physicians, and the reflection of the moralists of all ages. Morality, however, of a gloomy cast, will be avoided; for my wish is to give the work, like the subject, a smiling aspect.

“ Though flowering shrubs seem to contribute nothing to pottage, and little to medicine in its present refined state, yet they add greatly to our pleasure, and considerably to our health.

“ They win us to good humour by their fragrance and cheerful appearance, and produce a serenity of mind by the calm reflections they present to it; thus relieving some of the maladies of the soul, as drugs mitigate the grosser and more perceptible sufferings of the body.

“ ‘ The spleen is seldom felt where Flora reigns ;
The low’ring eye, the petulance, the frown,
And sullen sadness, that o’ershade, distort,
And mar the face of beauty, when no cause
For such immeasurable woe appears ;
These Flora banishes, and gives the fair
Sweet smiles and bloom, less transient than her own.’—COWPER.

“ I shall notice the allegorical allusions which the eastern nations are accustomed to make by means of flowers, and the fables of the ancient poets and mythologists respecting plants. Thus pleasing ideas may be connected with pleasing objects, and agreeable images convey lively but moral sentiments to the mind, adding to the charms of the country without recourse to romance or useless fiction. These accustom the mind to such violent sensations, that at last it is obliged to resort to an excess of feeling, either of mirth or grief, to prevent that dreaded fashionable lethargy of spirit—*ennui*. Such a habit in the end injures health, and consequently shortens life; but a calm and cheerful mind assists in the prolongation and enjoyment of both.

“ ‘ Come, then, ye blissful scenes, ye soft retreats !
Where life flows pure, the heart more calmly beats.’—DELILLE.

“ It would seem that the more terrible a sight, and the more violent an impression, the more agreeable to the great portion of mankind,

who run with avidity after objects of horror, whilst they pass unnoticed those which produce gentle and agreeable sensations; and would, to all appearance, rather tremble at the awful thunderbolt of Jupiter than calmly admire the beauteous horn of plenty. It has been observed that the volcano near Naples attracts more travellers to the city than the delicious gardens which adorn the shores of that region. The plains of Greece, overspread with ruins, would entice many to undertake a voyage to a distant country who would feel but little inclined to travel over their native soil to view its richly-cultivated lawns; and there is no doubt but that, formerly, where one person went to Egypt, to be a witness of Nature's bounty to that nation, five hundred became travellers to behold pyramids. A temple, after its fall, excites more eager curiosity than it did during its construction; and many, who will not cross their thresholds to look at a beautiful calm in nature, will rush to get a sight of a storm and shipwreck in a playhouse. This love of the terrific is not, as has been asserted by foreigners, peculiar to the English nation; it is prevalent everywhere. The author observed an instance of it when in Paris, in the summer of 1822. Wishing to visit the celebrated garden of M. Bourseau, unequalled for the beauty of its plants by any city garden in Europe, he received, in answer to all inquiries for direction to the spot, the usual careless, but short and decisive, *Je ne le connois pas, monsieur*; but, on asking the way to *La Mort*, every turn and alley were readily pointed out with all the bustle and officiousness of French politeness.

“In this history of flowering trees and shrubs there is nothing terrible to present to the reader; but every endeavour has been used to

“‘ Show nature's form in smiling beauty drest,
And call mankind to view her, and be blest.’—DELILLE.

“It seems hardly possible for any mind to be so debased as to be insensible to the effects of nature, whose vegetable charms become more endeared to us as our age and reflection increase. A more delightful cabinet of natural history can scarcely be formed than the shrubbery affords, even when unadorned with exotic beauties. It offers matter for contemplation of the most agreeable kind, which varies still as seasons revolve; and, as every tree and shrub has its peculiar inhabitants, we have at the same time a collection of animal and vegetable wonders that are sufficient to occupy all the leisure

which our economical duties allow us. As years increase, a taste for most pleasures in general diminishes; those of the court become fatiguing; the charms of the table appear to lessen; and, as passion subsides and love languishes, the gay ball and splendid opera lose their delights; but the fondness for a garden increases, and is almost the only earthly pleasure that does increase. Let us not, then, neglect to cultivate a taste for what will form the delight and amusement of the latter period of life. Every tree we plant adds to the entertainment we prepare for future years, for ourselves, our friends, and successors.

“Should particular times and circumstances require a retrenchment to be made in domestic expenses, it should not begin with the garden. This, once neglected or laid aside, cannot soon or with small cost be re-established. There are other more expensive and less profitable indulgences which may be lessened without injury, nay, perhaps with benefit to an establishment. By giving one entertainment less each season in London, more might be saved than by ruining a whole pleasure ground, the only means of subsistence to a few labourers, whose consequent discharge exposes them to want and all the evils that accompany it.

“The introduction of a useful or an ornamental plant into our island is justly considered as one of the most important services that a person can render his country; for it is impossible to calculate on the benefits that may be derived through this means, when the qualities of the vegetable are ascertained and its virtues known. Even what is introduced and planted merely from curiosity or ornament seems to unite us to the nations from whence it comes. It bestows on us a share of the blessings of other climates, and affords us a portion of the smiles of a more genial sun. When, therefore, we dwell on the beauty of exotic trees and shrubs, we wish to be understood as expressing our gratitude to those who have enriched our land with additional charms, and more fully displayed nature to our eyes, and not as disregarding the plants that are indigenous to our soil. I am aware that many an Englishman has sighed under the shade of the banana for a sight of his native banks, where the primrose sparkles through the hazel hedge, and the violet peeps so modestly. The plants of our country recall the idea of it in the most forcible manner, wherever we meet them. They are often the first object that

attract the attention of those who have been long absent from their native fields, and who, on their return, pour out the genuine effusions of joy on beholding the village elm, the well-known oak, or the unchanged yew, whose antiquity is equal to the church it shades. We are told of a young Indian Pontaveri (from Otaheite), who, in the midst of the splendour of Paris, regretting the simple beauty of his native island, sprang forward at the unexpected sight of a banana tree in the Jardin des Plantes, embraced it, while his eyes were bathed in tears, and exclaiming with a voice of joy, 'Ah! tree of my country!' seemed, by a delightful illusion of sensibility, to imagine himself for a moment transported to the land which gave him birth.

"We seem, as it were, for an instant to go back to the delights of infancy, when, on each succeeding spring, we visit the meadows covered with cowslips, which afforded us so many happy hours in childhood, as we formed balls of their blossoms. Then the playful girl, bedecked with wreaths and necklaces of daisies, led her little swain in chains formed of the milky flower stalks of the dandelion; but who at the sight of a butterfly burst the brittle bonds and scampered away, to return, perhaps, a few years after sighing, in fetters not so visible, but more binding.

There is no part of nature's works more interesting than flowers. They seem intended for the embellishment of the fair, and for the ornament of the spot where they tread. Their sweet perfumes have such influence over all our sensations, that in the midst of flowering shrubs the most acute grief generally gives way to sweetest melancholy. When our home and domestic companions are encompassed by the shrubbery, our situation approaches nearest to a terrestrial paradise. Is it not, then,

"Strange, there should be found,
 Who, self-imprisoned in their proud saloons,
 Renounce the odours of the open field,
 For the unscented fictions of the loom;
 Who, satisfied only with pencilled scenes,
 Prefer, to the performance of a God,
 Th' inferior wonders of an artist's hand?
 Lovely, indeed, the mimic works of art,
 But Nature's works far lovelier!—COWPER.

"The shrubbery is to a rational mind a source of inexhaustible delight and instruction, where each season brings new joy, and every morning a fresh harvest of delightful sweets. Subjects for new

REVIEW.

Donn's Hortus Cantabrigensis; or, an Accented Catalogue of Indigenous and Exotic Plants, cultivated in the Cambridge Botanic Garden, by the late James Donn, Curator, Fellow of the Linnean and Horticultural Societies. With the additions and improvements of the successive editors: F. Pursh, J. Lindley, Ph. D., and the late G. Sinclair, F.L.S., F.H.S. The Thirteenth Edition, further enlarged, improved, and brought down to the present time, by P. N. Donn. London; Longman and Co., 1845.

WE hail with pleasure the appearance of an extended and much improved edition of this very useful book. As a general plant catalogue it is the easiest of reference of any other we have seen. It contains the description of nearly every essential on each plant: as natural order, Linnean class and order, generic, specific, and English name; native country, time of introduction, period of flowering, colour of flowers, whether stove, greenhouse, or hardy plant; perennial, biennial, or annual; tree, shrub, or herbaceous; evergreen or deciduous; height of growth; reference to figures in magazines, &c., &c. In one or two plant catalogues by other authors, the derivation of the generic name, soil most suitable, and in what situation in its native habitat it was discovered, are given. The first and second is worth adding to another edition of Donn's, the latter is not worthy of being recorded. There are a few inaccuracies in spelling the names, &c. We cordially recommend the work, assured it will be found a very satisfactory one.

PART II.

LIST OF NEW AND RARE PLANTS.

ANIGOZANTHUS PULCHERRIMUS. BEAUTIFUL YELLOW. (Bot. Mag. 4180.) Hemodoraceæ. Hexandria Monogynia. A native of the Swan River Colony, where it was discovered by Mr. James Drummond. Plants have been raised from seed by Mr. Low, of the Clapton Nursery. The plant grows from two to three feet high. The flowers are produced in a large branching panicle, of a rich yellow colour. It is a very interesting and showy green-house plant; well meriting a situation therein.

CHIRITA ZRYLANICA. CEYLON CHIRITA. (Bot. Mag. 4182.) Cyrtandracæ. Didynamia Angiospermia. A native of Ceylon, and was raised by Mr. Henderson, gardener to Earl Fitzwilliam, at Wentworth House, from seeds he had

received. Treated as a stove-plant, it blooms through most of the summer months. It will do well, too, in a warm green-house. It grows from a foot to half a yard high, slightly branched. The flowers are produced in a branching panicle. Each blossom is funnel-shaped, bellying underneath; something in the way of a small flower of *Gloxinia speciosa*. The flower is about an inch and a half long, and nearly an inch across the mouth, of a rich purple; being paler and reddish in the tubular portion. It strikes readily from cuttings, soon blossoms, and, so very beautiful, as to deserve a place in every exotic collection of plants.

GARDENIA STANLEYANA. LORD DERBY'S GARDENIA. (Bot. Reg. 47.) Cinchonaceæ. Pentandria Monogynia. A native of Sierra Leone, sent by Mr. Whitfield to the Earl of Derby's, in whose service he was when the present plant was discovered. It has bloomed in the Royal Botanic Garden at Kew. It is a shrubby stove-plant; the foliage a lively green; ovate. The flowers are produced in great abundance, rising in an erect position above the foliage; each having a tube about nine inches long; and then terminates in a spreading five-parted flower, five inches across. The inside of the tubular portion is dark coloured. The centre of each spreading limb of the flower is green, spotted with red; the remainder is a snowy white, spotted with pink. The large spotted trumpet-like flowers, in profusion, produce a splendid appearance; they are fragrant too. The plant is of very easy culture. It deserves a place in every hothouse. From its vigorous habit it appears to us to be very likely to succeed well in a warm green-house. We are trying it; and, so far, it thrives well.

CHLOROKA VIRESCENS. GREEN VEINED. Orchidaceæ. Gynandria Monandria. (Bot. Reg. 49.) A native of the pastures of the Cordilleras of Chili, and, being a terrestrial Orchidææ, grows there as plentiful as our meadow orchides do in this country. It requires to be grown in a warm green-house, in rough sandy peat; to have plenty of water when growing; but, when the stem and leaves die down, to be kept barely moist, and be re-potted when the bulb begins to push in spring. The flowers are produced in an erect raceme, six inches long; they are of a rich orange yellow, having numerous light green veins upon the ground colour. Each blossom is two inches across, and a dozen or more in each raceme. It is a very pretty flowering species.

CYMBIDIUM MASTERSII. MASTERS'S CYMBID. Orchidaceæ. Gynandria Monandria. (Bot. Reg. 50.) Messrs. Loddiges' obtained this new species from the East Indies. The flowers are pure white, with a streak of yellow on the lip, and a few small spots of pink. They are sweet scented, with an almond fragrance. Each flower is about 2½ inches across. It is a very delicate and pretty species.

AZALEA LÆTITIAE. GARDEN HYBRID. This handsome and fragrant hybrid was raised at Spofforth Gardens, from the seed of a common *Rhododendron ponticum*, impregnated, in the greenhouse, by pollen of an *Azalea*; we understand, an orange-coloured one. The flowers are produced in fine heads, white streaked, and tinged with yellow.

EREMOSTACHYS LACINIATA. JAG-LEAVED DESERT-ROD. (Bot. Reg. 52.) Lamiaceæ. Ditynamiæ Gymnospermia. It is a hardy perennial herbaceous plant, a native of the eastern side of Caucasus. It grows erect, from three to five feet high, blooming from May to August. The flowers are produced in whorls; a pale sulphur, with a deep yellow lip, margined with crimson. It is grown in the garden of the London Horticultural Society.

GOMPHOLOBIUM VERSICOLOR VAR. CAULIBUS PURPUREIS. CHANGEABLE PURPLE-STEMMED VARIETY. (Bot. Mag. 4179.) Leguminosæ. Decandria Monogynia. Mr. James Drummond sent seeds of this very pretty greenhouse suffruticose plant from the Swan River colony to Messrs. Lucombe and Pince, of Exeter Nursery. It is an upright branching small shrub, with deep purple branches. The flowers are produced in profusion. At their first opening they are of a deep rich scarlet-red; and, as they increase in age, become of an orange, with red margin. It is a very beautiful variety, and merits a place in every greenhouse. Each flower is about an inch and a quarter across.

ECHINOCACTUS MULTIFLORUS. MANY-FLOWERED. (Bot. Mag. 4181.) This very singular species is grown in the noble collection of Cactuses of Mr. Palmer of Stockwell, near London. It is one of the globose-formed kinds, having five long spines at each areole. The flowers are produced numerously at the crown; they are white, with a spot of green at the point of each petal, and in some parts a slight tinge of rose. Each blossom is near three inches across.

HABROTHAMNUS FASCICULATUS. CLUSTER-FLOWERED. (Bot. Mag. 4183.) Solanaceæ. Pentandria Monogynia. A native of Mexico, which is in the collection of Messrs. Lucombe and Pince of Exeter. It is a handsome greenhouse shrubby plant, which bears numerous close-placed terminal heads, of bright red tube-formed flowers. Each blossom is about an inch long. It well deserves a place in the greenhouse.

GRIFFINIA HYACINTHINA. HYACINTH BLUE-FLOWERED. (Pax. Mag. Bot.) Amaryllidaceæ. Hexandria Monogynia. It is a bulbous perennial, discovered in Brazil; requires to be forwarded in a hothouse, or hot-bed frame, for a short time in spring; and, when the flower-stems appear, then be removed to the greenhouse, or conservatory, to bloom. The flowers are produced in large heads, each blossom being from two to three inches across. The centre pure white, and the upper half of each petal of a rich violet blue.

ORNITHOGALUM AUREUM. GOLDEN-FLOWERED STAR OF BETHLEHEM. (Pax. Mag. Bot.) Liliacæ. Hexandria Monogynia. A native of the Cape of Good Hope, which has bloomed in the fine collection of plants belonging to Mrs. Wray of Oakfield, near Cheltenham. It will flourish either in the greenhouse, or in a warm aspected border, against a wall. The flowers are produced in racemes, of from twelve to eighteen inches long. Each flower is an inch and a half across; varying in colour from a bright yellow to a rich deep orange. It is a very beautiful flowering plant, well deserving cultivation.

PLANTS NOTICED IN BOTANICAL REGISTER, NOT FIGURED.

The only marked distinction between the beautiful yellow and white *Orchis sambucina* of the Alpine mountains, and *Orchis provincialis* is, that the latter has the tubers undivided, and the former belongs to the division which has palmate tubers; *sambucina* having short prominences at its base. *Orchis Schleicheri* grows in company with the above; the flowers are crimson, with an orange throat. The former are fragrant, but the latter are scentless.

ORNITHIDIUM MINIATUM. An orchidæe from Columbia. The flowers are of a rich crimson vermilion, with the lip yellow, edged and blotched with crimson. It is in Messrs. Rollisson's collection.

ERIA DILLWYNII. A native of the Phillipine Islands. The flowers are of a pale lemon colour; a most profuse bloomer. It has flowered at Penllergare, in the collection of Dillwyn Llewellyn, Esq.

NEW OR INTERESTING PLANTS SEEN IN NURSERIES, GARDENS, &c.

BUDDLEA LINDLEYANA. This new species has bloomed in the conservatory of the London Horticultural Society. It was sent there from China. The flowers are produced in racemes of about six or eight inches long. Each flower consists of a long curved tube, with a very rich violet four-cleft spreading border. When the plant is grown in pots it appears to grow somewhat twiggy and loosely; but, when grown in the open bed in the conservatory, becomes a very neat bush. Some plants grown in the open air last summer remained out during winter; and, although the tops perished, the plants have pushed vigorous shoots this season from underground.

TETRONSMA MEXICANA. This plant very much resembles the *Pentstemon* tribe, particularly like *Parguta*, both in form and colour. Its lovely blue flowers being produced in profusion during the winter and spring months renders it a very interesting object. It is a dwarfish plant, requiring similar treatment to a *Gloxinia*; does best in a stove, or warm greenhouse, and it merits a place in

every one, as well as in a dwelling room. It can be procured at a very reasonable price at some of the extensive nurseries.

DAIS COTINIFOLIA. A shrub, from the Cape of Good Hope, and forms a very showy greenhouse plant, much resembling a *Pimelea*. The flowers are of a rich pink, and produced in showy heads. It is in the collection at Kew, and deserves to be in every greenhouse. It blooms during the summer months.

CASSELLIA INTRORIPOLIA. Of the natural order Verbenacæ. It is a native of Brazil; a stove-plant; blooming from March to September. The flowers are like those of a small pale blue salvia. In Mr. Low's collection,

RHODOSTHEMA GARDENIODES. It has a leaf like a *Luculia*; the flowers are very fragrant, white, and in form like a white jasmine. At Mr. Low's.

ACUBA JAPONICA VAR. This very handsome variety has been sent to this country by Dr. Siebold. The leaf is large, having the centre, comprising nearly half of the surface, a rich yellow colour, and surrounded with a broad band of green. It is a very noble and beautiful shrubby plant. Mr. Low has it in-doors; but it is very probable it will be found as hardy as the original species.

LISIANTHUS GLAUCOPHYLLUS. The flowers are about half the size of *L. Russeianus*, and of a darker colour. At Mr. Low's.

PÆONIA WHITMANNIA. It is an herbaceous species, recently sent from Siberia. The flowers are yellow, and said to be very magnificent. At Mr. Low's.

IXORA. A new species, sent by Mr. Low, jun., to the Clapton Nursery. It is stated that the heads of flowers are larger than those of the *Hydrangea hortensis*, and of a brilliant scarlet colour. It is expected to be one of the finest plants which has been brought to this country. We were informed that 100*l.* had been offered for the plant, but refused.

DIANTHUS GORTHADSII. The flower-stems rise to a foot high. The flowers are very double, 1½ inch across, produced in heads; they are a bright rosy crimson, with a dark centre. The plant is as hardy as other double ones, flourishes in the open bed in summer, and to be protected in winter, in a cool frame, or by a small glass cover, pot, &c. At Mr. Low's.

COLUMNÆA. A new species has been received from Mr. Low, jun. The flowers are of a bright scarlet, with a purple calyx.

GESNERIA GEOLDIANA. The flowers are a bright scarlet outside, and a rich golden yellow inside. They have a few very distinct dark spots inside, producing a very pretty effect. At Mr. Low's.

SPIRÆA DOUGLASSI. It is a hardy shrub, growing two to three feet high. The flowers are produced numerously, in spikes; a pretty rosy-lilac colour. It is a neat plant for the shrubbery. At Mr. Low's.

BARLERIA. New species. An erect growing plant, bearing terminal spikes of large handsome (*Justicia*-like) flowers, of a rich violet-blue. It blooms a long period. At Messrs. Henderson's.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON A PLAN FOR A FLOWER GARDEN, &c.—A constant subscriber to the *FLO-RI-CULTURAL CABINET* would be glad if any of your correspondents would inform her the best way to lay out a piece of lawn thirty-six yards long and eleven broad in flower-beds. At present there are eight St. Andrew's crosses and some oblong beds; but they offend the eye as being too angular. Any hint will be thankfully received by your constant subscriber,
Sept. 9th.

J. E.

ON A LIST OF TWENTY-FOUR PHLOXES.—The names of 24 of the very best herbaceous Phloxes in the October Number of the CABINET would much oblige
A SUBSCRIBER IN WILTSHIRE.

[*Purpurea perfecta*, *Captivation*, *Eye-bright*, *Oracle*, *Archduchess*, *Brillianti*, *Broughtonia*, *Bruceii*, *Beauty*, *Compacta alba*, *Cordata grandiflora*, *Formosa*, *Glomerata*, *Jenkinsonia*, *Lindleyana*, *Longiflora purpurea*, *Louisa*, *Murrayana*, *Pendulina*, *Princesse Clementina*, *Princesse Marianne*, *Speciosissima*, *Striata delicatissima*, and *Van Houttei*. The description of each may be seen in the advertised list inserted in the last March Number of our Magazine. The price will be much lower now than at that season.—CONDUCTOR.]

ON SOWING SEEDS OF HYACINTHS.—Having seeds of some fine Hyacinths, I am anxious for some information respecting them, proportion of sowing, the description of soil most suited to them, and the general treatment required by them. An answer in your next will much oblige

Shrewsbury.

M. A. H.

[The seed usually ripens by June or July; when so obtained, sow it a few days after being gathered in a pot or box, in light sandy loam, half an inch deep, and place it in a cool frame under glass, say a spent cucumber or melon bed; in three weeks they usually vegetate; they must be kept growing as long as they will, then allowed to become nearly dry, and be so preserved through winter. In February following they would push again; and, if the pot or box is not crowded, they had best be unmoved, and remain to grow so through the season, and be kept dry from the time of their foliage withering till the planting season. About the middle of October they may be carefully taken up and planted at a few inches apart in a box, &c.; and at the following planting season they may be planted in the open bed, &c., as is done to full-grown bulbs. We repeat, only just keep the soil for the first two rest seasons from becoming dust dry, not wet, and be kept from frost. Seed collected late had best be sown the first week in April; it is much more successful than if sown in September or October, as has generally been done in bygone years.—CONDUCTOR.]

ON TOBACCO WATER.—You have often mentioned that tobacco water being applied to plants infested with green fly, it would destroy the insect. I should be much obliged if you would inform me how the liquid is to be prepared, and how applied.

A. B.

[The liquid is prepared by boiling a proportion of tobacco in a quantity of water for a quarter or even half an hour, and when cool is fit for use. However strong it is it does not in the least injure the plant to which it is applied; and the stronger it is, the more effectual it answers the intended purpose. To immerse the entire top of a plant in the liquid is best. This, with small plants, is readily done; larger ones may in general have the branches bent so as to immerse them successively. Where neither can be done, then syringe the under side of the leaves as well as the upper. Sometimes a repetition is required; it is best to do it as soon as any insect is discovered. We have tried the plan on many occasions, and always succeeded. Tobacco water can generally be procured at a tobacco manufactory at about 1s. per gallon. Gas water will answer, too; it must be weakened so as not to be injurious to vegetation. An experiment on a waste plant will point out the degree. British-grown tobacco, such as is usually grown in gardens, will answer the purpose in the former case. The mode of preparing it is—pull up the full-grown plants, and hang them, roots upwards, in a glass-roofed green-house, peach-house, or similar place, where the temperature will be 70 or 80 degrees, in order to dry. When well dried, dip them in water, and again dry them; this must be repeated once or twice more; after which, when quite dry, put them closely in bags, keep in a dry place, and they will be fit for use. When the liquid is to be made, chop up the stalks and leaves, and boil them in a due proportion of water for half an hour. When cool, it may be used. The liquid will keep well corked up tight in bottles, or bunged up close in a cask.—CONDUCTOR.]

ON A LIST OF LATE BLOOMING ROSES.—I should feel particularly obliged, if you, or some one of your numerous subscribers, would furnish me with a list of thirty of the best Roses (for planting in a bed on the lawn) perpetuals, or such other varieties, as will flower from August till Christmas, or [nearly then, the colour also, as well as an early answer, will be esteemed a favour by

Kent.

A SUBSCRIBER FROM THE COMMENCEMENT.

Bernard; pink, superb, dwarf, very fragrant.

Mogoda, or Crimson Superb; brilliant crimson, shaded with purple, distinct and beautiful.

Grand et Belle; bright rose, very large and fragrant.

Van Mons; pink, veined with red, large.

Auburnon; brilliant crimson, perfect, superb, very fragrant.

Comte d'Eu; brilliant carmine, approaching to scarlet, dwarf.

Duc d'Aumale; bright crimson, beautiful.

Duchess of Sutherland; bright rose, mottled, large, superb.

Lady Alice Peel; deep pink, superb, beautiful.

Louis Bonaparte; rosy-crimson, very distinct.

Prince of Wales; bright lilac, blooming in large clusters.

William Jessie; light crimson, lilac tinged, large, beautiful.

La Bedoyere; bright red, very distinct.

Bouquet de Flora; deep carmine, very superb.

Comice de Seine et Marne; cherry-red, superb.

Deagaches; bright rose, perfect.

George Cuvier; brilliant rosy carmine.

Grand Capitaine; velvet-scarlet, brilliant, beautiful, dwarf habit.

Madame Nerard; beautiful blush, perfect, superb.

Madame Souchet; blush, edged with red, distinct and superb.

Proserpine; brilliant crimson, shaded with purple, superb, dwarf.

Queen, fawn coloured rose, beautiful.

Souchet; crimson, shaded with purple, perfect, superb.

Souvenir de la Malmaison; pale flesh, tinted with fawn, large, superb.

Salfaterre; bright sulphur, large and very superb, but is rather tender in a cold climate.

Clara Sylvain; pure white, distinct, dwarf, superb.

Madame Bureau; white, distinct and pretty.

Cramoise Superiore; brilliant crimson, most beautiful.

Mrs. Bosanquet; pale fresh, wax-like, superb.

Fabvier; fine brilliant scarlet, superb.

REMARKS.

CLOTH OF GOLD ROSE.—It is a rich yellow, large and superb. It is not yet so bright in colour in this country as it grows in France. The petals are of a thick magnolia-like substance. It blooms well against a south aspected wall or in a greenhouse.

PERSIAN YELLOW.—Is an Austrian Briar, the flowers full double, deep yellow, growing and blooming freely. It is a very superb Rose.

Both kinds deserve a place in every collection.

SALISBURY PLAIN DAHLIA SHOW.—Salisbury, or rather Stonehenge, Dahlia show is, in general, one of the earliest of the great exhibitions, and brings in all the early flowers. This season the display was very great. The exhibition may be called extensive; no less than eleven nurserymen competed for the prizes in that class, and the prizes were liberal. In the class of new flowers there were a number of competitors, and it is a pity the importance of this class is not better understood, for it would be the most popular of all. The new flowers of the season formed a very important feature in most of the stands, though, for some of them, which went out in large numbers and late, the show was too early. Of seedlings there was a good show, and few prizes were awarded, for none but the best class were honoured with the distinction. The judges, Messrs. Shepherd

and Glenny, were instructed that they were not limited, and might give as many first and second class as they thought proper. They, however, declined doing more than pointing out such as they considered might go forth to the public at the usual price of half a guinea, without saying anything about first or second class.

List of Prizes.—Nurserymen, Twenty-four Blooms—1. Mr. Keynes, of Salisbury, with Burnham Hero, J. S. Richardson, Cleopatra, Lady St. Maur, Eclipse, Mrs. Shelly, Victory of Sussex, Antler, Gloria Mundi, Standard of Perfection, Princess Royal, Beauty of Sussex, Aurantia, Indispensable, Hofer, Admiral Stopford, Queen of Roses, Beeswing, Raphael, Empress of Whites, Nonpareil, Essex Triumph. 2. Mr. Drummond, Bath, with Beeswing, Victory of Sussex, Vivid, Marchioness of Ormonde, Perpetual Grand, Princess Royal, Lady St. Maur, Catleugh's Eclipse, Lord Howden, Alice Hawthorn, Essex Triumph, Cleopatra, Bathonia, Mrs. Shelly, Aurantia, Springfield Rival, Admiral Stopford, Fullwood Hero, Beauty of Sussex, Queen of Roses, Standard of Perfection, Sir J. S. Richardson, Nonpareil, Sir H. Pottinger. 3. Mr. Brown, Slough, with Rubens, Lady St. Maur, Perpetual Grand, Princess Royal, Aurantia, Victory of Sussex, Cleopatra, Sir J. S. Richardson, Queen of Roses, Standard of Perfection, Ophir, Rembrandt, Nutwith, Duchess of Richmond, Beeswing, Queen, Indispensable, Springfield Rival, Admiral Stopford, Beauty of Sussex, Nonpareil, Essex Triumph, Delight, Raphael. 4. Mr. Spary, of Hungerford, with Candidate, Lady Antrobus, Cook's Albion, Cleopatra, Perpetual Grand, Lady St. Maur, Beeswing, Mrs. Shelly, Fullwood Hero, Dazzle, Aurantia, Essex Triumph, Bridesmaid, Sir R. Sale, Essex Champion, Standard of Perfection, Antler, Beauty of the Plain, Rembrandt, Nonpareil, America, Duchess of St. Albans, Springfield, Phenomenon. 5. Mr. Southley, of Newbury, with Royal Standard, Royal Sovereign, Marquis of Lansdowne, Beauty of Sussex, Argo, Scarlet Eclipse, Victory, Sir J. S. Richardson, Emma Noke, Girling's Prince of Wales, Beeswing, Novelty, Essex Triumph, Phenomenon, Duchess of Richmond, Aurantia, Sir R. Sale, Lady Antrobus, Proctor's Nonpareil, Emperor of the Whites, Standard of Perfection, Majestic, Sir J. Johnstone, Beauty of the Plain. 6. Names not given in. 7. Mr. Heale, of Calne, with President of the West, Dodd's Prince of Wales, Sir J. S. Richardson, Admiral Stopford, Beauty of Sussex, Hampstead Rival, Widnall's Queen, Aurantia, Princess Royal, Essex Triumph, Langley's Duke of York, Beeswing, King of the West, Empress of the Whites, Proctor's Nonpareil, Prince of Waterloo, Bermondsey Bee, Queen of Roses, Orange Superb, Standard of Perfection, Harrison's Duke of York, Indispensable, Sir R. Sale, Dazzle. 8. Mr. Heale, of Devizes, with Perpetual Grand, Aurantia, Sir R. Sale, Gloria Mundi, Springfield Rival, Delight, Great Mogul, Harrison's Duke of York, Dodd's Prince of Wales, Hodge's Competitor, Orange Superb, Essex Triumph, Marchioness of Ormond, Beeswing, Beauty of the Plain, Rubens, King of the West, Princess Royal, Nonpareil, Empress of the Whites, Bermondsey Bee, Standard of Perfection, Prince of Waterloo. *Amateurs, Twelve Blooms*—1. Mr. Fox, with Spitfire, Cleopatra, Mrs. Shelly, Lady St. Maur, Victory of Sussex, Marchioness of Ormonde, Sir J. S. Richardson, Standard of Perfection, Perpetual Grand, Essex Bride, Prince of Waterloo. 2. J. M. Yeeles, Esq., with Beeswing, Aurantia, Sir J. S. Richardson, Cleopatra, Gloria Mundi, Fullwood Hero, Essex Triumph, Duchess of Richmond, Princess Royal, Widnall's Queen, Albion, Admiral Stopford. 3. Names not given in. 4. Mr. Hopkins, with Model, Indispensable, Mrs. Shelly, Cleopatra, Beauty of Sussex, Perpetual Grand, Antagonist, Nonpareil, Orange Superb, Virgil, Dazzle, Standard of Perfection. 5. Names not given in. 6. Mr. Keate, with Indispensable, Lady Harland, Twyford's Perfection, Essex Triumph, Duchess of Richmond, Dodd's Prince of Wales, President of the West, Emperor of the Whites, Admiral Stopford, Delight, Beauty of the Plain, Queen of Roses. *Amateurs, Six Blooms*—1. Mr. Yeeles, with Sir J. S. Richardson, Cleopatra, Gloria Mundi, Nonpareil, Princess Royal, Victory of Sussex. 2. Mr. Durwed, with Cleopatra, Hero of Stonehenge, Standard of Perfection, Empress of the Whites, Queen of Roses, Hero of Waterloo. 3. Mr. Hopkins, with Nonpareil, Mrs. Shelly, Model, Orange Superb, Beauty Superb, Standard of Perfection. 4. Mr. Gidward, with Fullwood Hero, Beauty of Sussex, Standard of Perfection,

Widnall's Queen, Beeswing, Admiral Stopford. 5. Mr. Brown, of Wilton, with Bermoudey Bee, Dazzle, Princess Royal, Duke of York, Standard, Cleopatra. 6. Mr. Brown, with Favourite, Dazzle, Aurantia, Queen of Roses, Mrs. Shelly, Princess Royal. *Amateurs*, Six new Flowers—1. Mr. Dodd, with Keynes's Antler, Fulwood Hero, Beeswing, Keynes's Dazzle, Gloria Mundi, Empress of the Whites. 2. Mr. Yeeles, with Red Rover, Albion, Alice Hawthorn, Gloria Mundi, Cleopatra, Beeswing. 3. Mr. Hopkins, with Antler, Dazzle, Cleopatra, Marchioness of Ormond, Duke of York (Keynes), Duke of York (Langley). *Seedlings of 1844*—Mr. Gaines, for Princess Radzville; Mr. Whale, for Lady Cornwallis; Mr. Dodd, for Enterprize; Mr. Spary, for Marquis of Aylesbury; Mr. Sorrel, for Caractacus; Mr. Keynes, for Sir Edward Antrobus; Mr. Dodd, for a fancy purple and white bordered flower, called Punch. *Seedlings of 1845*—Mr. Brown, of Slough, for a shaded purple, and Mr. Girling for a fancy flower.

TRAINING HEATHS.—Mr. Campbell, of Warminster, trains many of his Heaths into pyramids, which he places along each side of a wide path in his conservatory. The effect is somewhat novel, and in such situations very good. He merely selects a strong leading shoot, and keeps the remainder constantly cut back. The following sorts he has been successful with:—*Erica Linnaea nova*, *E. Melastoma*, *E. Grandinosa*, *E. Laxa*, *E. Spumosa*, *E. Colorans*, *E. Colorans verna*, *E. Densa*, *E. Ventricosa breviflora*, *E. Nigrita*, *E. Sebana*, *E. Linnaeoides superba*, *E. Sparsa*, *E. Persolata*, *E. Hyemalis*, and *E. Wilmoreana*.

SEEDLING CACTUSES.—Whenever the seed is ripe, sow it in sand, then place the pot on a shelf in a warm and dry situation. It will vegetate readily. Little water should be given to the plants when up. As they root well in sand, they need not be potted till they are tolerably strong plants. The best soil to pot them in is loam, peat, and brick rubbish, and be well drained.

FLORICULTURAL CALENDAR FOR OCTOBER.

Annual Flower Seeds, as *Clarkia*, *Collinsia*, *Schizanthuses*, *Ten Week Stocks*, &c., now sown in pots, and kept in a cool frame or greenhouse during winter, will be suitable for planting out in open borders next April. Such plants bloom early and fine, and their flowering season is generally closing when spring-sow plants are coming into bloom. Seeds of many kinds now sown in the open borders endure winter and bloom vigorously early next season.

Biennials, as *Scabious*, *Sweet Williams*, *Canterbury Bells*, &c., should now be planted where to bloom next season.

Camellias.—Thin the flower buds, which will tend to preserve more certainly those for blooming, and cause them to be vigorous. Place some in the greenhouse early, that are desired to bloom in December, or before, in some cases.

Carnation Layers should immediately be potted off.

China Rose Cuttings now strike very freely; buds may still be put in successfully.

Dahlias.—Where the laterals are very numerous, they should be thinned out so as to have vigorous blooms. Towards the end of the month collect seeds of the early-blown flowers. Heap soil round the stem to save the crown from frost.

Greenhouse plants will generally require to be taken in by the end of the month. If allowed to remain out much longer, the foliage will often turn brown from the effect of cold air. The earlier succulents are the better.

Lobelias.—Offsets should be potted off, so as to have them well rooted before winter.

Lisianthus Seed now sown will produce plants for next year's blooming.

Mignonette may now be sown in pots, to bloom in winter.

Pelargoniums, cuttings of, may now be put off; plants of which will bloom in May.

If *Pelargoniums* have not been headed down, they should now be done, the

shoots may push a little before repotting for winter. Plants which have been headed down, and have pushed shoots two inches long should be repotted.

Pinks, pipings of, if struck, may be taken off and planted in the situations intended for blooming in next season.

Plants of Herbaceous Calceolarias should now be divided, taking off offsets and planting them in small pots. Cut off the flower stems of such as have done blooming, to induce shoots to be vigorous.

Plants of Chinese Chrysanthemums should be repotted if necessary; for if done later, the blossom will be small. Use the richest soil. Pinch off the heads to cause the production of laterals, so as to have a head of flowers. Large plants may be taken up from the open borders and potted, they will bloom fine with due care.

Plants of Pentstemons should be divided by taking off offsets, or increased by striking slips. They should be struck in heat.

Pansies.—The tops and slips of Pansies should now be cut off, and be inserted under a hand-glass, or where they can be shaded a little. They will root freely, and be good plants for next season.

Ranunculus beds should now be prepared as follows:—The depth of soil to be two feet and a half, of a rich clayey, friable loam, retentive of moisture; about six or eight inches from the surface to be a rich light loam, of a sandy nature. Remove the whole of the soil with the remains of the dung given last year, and turn up the subsoil a whole spade in depth, breaking it well. If the beds are allowed to remain in this state for a day or two to sweeten the subsoil, it will be an advantage. Then place upon the subsoil a layer of cow-dung, at least one year old, four inches thick; then scatter over it the fine powder of new-slaked lime, to correct any acidity and destroy the worms. Then fill up with new light soil, taken from the surface of the old tulip-bed or potato-ground, which has been frequently turned to sweeten it.

Sweet William seed now sown will soon strike and the plants bloom next season.

Seeds of many kinds of flowers will be ripe for gathering this month.

Tigridia, *Commellina*, and similar roots, may be taken up about the end of the month.

Verbenas.—Runners of this plant should now be taken off, planting them in small pots, half filled with potsherds, and the rest with good loamy soil, then placing them in a shady situation. It should be attended to as early in the month as convenient. When taken into a cold frame or greenhouse for winter protection, much of the success depends on being kept near the glass; or sink a box or two, half filled with potsherds, and the other good loamy soil, round the plant, so that the runners, being pegged down to the soil, will soon take root at the joints. When a sufficient number are rooted, separate the stems from the parent plant, and those in the boxes will be well established, and, being removed before frost, are easily preserved in winter, as done with those in pots.

When Lilies, Crown Imperials, Narcissuses, &c., require dividing, take them up now, and replant immediately; also plant Hyacinths and Crocuses, &c., either in beds or in pots for forcing.

When Petunias, Heliotropium, Salvias, Pelargoniums, (Geraniums,) &c., that have been grown in open borders, and it is desirable to have bushy plants for the same purpose the next year, it is now the proper time to take off slips (select the short and well-ripened ones), and insert a number in a pot; afterwards place them in a hot-bed frame, or other situation having the command of heat. When struck root, they may be placed in a greenhouse or cool frame to preserve them from frost during winter. When divided and planted out the ensuing May in open borders of rich soil, the plants will be stocky, and bloom profusely.

Greenhouse plants yet out will require to be taken in by the middle of the month; if allowed to remain out much longer, the foliage will often turn brown from the effects of cold air. Where they are in all air should be admitted by day. The plants should not be watered over head at the close of the day. Water the soil too only in the early part of the day, if not so attended to the leaves will be liable to damp off. Loosen the soil at the surface frequently, it contributes much to health.



1. BOUVARDIA FLAVA.

2. CALANDRINTIA UMBELLATA.

Floricultural Cabinet.

THE
FLORICULTURAL CABINET,

NOVEMBER 1st, 1845.

PART I.
EMBELLISHMENTS.

ARTICLE I.

1. BOUVARDIA FLAVA.—(YELLOW FLOWERED.)

THIS very pretty and new species we lately received from Mr. Van Houtte, nurseryman of Ghent, who, in addition to the plant and a coloured figure of the flower, forwarded us the following communication of the plant, culture, &c. It will prove a very striking companion to the fine scarlet Bouvardias triphylla, Jacquinii, and versicolor, whether grown in pots in the greenhouse, or in the open beds in summer; and its beauty, freeness of blooming, &c., render it deserving a place in every greenhouse and flower garden. Mr. Van Houtte observes as follows:—

“ This is a very interesting and entirely new acquisition to our cultures; stubbed in short, and kept shrubby, it will long continue to form, by its numerous and light hanging flowers, pendant on their triangular peduncles, a spring ornament for the green-house, into which it must be placed during the winter. The beautiful yellow colour of the flowers forms a most happy and agreeable contrast to the dark purple and varied shades of the foliage. In order to obtain the latter effect, the plant must, during the fine season, be exposed, if not to the direct rays of the sun, at least in mid shade, so as to enjoy a vast and airy space.

“It delights in a soil sufficiently rich in decomposed vegetable matter, and, in consequence of its almost continued growth, frequent waterings; winter excepted.

“It will prosper in the open ground, if transplanted into the borders towards the end of May; in which case it must be re-potted about the 10th of September, placed in the shade or cold-pit, and brought into the green-house about the beginning of October.

“Its increase is as simple as easy by cuttings of the young branches, in a hot bed, and under bell-glasses. The young scions cut at the articulation of a branch will root in a few days, and may be treated like the mother plants; the only precaution necessary to be taken is, not to expose the new shoots to the open air, or to the sun, before being accustomed thereto by degrees; the delicacy of the young branches being so great that the sudden contact of either might occasion some disorder in the new plants. Forced early in spring, as is done with other green-house plants, this plant has had but little success; only producing small (and, as one may say), abortive flowers, of an undecided colour: left to itself, and subject to all the influences of the spring, and of the atmosphere, its vegetation at once proceeds with redoubled vigour; its leaves twice as large, and are now spotted with red; the flowers much more numerous, longer, and double the size, acquire a lively colouring of the most beautiful yellow; it is therefore important, with regard to this beautiful species, to let nature work alone.”

2. CALANDRINIA UMBELLATA.

This is another beautiful addition to this lovely tribe of flowers. Messrs. Veitch's, of Exeter Nursery, received it from their collector, Mr. Lobb. They exhibited it at the Chiswick Horticultural show in July last. It is a very profuse bloomer, and its rich coloured flowers produce a very striking appearance. It will well deserve a place either in pots in the greenhouse, or in the open border.

ARTICLE II.

THE METROPOLITAN FLORAL EXHIBITIONS.

METROPOLITAN FLORICULTURAL SOCIETY, *September 25.*

THE September exhibition of this Society has for some years been acknowledged as the grand Dahlia show of the season, the com-

petitors being many of the principal growers throughout the country, and the blooms placed to view at this meeting justified this character.

The number of stands produced was probably not so extensive as they would have been, had not an early frost in several localities much destroyed the flowers; the generality of those shown, however, were very good. A considerable number of seedlings were offered for notice, some of which were really good; our notes of them was made from a very careful inspection, and may be relied upon. The show was held in the gardens of Cremorne House, Chelsea.

The following is a list of the flowers, comprising the prize stands in the various classes.

CLASS I.

24 Blooms: open to Nurserymen only.

1st Prize, Mr. Turner, Chalvey, for fine specimens of *Indispensable* (Girling), *Pickwick* (Cormack), *Aurantia* (Sperry), *Cleopatra* (Attwell), *Bermondsey Bee* (Proctor), *Nonpareil* (Proctor), *Perpetual Grand* (Brown), *Competitor* (Holtze), *Duchess of Richmond* (Fowler), *Trafalgar*, *Leed Howden* (Harrison), *Rembrandt* (Brown), *Mrs. Shelley* (Mitchell), *Princess Royal* (Hudson), *Beauty of the Plain* (Sperry), *Spitfire* (Fisher), *Beeswing* (Drummond), *La Grande Bauduin* (Low), *Alice Hawthorn* (Drummond), *Raphael* (Brown), *Standard of Perfection* (Keynes), *Marchioness of Ormond* (Bourn), *Dowager Lady Cooper* (Jackson), and *Springfield Rival* (Inwood).

2nd Prize, Mr. Girling, Stowmarket, for *Lord Howden*, *Gloria Mundi*, *Princess Royal*, *Ashlete*, *Biondetta*, *Mrs. Shelley*, *Blue Bonnet*, *Standard of Perfection*, *Victory of Sussex*, *Optimus*, *Essex Triumph*, *Antagonist*, *Reubens*, *Cleopatra*, *Phenomenon*, *Queen of Roses*, *Alice Hawthorn*, *Gloricum*, *Bermondsey Bee*, *Rembrandt*, *Lady Leicester*, *Admiral Stopford*, and *Dazzle*.

3rd Prize, Mr. Brown, Slough, with *Queen of Roses*, *Pickwick*, *Rembrandt*, *Phenomenon*, *Duchess of Richmond*, *Indispensable*, *Nutwith*, *Raphael*, *Standard of Perfection*, *Sir J. S. Richardson*, *Beeswing*, *Bauduin*, *Competition*, *Mrs. J. Richardson*, *Essex Champion*, *Delight*, *Bermondsey Bee*, *Perpetual Grand*, *Ophir*, *Springfield Rival*, *Desirable*, *Cleopatra*, *Northan Beauty*, and *Princess Royal*.

4th Prize, Mr. Bragg, Slough, with *Orlanda*, *Springfield Rival*, *Cleopatra*, *Admiral Stopford*, *Antagonist*, *Duchess of Richmond*, *Essex Bride*, *Burnham Hero*, *Victory of Sussex*, *Beauty of the Plain*, *Essex Triumph*, *Aurantia*, *Great Mogul*, *Princess Royal*, *Antler*, *Blue Bonnet*, *Indispensable*, *Vivid*, *Standard of Perfection*, *Bermondsey Bee*, *Beauty of Sussex*, *Nonpareil*, *Emperor of Whites*, and *Beeswing*.

5th Prize, Mr. Gaines, Battersea, for *Lady Glentworth*, *Oelando*, *Bloomsbury*, *Cleopatra*, *Perpetual Grand*, *Albion*, *Mrs. Shelley*, *Hero of Maida*, *Gloria Mundi*, *Gaines' Countess of Zetland*, *Sir J. S. Richardson*, *Essex Bride*, *Victory of Sussex*, *Vivid*, *Beeswing*, *Candidate*, *Princess Royal*, *Eximia*, *Essex Primrose*, *Aurantia*, *Cheltenham Queen*, *Rembrandt*, and *Marc Antony*.

6th Prize, Mr. Sorrell, Chelmsford, for *Sir J. S. Richardson*, *Cleopatra*, *Essex Triumph*, *Pickwick*, *Admiral Stopford*, *Victory of Sussex*, *Phenomenon*, *Widnall's Queen*, *Antler*, *Consolation*, *Duchess of Richmond*, *Princess Royal*, *Conqueror of the World*, *Standard of Perfection*, *Queen of Roses*, *Sir A. Pottinger*, *Beeswing*, *Mrs. Shelley*, *Perpetual Grand*, *Bermondsey Bee*, *Aurantia*, *President of the West*, *Catleugh's Eclipse*, and *Champion*.

Besides the above, three other collections were shown.

CLASS II.

24 Blooms : open to all Competitors.

1st Prize, Mr. Turner, Chalvey, for Duchess of Richmond, Raphael, Beeswing, Standard of Perfection, Nonpareil, Trafalgar, Spitfire, Princess Royal, Gloria Mundi, Indispensable, Victory of Sussex, Bathonia, Beauty of Bucks, Pickwick, Admiral Stopford, Beauty of the Plain, Lord Howden, Arethusa, Competitor, Ekimia, Cleopatra, Raphael, Springfield Rival, and Bermondsey Bee.

2nd Prize, Mr. Bragg, Slough, for Burnham Hero, Essex Bride, Admiral Stopford, Blue Bonnet, Beeswing, Essex Triumph, Mrs. Shelley, Duchess of Richmond, Beauty of Bucks, Antagonist, Spitfire, Vivid, Lady St. Maur, Cleopatra, Raphael, Great Mogul, Beauty of Sussex, Lady Antrobus, Aurantia, Candidate, Beauty of the Plain, Nonpareil, Springfield Rival, and Bermondsey Bee.

3rd Prize, Mr. Girling, Stowmarket, for Biondella, Mrs. Shelley, Beeswing, La Polka, Cleopatra, Antagonist, Gloria Mundi, Athlete, Admiral Stopford, Antler, Phenomenon, Princess Royal, Raphael, Lord Howden, Standard of Perfection, Alice Hawthorn, Zoe (Truelle), Blue Bonnet, Highgate Surprise, Trafalgar, Candidate, Oudine, Queen of Roses, and Essex Triumph.

4th Prize, Mr. Cook (amateur), Notting-hill, for Mrs. Shelley, Tournament, Perpetual Grand, Victory of Sussex, Raphael, Lord Howden, Prince of Wales, Standard of Perfection, Admiral Stopford, Albion, Bathonia, Phenomenon, Antagonist, Princess Royal, Sir J. S. Richardson, Andrew Hofer, Competitor, Nonpareil, Springfield Rival, Queen of Roses, Aurantia, Essex Scarlet, and Bermondsey Bee.

5th Prize, Mr. Brown, Slough, for Queen of Roses, Perfect Grand, Phenomenon, Essex Triumph, Springfield Purple, Sir J. S. Richardson, Duchess of Richmond, Competitor, Nutwith, Twickenham Rival, Admiral Stopford, Rubens, Princess Royal, Raphael, Beauty of the Plain, Antagonist, Pickwick, Essex Champion, Sir R. Sale, Bermondsey Bee, President of the West, Beeswing, Indispensable, and Springfield Rival.

6th Prize, Mr. Kimberly, Pimley, Coventry, for Perpetual Grand, Mrs. Shelley, Pickwick, Beeswing, Scarlet Eclipse, Duchess of Richmond, Essex Triumph, Andrew Hofer, Admiral Stopford, Cleopatra, Maria, Vivid, Optimus, Candidate, Marc Antony, Blue Bonnet, Rembrandt, Bathonia, Princess Royal, Le Grand Baudoin, Standard of Perfection, Beauty of Pimley, Competitor, and Orange Superb.

7th Prize, Mr. Gaines, Battersea, with Mrs. Shelley, Gloria Mundi, Cleopatra, Beeswing, Essex Primrose, Sir J. S. Richardson, Vivid, Marc Antony, Aurantia, Alphonso, Burnham Hero, Princess Royal, Albion, Dazzle, Bloomsbury, Rembrandt, Duke of York, Antler, Countess of Zetland, Commodore, Phenomenon, Cheltenham Queen, Victory of Sussex, and Mary Ann.

8th Prize, Mr. Hoare, with Princess Royal, Pickwick, Mrs. Shelley, Duchess of Richmond, Marquis of Lansdowne, Catleugh's Eclipse, Coronation, Sir J. S. Richardson, Beeswing, Essex Triumph, Victory of Sussex, Maria, Will Watch, Beauty of the Plain, President of the West, Aurantia, Phenomenon, Competitor, Lady Harland, Standard of Perfection, Cox's Yellow Defiance, Bermondsey Bee, Nonpareil, and Rembrandt.

Three other competitors.

CLASS III.

12 Blooms : for Amateurs residing beyond five miles from London.

1st Prize, Mr. Howard, Burnham, for Victory of Sussex, Burnham Hero, Cleopatra, Standard of Perfection, Beeswing, Essex Triumph, Lady Cooper, Nonpareil, Bermondsey Bee, Admiral Stopford, Aurantia, and Princess Royal.

2nd Prize, Mr. Hopkins, Brentford, for Nonpareil, Sir J. S. Richardson, Antagonist, Cleopatra, Mrs. Shelley, Beeswing, Princess Royal, Standard of Perfection, Essex Triumph, Rembrandt, and Aurantia.

3rd Prize, Mr. Collison, Bath, for Lord Howden, Ophir, Cleopatra, Sir J. S. Richardson, Northern Beauty, Mrs. Shelley, Pickwick, Trafalgar, Nonpareil, Asmodeus, Beeswing, and Essex Triumph.

4th Prize, Mr. Weeks, Chelmsford, for Essex Bride, Antler, Essex Primrose, Beeswing, Cleopatra, Essex Triumph, Springfield Rival, Rembrandt, Bathonia, Nonpareil, Admiral Stopford, and Essex Champion.

5th Prize, Mr. Edwards, Hilperton, for Alice Hawthorn, Mrs. Shelley, Victory of Sussex, Cleopatra, Beeswing, Phenomenon, Burnham Hero, Trafalgar, Prince of Wales, Perpetual Grand, Lady Harland, and Essex Triumph.

6th Prize, Mr. Hore, for Widnall's Princess Royal, Mrs. Shelley, Beeswing, Sir J. S. Richardson, Cleopatra, Standard of Perfection, Lady Harland, Bermondsey Bee, Aurantia, President of the West, Phenomenon, and Maria.

7th Prize, Mr. Weedon, Hillingdon, for Princess Royal, Beeswing, Cleopatra, Blue Bonnet, Mrs. Shelley, Phenomenon, Antagonist, Sir J. S. Richardson, Essex Triumph, Raphael, Widnall's Queen, and Widnall's Eclipse.

8th Prize, Mr. Humber, Southall, for Cleopatra, Mrs. Shelley, Royal, Beeswing, Aurantia, Nonpareil, Raphael, Lady Harland, and Rembrandt.

CLASS IV.

12 Blooms: for Amateurs, residing within five miles of London.

1st Prize, Mr. Cook, Notting-hill, for Victory of Sussex, Tournament, Antagonist, Mrs. Shelley, Lord Howden, Princess Royal, Perpetual Grand, Sir J. S. Richardson, Essex Triumph, Bathonia, Raphael, and Phenomenon.

2nd Prize, Mr. Proctor, Bermondsey, for Beeswing, Blue Bonnet, Victory of Sussex, Mrs. Shelley, Standard of Perfection, Princess Royal, Essex Triumph, Bridesmaid, Antagonist, President of the West, Nonpareil, and Queen of Roses.

3rd Prize, Mr. Cowan, Hampstead, with Aurantia, Beeswing, Cleopatra, Princess Royal, Admiral Stopford, Sir J. S. Richardson, Gloria Mundi, Essex Bride, Indispensable, Emperor of Whites, Nonpareil, and Standard of Perfection.

4th Prize, Mr. Legg, Kingland-road, for Sir J. S. Richardson, President of the West, Competitor, Lady Harland, Princess Royal, Standard of Perfection, Victory of Sussex, Aurantia, Nonpareil, Antagonist, Beeswing, and Phenomenon.

5th Prize, Mr. Hunt, Paddington, with Princess Royal, Victory of Sussex, Prince of Wales, Mrs. Shelley, Standard of Perfection, Aurantia, Beeswing, Pickwick, Emperor of Whites, Paul Pry, Queen of Roses, and Nonpareil.

6th Prize, Mr. Edwards, Holloway, with Sir J. S. Richardson, Cleopatra, Victory of Sussex, Aurantia, Lady St. Maur, Beeswing, Polka, Blue Bonnet, Virgil, Hudson's Princess Royal, Standard of Perfection, and Lady Antrobus.

7th Prize, Mr. James, Stoke Newington, with Girling's Prince of Wales, Cleopatra, Aurantia, Perpetual Grand, Antagonist, Beeswing, Hudson's Princess Royal, Mrs. Shelley, Standard of Perfection, Essex Triumph, Dodd's Prince of Wales, and Admiral Stopford.

8th Prize, Mr. Hatham, Haggerstone, with Mrs. Shelley, Victory of Sussex, Candidate, Eximia, Rival Yellow, Blue Bonnet, Marc Antony, Alice Hawthorn, Virgil, Antagonist, Beeswing, and Admiral Stopford.

Three other competitors.

CLASS V.

6 Blooms of Flowers let out this year: for Amateurs only.

1st Prize, Mr. Howard, Burnham, with Cleopatra, Beeswing, Marchioness of Ormoud, Red Rover, Junius, Gloria Mundi, Empress of the Whites.

2nd Prize, Mr. Ford, for Alice Hawthorn, Beeswing, Cleopatra, Essex Bride, Antler, (Keynes,) and Empress of the Whites.

3rd Prize, Mr. Collison, Bath, with Gloria Mundi, Cleopatra, Sphere, Caledonia, Beeswing, and Lady Sale.

4th Prize, Mr. Cowan, Hampstead, with Gloria Mundi, Beeswing, Cleopatra, Essex Bride, Lady Sale, and Fulwood Hero.

5th Prize, Mr. Fozzard, with *Essex Bride*, *Cleopatra*, *Beeswing*, *Gloria Mundi*, *Emperor of the Whites*, and *Alice Hawthorn*.

6th Prize, Mr. J. Edwards, *Holloway*, with *Essex Primrose*, *Beeswing*, *Cleopatra*, *Gloria Mundi*, *Essex Scarlet*, and *Sylph*.

Two other competitors.

CLASS VI.

VARIEGATED VARIETIES.

12 Blooms: open to all.

1st Prize, Mr. Girling, *Stowmarket*, with *Vicomte Ressequier*, *Harlequin*, *Purpurea Alba*, *Superb*, *La Vouge*, *Madame Chauviere*, *Madame Wallner*, *Madame Beverche*, *Surprise*, *Monsieur Jane Wallner*, *Nouveau Protea*, *Zeitgeish*, and *Archduke Frederick*.

2nd Prize, Mr. Gaines, *Battersea*, with *Vicomte Ressequier*, *Madame Wallner*, *Harlequin*, *Oakley*, *Surprise*, *Illuminator*, *Alba Purpurea*, *Tricolor*, (*Harrison's*), *Maid of Lodi*, *Striata*, *Monsieur Wallner*, *Madame Schauenfield*, and *Queen of England*.

2nd Prize, Mr. Bragg, *Slough*, with *Vicomte Ressequier*, *Nihil*, *Harlequin*, *Miss Watson*, *Alba Purpurea*, *Superb*, *Madame Mortier Bavais*, *Striata*, *Surprise*, *Madame Millex*, *Louisa*, *Madame Chauviere*, and *Alba Purpurea*.

Three other competitors.

CLASS VII.

VARIEGATED VARIETIES.

6 Blooms: for Amateurs.

1st Prize, Mr. Ford, with *Nihil*, *Oakley*, *Surprise*, *Harlequin*, *Miss Watson*, *Purpurea Alba*, *Superb*, and *Queen*.

2nd Prize, Mr. Shepherd, with *Archduke*, *Nihil*, *Madame Bavais*, *Miss Watson*, *Oakley Surprise*, and *La Vogue*.

The eighth and ninth classes comprise Seedlings of 1844 and 1845, our notes upon which being copious, want of room obliges us to defer them until our next number.

In addition to the Dahlias, some Fuchsias, Heartseases, and Verbenas were exhibited, and several prizes awarded.

ARTICLE III.

CULTURE OF THE CHILIAN ALSTROEMERIA.

BY MR. LOUIS VAN HOUTTE, OF GHENT.

NOTHING whatever presents more ornament to our gardens, during a great portion of the year, than this beautiful production, whose flowers are at once so numerous and so splendid; and yet nothing can be more easy than its culture and multiplication. The thousand varied, but always charming tints, which tinge the corollas of these *Alstroemeras*, present a difficulty in establishing a just horticultural nomenclature for them, as, like their brilliant rivals the *Calceolarias*, they would defy on that point the most rigid examination. One may affirm without exaggeration that all are beautiful, and one may also infer that they will soon become as popular as the *Wallflower*, the *Mignonette*, the *Carnation*, &c.; in fact, cut for nosegays, to grace

the various apartments of the house, no other flowers can be compared with them.

The length, thickness, and number of their fascicled roots hinder them from flourishing under pot-culture; they succeed best in the open ground, in the free air, which, if subjected to the following treatment, they can brave with impunity. A bed is dug about 14 inches deep, in length and breadth proportioned to the number of roots required to be planted, at a foot apart from heel to heel; the bottom of the trench must be filled with rubble of potsherds, fragments of bricks, tiles, &c., in order to permit a prompt and easy drainage. It is then filled with a rich compost, formed of one-third fresh loam, one-third sandy bog earth, and one-third spit dung, and some such strong manure as guano may be added, in the proportion of one-thirtieth of the whole mass. The whole is to be mixed well together, and left in heaps about two months before making use of it.

Each rhizome is planted in the month of October, taking care that its growing point is 10 inches below the surface of the soil. On the frost becoming severe, the bed is covered with a frame-work, and surrounded by muck; the air being abundantly admitted whenever the thermometer may not be below 32° Fahr. We have, however, known the cold to descend to 25°, and the roots not to be injured thereby.

As long as the severe frost lasts, the frame is covered with litter or straw, which is removed at all times when the plants can enjoy the benefit of the sun's rays. So soon as the cold is no longer to be dreaded, the above protections are removed, and the plants whose shoots are already apparent, are left perfectly free to all atmospheric influences, and finally treated like other perennials. They must be very sparingly watered during the ripening of the seeds, and should great rains follow after the seeds are gathered, they must be protected by the frames to prevent the rot. The roots are to be taken up towards the end of July, the rhizomas cleaned and separated; afterwards they may be left exposed on shelves in a very airy dry place, until the moment of replanting.

The splendid collection of *Alstroemerias* which the abovenamed gentleman possesses has been spoken of this year by several eminent floriculturists of this country, who saw them in bloom.

ARTICLE IV.

OBSERVATIONS UPON THUNBERGIA (?) FASTUOSA.

BY CH. J. OF MR. VAN HOUTTE'S NURSERY, GHENT.

THE inconvenience is vexatiously felt by most amateurs of being under the necessity of shading those plants which remain under glass during the summer season; their protections being mostly unsightly, formed of clownish and nasty canvass, laths, mats, &c. To avoid the disagreeable effect of such protections, the loss of time resulting from their arrangement in the morning and removing them in the evening, various climbers are planted to protect the plants under them from the sun, by the interlacing of their long leafy branches.

But no plant has, up to the present time, answered the above object; the Passion-flowers, the Bignonias, &c., grow slowly enough, or even languish; and besides too long a lapse of time (several years) would pass over, before the green or hot-houses would be properly furnished, or their branches be capable of casting the necessary shade.

At this moment the problem is completely resolved by experience.

A plant recently introduced from Mexico amply suffices for all the exigencies of amateurs. Its vegetation is of such extraordinary luxuriance that in a few months only (six or seven), its branches attain a length of more than 30 feet, without counting numerous side shoots, which reach nearly the same extension. The diameter of its leaves is more than six or eight inches, and they garnish the whole length of the shoots. Such a plant, put in full ground, in a corner of an ordinary hothouse, will easily cover all glazed surface in less than a year, and save the amateur from having to employ other means to protect his plants against the devouring influence of the sun's rays. Even during this first year pruning will be often necessary, in order to diminish the obscurity produced by the multiplicity of intermingled branches and of large leaves of our *Thunbergia*.

These few words will suffice to make the utility of the new plant we announce understood. We must say a word of the beauty of its habitus.

At this point of view, it fears little rivalry. Its cylindric branches, hollow within, as thick as a finger, are very glabrous, smooth, of a deep purple, very finely spotted with green. Its leaves are oppo-

site, very ample, smooth, emarginate-cordiform, ovate, obliquely acuminate, five-nerved, denticulated-mucronate at the edges; both sides covered with numerous stomata. The nervation is finely reticulated. The young leaves are of a dark red, and appear pubescent; the petioles (young) form a sort of ring around the branch, and are abruptly deflexed behind, as well as the buds contained in their axil. The shoots, freshly cut, shed a grave smell, indicating some quality, which it would be interesting to study, as being perhaps pharmaceutic.

We have not yet seen it in flower, and cannot therefore affirm that it really belongs to the genus *Thunbergia*, of which, however, it certainly presents all the habitus. The fury of its vegetation has, without doubt, prevented it, up to the present time, from producing this agreeable result, which one must hope will be obtained by judicious pruning. As soon as we have seen these flowers, we shall hasten to have them figured, and to describe them conveniently. In the mean time, we can confidently recommend this being planted both in the hot or the greenhouse (indifferently); it will perfectly answer the purpose of which we have spoken.

ARTICLE V.

REMARKS ON THE PANKE. (*GUNNERA SCABRA*).

BY CH. J. OF MR. VAN HOUTTE'S NURSERY, GHENT.

WHEN from the commencement of the 18th century, father Feuillée proclaimed the pharmaceutic, culinary, and economic qualities of a plant, the Panke, of which the Chilians made advantageous use under all these three points of view, he could not have imagined that his voice would not be heard, that his efforts would rest powerless. Is that not eventually the fate of all who have endeavoured to bless their fellow men with any useful invention? Was Solomon De Caux believed, James Watt, Fulton, and even Parmentier himself, the discoverer of the potatoe!

At length, more than 100 years ago since that voice was extinct which announced to Europeans the utility of the Chilian plant, thanks to the generous efforts of one of the principal horticulturists of the Continent, the Panke is finally introduced into Europe, and society may in future reap the same advantages from it as do the Chilians themselves.

The Panke (*Gunnera Chilensis* or *scabra* Auct.), though stemless, acquires very great dimensions. Its facies is that of a Rheum, with a more considerable development. No other plant is more proper to adorn the landscape or large flower-gardens.

From a very thick round rhizoma, formed with persistent vestiges of the old leaves, rise cylindric petioles embracing and dilated at the base, nearly the size of a child's arm, 1 or 1½ metre long, ordinarily purple, covered with short conic and herbaceous prickles. The foliaceous limb is not less than a metre in diameter, and palmatifid, five-lobed, five-nerved; each nerve is doubly dichotomous, each lobe bilobulate, with slightly acuminate coarsely duplicidentate segments. These two pages are scabrous, covered with scarce hairs, and, below particularly, along the nervures, the same prickles as on the petioles. The young leaves, before their entire development, are of beautiful reddish purple, which slowly disappears as they grow older. The floral scapes, hardly 35 to 40 centimetres high, are pyramidal and covered from half to summit with hermaphrodite flowers, which are sessile and little remarkable in themselves, but, however, of a pretty good effect by their mode of insertion.

The *Gunnera scabra* grows in humid places, in Peru and Chili; and according to travellers it is very refreshing. The natives drink a decoction of its leaves for that purpose; they also eat the thick petioles raw or cooked, after having peeled off the bark. Dyers cut the roots in little pieces, boil them, and thence extract a beautiful and solid black colour. Tanners soak their leathers in a water saturated with its juice, which thus acquire a thickness and pliancy that no other procedure would or can give it.

If one takes into consideration that the temperature of Chili and Peru is nearly identical with that of the climates of the centre and of the south of Europe, it is not unreasonable to suppose that the *Gunnera scabra* may easily be acclimated, and produce high results here. It is with this view that we publish this note; let us hope that both medicine and domestic economy may draw some advantage from it.

ARTICLE VI.

ON GRAFTING AND STRIKING CUTTINGS OF THE ROSE.

BY SENEX.

I BEG to forward, for insertion in the CABINET, a few remarks which have come under my notice, and a practice in Germany respecting grafting the varieties of Roses, but more particularly the *Rosa odorata*, or tea-scented. As this system is something different from what is described in the fifth volume of the CABINET, I thought it probably might be interesting to some portion of the readers of your useful Magazine. As this season of the year affords an opportunity and comfortable employment to those who are fond of experiments, and possess a few choice kinds of Roses, and are desirous of increasing their collection, but who may not be acquainted with this method, I will briefly state how it may be done. I should first state, however, that at this season of the year the system cannot be well performed by any but those who are in possession of a stove or vinery at work, nor even by them if they have not some of the commoner kinds of roses in pots to work the rarer sorts upon.

The first thing to be successful in this operation is to cause a quantity, as may be required, of suckers or layers of the purple Noisette, Boursault, China, or common Dog Rose, to be potted the previous winter or spring; let the pots be plunged in the earth in the open garden, watered when required, and all side shoots removed from the stems through the summer. In November, or before Christmas, the pots may be taken up and cleaned, the stocks headed down from twelve to thirty inches, as best suits the taste of the operator. They may then be placed under a greenhouse stage, shed, or frame, not in use, and be introduced to a warmer temperature for working when required. When prepared with cuttings of those sorts of Roses desired, which should be the growth of the previous year, some thin strips of matting, a little grafting wax, &c., and the stocks having been excited for ten days in a vinery or stove, the operation may be commenced. After placing a seat in a convenient part of the house, take the cuttings and, with a sharp knife, cut the scions to proper lengths, viz., two or three inches, according to the distance betwixt the buds, cutting them through at equal distances between the buds. When the sap in the stocks has begun to flow, which

will be seen on removing a portion of the bark at the top, the scions may be inserted by cutting a slit about one inch long in the bark of the stock, commencing a few inches from the top, and then cutting horizontally across the top of the first incision, open the bark with a budding-knife, and pare on one side of the scion opposite the bud and about one inch below, to the form of a wedge, leaving the bark on the opposite side entire. After inserting the scion under the bark of the stock, tie round with a little matting, and cover the part with a mixture of pitch and bees-wax, and the work is complete. When the stocks are large, two or more scions may be inserted. The upper part of the scions, as well as the stocks, are left until the plants are established, which is generally in a few weeks, if the operation is rightly performed, when they are cut clean off, by allowing one or two inches of wood to remain on the scion above the bud, as well as a few inches on the stock above the grafted part. Chance of success is almost certain. To those who are interested in this art, and possessing the means, they may find the practice of the above method a very interesting employment during the severe weather of winter, besides furnishing their greenhouse stages with this lovely flower the ensuing season.

It may not be generally known that cuttings of *Rosa odorata*, and its numerous varieties, are much readier rooted in water than by any other method. When an increase of bushy plants are required, in the spring take off cuttings, place six or eight in a pot of water, having previously tied some paper over the top; the paper cover must have a proper number of small holes around the inside of the rim of the pot for the ends of the cuttings to be passed through, and a larger hole in the centre of the cover in order to supply water there. when the cuttings are thus fixed, plunge the pot to the rim in a hot-bed and shade from hot sun. In three weeks the cuttings may be planted out on a slight hot-bed in a sandy soil, at nine inches apart, watered, and shaded by means of whitewashing the glass at the under side of the sashes, and admitting air throughout the day. In autumn the plants may be potted, and will form neat specimens for flowering the following season.

ARTICLE VII.

ON THE CULTURE OF INDIAN (GREENHOUSE) AZALAS.

BY A LONDON EXHIBITOR.

THE splendid specimens which are exhibited in, and around London, of the *Azalea indica*, being much superior to any I have seen at the country shows, induces me to send the particulars of culture.

As soon as the plants have done flowering, if shifting is necessary, prepare some compost mould for them in the following proportions: two-thirds bog earth, one-third well decomposed tree-leaf mould, and one-twelfth sharp silver sand: they must not be sifted, but well chopped and broken with the spade; any lumps remaining may be broken with the hand. Having a pot a size larger than the one the plant to be shifted has been growing in, and washed clean inside and out, then proceed to pot the plant, taking care the drainage is well attended to, for upon this depends in a very great measure the success of the plant. In potting, I think it an advantage to place the centre of the ball rather lower than the mould at the outside of the pot, and form as it were a little basin inside, as by this means the whole mass of roots is benefited by the water given from time to time; and if the drainage is effectually performed, the water will pass through as freely and quickly as when the plant is potted high in the pot. The plants being potted, place them in the stove, where attention must be paid to watering when necessary. They will be very much benefited by being syringed all over at least once a day; and in sunny days they will require to be syringed three or four times each day. With this treatment they will grow amazingly, and in the course of six or eight weeks will have made shoots from three to nine inches in length. They must be kept in the stove till the flower-buds for the ensuing year have attained the size of a small pea, which can easily be ascertained by feeling the ends of the shoots; they should then be placed in the greenhouse for ten days or a fortnight to harden, when, if the weather is suitable, they may be placed out of doors in a cool airy situation, till the time for taking in the general stock of greenhouse plants.

Where the plants have bloomed so profusely as almost to exhaust them, tie some moss round the principal stems, and keep it constantly moist; this will cause them to break regularly and grow freely.

Where there is not the convenience of a stove, I would recommend that the plants be kept in the greenhouse till the buds are well set; and should this happen so late that there are but two or three weeks for them to have the advantage of the open air, still setting them out will be found highly serviceable.

If the foregoing particulars are attended to, the evil spoken of at page 215 of the sixth volume of the *FLORICULTURAL CABINET* will be of very rare occurrence, for the roots are emitted in such abundance as completely to fill the pots; and instead of being liable to perish from over-watering, it will be almost impossible to give them enough, the close mass of thirsty roots absorbing an almost incredible quantity of moisture. Treated as above described, all the species and varieties of this splendid tribe will answer the most sanguine wishes and expectations of the cultivator; and I think it is impossible to bloom some of the sorts properly, as *Phoenicea*, *Smithii*, and others, under any other mode of treatment:—instead of producing here and there a flower, as is commonly the case, the *Phoenicea* will be one entire mass of bloom, expanding its brilliant purple flowers from two and a half to three inches across, and commanding the admiration of all who behold it.

Where it is required, and the stock of plants is sufficient, the blooming season may be protracted from September till June.

ARTICLE VIII.

ON RAISING MIGNONETTE FROM CUTTINGS,

BY A PRACTICAL LADY AMATEUR.

BEING very short of *Mignonette* this year, though I had sown a quantity, I was induced this July to try the experiment of a few cuttings in transplanting, from the border to some boxes. I have had the pleasure to see the cuttings thrive equally as well as the plants with roots. The *Mignonette* was sown in an open border, and the boxes the cuttings were put into were at a window with a north aspect. As soon as the state of the ground will allow of it, I purpose to repeat the experiment in the open border.

ARTICLE IX.

REMARKS ON CLIANTHUS PUNICEUS, GROWN AS A STANDARD PLANT.

BY A FLOWER GARDENER.

THE *Clianthus Puniceus* is well worthy of a place in every collection, both for its beautiful foliage and pendant racemes of red flowers. When grown as a standard, it far surpasses in beauty and elegance any plant I have seen of its kind: I shall mention a few words regarding its culture as a standard. Select cuttings from a plant about the beginning of May or June; the cuttings should not exceed four inches in length, and taken from the same year's growth; recollect that the extremity or point of the cuttings must not be pinched off. After making the cuttings, allow them to remain for a day or two before potting, to dry some of the superabundant moisture from them, which is an advantage gained by the cuttings rooting two days sooner. A 32-sized pot should be filled with white sand, and the cuttings inserted therein to the depth of two or more inches; they will strike readily in a heat of 70 or 75 degrees; if they are covered with a bell-glass the strike will be more successful. After struck, they should be potted off separately, in thumbs or small sixties, amongst a compost of sand, leaf, loam, with a little well-decomposed cow-dung, all well incorporated together. When potted, they should be placed in a bottom heat till they have matured roots enough to support themselves. Then they should be removed to a more airy situation, either to a greenhouse or conservatory, and great care and attention must be paid to the repotting and watering, for without the plants will soon form a sickly, stunted appearance. To make good standards, all side-shoots must be pinched off as soon as they appear, training the plant up with a clear stem to the necessary height required. Then, after they have attained the required height, the tops should be pinched off; and that causes them to throw out laterals, and these laterals again stopped, make them still to throw out the more, till at last the plants attain a most luxuriant head, richly decorated with thick but dense pale green foliage. When treated after the method that I have laid down above, then planted out in a conservatory, amongst good rich mould, one-half fresh loam, one quarter leaf mould, and one-quarter decomposed cow-dung, along

with a little vegetable mould and sand; all these to be well incorporated together, and a pit made for the reception of the plants, three feet square by two and a half deep, filling it up with the above composts; then insert the plant, putting it about an inch deeper than it was in the pot; then there should be a stake of durable wood procured to fasten it to. When planted out, it grows more luxuriant than in pots, and has always a more healthy appearance. When in flower, what can surpass it? The bunches of pale red flowers hanging the one upon the other, out of a dense thicket, as it may be termed.

PART II.

LIST OF NEW AND RARE PLANTS.

CALLIANDRA TWEEDIEI. Mr. TWEEDIE'S. (Bot. Mag. 4188.) Leguminosæ. Monadelphia Polyandria. This is a very beautiful flowering Mimosæ-like plant; it is a native of South Brazil, where it was found by Mr. Sellow. Mr. Jennings, gardener to the Earl of Derby, at Knowsley Park, raised plants of it from seeds, where it has also bloomed, as well as at the Royal Gardens at Kew. It requires to be grown in a moist stove temperature. In its native country it grows to a small tree in good soil; but in the mountainous places a low shrub. The foliage is of the beautiful Mimosæ form. The flowers are produced in heads of about twenty in each. The fine crimson-red filaments give a very pretty appearance, much like those of the *Inga pulcherrima*.

TACSONIA MOLLISSIMA. DOWNY-LEAVED. (Bot. Mag. 4187.) Passifloræ. Monadelphia Pentandria. A native of New Grenada, yet growing at a height of 10,000 feet above the level of the sea. Mr. Lobb sent seeds of it to Messrs. Veitch, of Exeter Nursery, where it has been raised. It blooms freely in a cool greenhouse, and it is very likely to bloom well in the open air in Devonshire, trained against a good aspect wall. As a conservatory climber it is very beautiful. The flower has a tube five inches long, green. The petals are of a beautiful rose colour. Each flower about four inches across.

FRANCISCEA ACUMINATA. ACUMINATED-LEAVED. (Bot. Mag. 4189.) Scrophularinæ. Didynamia Angiospermia. A shrubby plant, a native of Brazil, received into this country by the name of *F. Pohliana*. It is a very handsome stove plant. The flowers are about the size of *F. Hopeana*, produced in terminal clusters on short branches. The corolla is of a rich deep purple, having a white ring around the eye of the tube; as the flowers become older, they become of a pale purple. It is a very pretty species.

SCHOMBURGKIA UNDULATA. WAVY-FLOWERED. (Bot. Reg. 53.) Orchidacæ. Gynandria Monandria. Discovered by Mr. Linden in New Granada. The flowers are produced in a head of about twenty in each. The sepals and petals are a chocolate-brown colour. The labellum is a bright rosy crimson. Each flower is two inches and a-half across.

HABRANTHUS CONCOLOR. WHOLE-COLOURED. (Bot. Reg. 54.) Amaryllidacæ. Hexandria Monogynia. Mr. Hartweg found it in pastures near the city of Leon in Mexico. The flowers are a pale green, each being about three inches long and nearly as much across. It flourishes either in the greenhouse or cold frame.

GONGORA TRUNCATA. BEAN-BUDDED. (Bot. Reg. 56.) From Mexico, and is in the collection of S. Rucker, Esq., of Wandsworth. Sepals and petals

cream colour, brown, and green, with small streaks of rose. Lip yellow, with white tip. Each blossom is about an inch and a-half across. They are numerous produced in large panicles.

BOLDOA FRAGRANS. SWEET-SCENTED. (Bot. Reg. 57.) Monomiaceæ. Gynandria Monandria. A greenhouse shrub from Chili, where it is much valued. The aromatic fruit is eaten by the natives. It is about as large as a haw. It there grows to a tree about ten yards high. The foliage and flowers are highly aromatic. The blossoms are of a pale greenish white, in smallish terminal panicles, and about half an inch across. It is in the collection at the garden of the London Horticultural Society.

AERIDES MACULOSUM. SPOTTED AIR-PLANT. (Bot. Reg. 58.) Orchidaceæ. Gynandria Monandria. The flowers are produced in dense panicles. Each flower is about an inch across, petals and sepals flesh colour, spotted with dark crimson. Lip a rose crimson, having a broad margin of flesh colour. It is a very beautiful species, growing in Messrs. Rollisson's collection at Tooting.

ODONTOGLOSSUM CERVANTESII. CERVANTES' TOOTH-TONGUE. (Pax. Mag. Bot.) Orchidaceæ. Gynandria Monandria. Messrs. Loddiges received it from Oaxaca. The flowers are white, with a pink-coloured margin. A portion of the lower part of each petal is streaked with black, giving the flower a dark circular eye. A separate blossom is nearly three inches across. Lip is very small bright golden yellow, marked with crimson.

SPIREA DOUGLASSII. Mr. DOUGLAS'S SPIRÆA. (Pax. Mag. Bot.) Spiræaceæ. Icosandria Di-Pentagynia. It was first discovered by the late Mr. Douglas on the north-west coast of America, about Columbia, but was not sent to this country by him. Dr. Tolmie sent some seeds, which he gathered at Fort Vancouver, to the Glasgow Botanic Garden, where the plant has bloomed. It forms a handsome shrub, much like the well-known *S. tomentosa*, rising to about four feet high. The flowers are produced in crowded panicked spikes, of a beautiful rosy lilac. It blooms from June to November, and well merits a place in the shrubbery.

MUSSENDA MACROPHYLLA. THE BROAD-LEAVED. (Pax. Mag. Bot.) Cinchonaceæ. Pentandria Monogynia. From Nepal. An evergreen, upright spreading shrub, growing in the conservatory to about six feet high. It flourishes with a similar treatment to *Luculia gratissima*. The flowers are produced in terminal corymbose heads. Each blossom has a tube about an inch and a half long, green; calyx green; petals five, of a rich orange-red colour. The flower is about three-quarters of an inch across.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON A LIST OF PELARGONIUMS, &c.—You will greatly oblige several of your original subscribers in this neighbourhood by giving a list of a few of the best new Pelargoniums and Calceolarias; I mean such kinds only that if added to our collections will be really acquisitions.

Sheffield, June 2, 1843.

FELIX.

We recommend our querists to peruse the accounts as they will appear in the CABINET of the Metropolitan Exhibitions, and in them from time to time will be found the names of all the flowers in prize collections; in the mean time the following may safely be added:—

Pelargoniums.—Achilles, Ackbar, Roulette (Garth), Zanzummin (Beck), Mabel, Favorita (Beck), Duke of Cornwall (Lyne), Sir R. Peel (Foster), Pulchellum (Foster), Neptune, Hermione, Coquette, Albert Prince of Wales, Oberon, Mejub, Princeps, Mrs. Sterling, Alice Gray, Bella (Beck); and amongst the

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new ones coming out for the first time next spring we recommend Aurora (Beck) Desdemona (Beck), Othello (Beck), Mustee (Beck), Arabella (Beck), Sunset, Heidos (Hoyle), Standard of Perfection (Grady), Miss Halford (Gaines), Rosy Circle (Beck), Emperor Nicholas, Merry Monarch (Staines), Prince Alfred (Gaines), Vesta (Gaines), Formosissima (Gaines), and Phantom (Gaines).

Calceolarias.—Prince Albert (Green), Jamie Forrest, Lady Constable, Magician, King of Saxony, Mary Queen of Scots, General Robertson, Emperor of Russia, Lady Vernon (Holmes), Prince Alfred, Lady Ann Charteris, Rosea grandiflora; and of the kinds coming out next spring, Lacerata (Garrod), Madonna (Gaines), Louis Philippe (Gaines), Novelty (Gaines), No. 318 (Gaines), Climax (Gaines), London Rival (Holmes), and Emperor (Standish).

ON HYBRID PERPETUAL ROSES.—A Beginner will be obliged by having a list of twelve of the best Perpetual Roses, dwarfs, for a small flower garden.

Clementine Duval; bright rose, brilliant.

Duc d'Aumale; bright pink, fine.

Duchess of Sutherland (Laffy); bright rose, mottled.

Madame Laffy; brilliant rosy-crimson, superb.

Rivers (Laffy's); red, tinged with lilac, superb.

William Jesse; light crimson, lilac tinge, beautiful.

Aubornon; brilliant crimson, superb, very fragrant.

Clementine Seringe; beautiful rose, very fragrant.

Comte d'Eu; crimson-scarlet, very brilliant.

Dr. Marjolin; deep carmine, superb.

Mrs. Elliott; light lilac-crimson, fine.

Reine de la Guillotiere; brilliant crimson, very superb.

The above are splendid in flower, and bloom from the beginning of June till November, deserving a place wherever fine Roses are desired at the time specified.—CONDUCTOR.

REMARKS.

ON GLASS AND GLAZING.—The following remarks on the above-named subjects, by the editor of the "Gardeners' Chronicle," I extract from that paper, and should be glad of their insertion in the November CABINET; it will be useful to persons about to construct houses the coming winter. A.

Glass.—If "A Country Gentleman" or "F. G. H." will be so good as to consult our advertising columns, they will see that the dealers in foreign glass are Mr. Elphick and Mr. Rahn. He should apply to them. We are sure that his gardener will be glad to learn the use of the diamond, and to be his own glazier in small matters, until the glazier by trade shall come to his senses. The attempt, on the part of the country glaziers and others, to charge the old prices for glass is a most impudent attempt at extortion, and should be effectually put a stop to. They are of opinion that country gentlemen are helpless. As to "F. G. H." being puzzled with glass-cutters' figures, we are not surprised at it; the figures are well suited to puzzle anybody; but we cannot occupy more time in exposing that system. The foreign glass trade has nothing to do with such devices, and does not dream of charging more and more for any few inches of additional size; that is a mere glass-cutters' trick, which we long ago exposed, to the infinite annoyance of our glass-cutting friends.—"J. M." Good foreign sheet-glass is not more blistered than other sheet-glass, all of which has some defects, unless of very superior quality, and it is quite good enough for all common glazing purposes. There is, however, a good deal of difference in the quality of foreign glass, and some is said to be very bad; but we have not seen any such. If you want glass as true as plate-glass, then you must go to the home market, and pay English prices. As to the price of English glass, that depends upon your skill as a buyer. In your purchase go to the glass makers themselves, and not glass cutters and retail dealers; if you cannot make a good bargain with the sellers, why go without their material, which will be much cheaper by another season.

The larger your squares the better they will look ; but it is not safe to employ squares wider than a foot if your sashes are to be lifted about, for they will be apt to wring and break the panes.—“ T. H.” The statement which you have investigated was not ours, but that of a correspondent. You see that the statement is true, although we were mistaken in the inference we drew from it. You also see what the glass trade is. If the manufacturers are so ill-advised as to persevere in playing into the hands of glass-cutters and dealers, who are their worst enemies, it is of no consequence to anybody but themselves. We can procure foreign glass of as good quality as theirs without any trouble, and they may say farewell, a long farewell, to their trade, which is already moving rapidly to the Elbe and the Scheldt.

Glazing.—“ F. P.” We feel your difficulty. Buy and cut your glass, and give your glazier 1½d. a foot for putting it in, he fusing putty, and leaving it in a workmanlike state : and if he will not, buy putty and do it yourself. Do not be imposed upon by the country glaziers. The allowance is ample.

PROPERTIES OF THE CARNATION AND PICOTEE, AS NOW UNIVERSALLY RECOGNISED among the first cultivators of the day, and at the principal floral societies :—

Carnation.—General Form and Size.—Round outline as seen in front, formed by the guard petals, and those having perfectly smooth edges ; half round as looked at in profile, formed by a regularly rising face and crown. The perfection of size two and a-half to three inches.

Texture.—Thickness of petals and richness of surface are absolutely necessary to secure the advantage of whichever colour may be present.

Colour and Character.—Ground pure white ; every spot, or shade, or stain is a blemish. Stripes to be broad, whole, and well defined at the edges, and, whatever shade they may be, dense and perfect throughout. In bizarres, the whole of the light and dark to be equal in width and quantity. In flakes, twice as much colour as white, and in complete stripes.

Symmetry.—The petals should be slightly cupped, as it gives great strength and reflects the colour, and lay in well-arranged circular tiers, one row above another, and each petal covering the place where the lower petals meet. Each row should be sufficiently shorter than the under one to expose a good portion of the surface, and form the half ball. Not less than nineteen petals will do this properly, supposing them even wide enough to make five form each row or circle.

Picotee.—Form, Texture, Size, and Symmetry.—The same as the Carnation.

Colour and Character.—The colour should be whole at the outer edges, and whether heavy or light—that is, broad or narrow—form a delicate feather on the inner edge. The ground pure white, any spot, or bar, or stain, or shade, except the edging, being a decided blemish.

HYACINTHS IN GLASSES.—When water is to be renewed always have it about new milk warm when put in the glass. The application of cold water damages the tender roots, and causes the tips to rot. FLORA.

SCALE.—The following is a sure, simple, and easy method of cleaning plants infected with scale : Take a handful of gum arabic, and dissolve it in as much water as will thicken it to the consistency of oil ; then take a small painter's brush (if a new one so much the better) and commence at the top of the plant, and paint both leaves and stem, with the dissolved gum, down to the soil. The plant may then be removed to its proper place for a week or two, at the expiration of that time it must be taken and washed with soft water, using a sponge, or, what is still better, an old tooth-brush, to remove the gum that may adhere to the plant ; after the washing is finished, if carefully done, the plant will be completely cleansed from scale. I have done plants so infected, that I never had any hopes of ever cleaning them, and now there is not a scale to be found upon them, and the plants have a fine bright glossy appearance.

Leeds.

F. G. A.

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ON THE DOUBLE RED FLOWERED CURRANT, &c.—As you desire information on the subject of new plants, and as I have not observed anything on the following in the CABINET, I forward the particulars of them for insertion in the next number.

The Double Red Currant.—I observed mention made of a semi-double Currant in the "Gardeners' Chronicle" some time since, and, happening to mention this to a nurseryman in Scotland, he gave me the following particulars:—"Mr. M'Nab, of the Edinburgh Botanical Gardens, having gone to see some garden in the neighbourhood, was asked by the gardener to look at a curious currant, which he discovered growing among some rubbish; upon examination, Mr. M'Nab found this to be a double flowering Red Currant, and immediately asked for plants of it." This currant is perfectly double, and a size larger than the common red flowering one (*Ribes sanguinea*). I believe Mr. M'Nab was selling plants this spring at 10s. 6d. each.

NEW NEMOPHILA.—When I was at Kenmore this summer, Mr. Murray, gardener to the Marquis of ——— showed me a pure white *Nemophila* which he had raised; it was a variety of *N. insignis*, but rather larger. When in Scotland I observed several Pansies that I thought particularly fine, which are not in the English catalogues; among them were Finlayson's Laird o' Logan; a white ground, blue purple top petals, and a broad blue margin; eye very dark and rich; size, shape, and substance, extra. Also, Campbell's Rob Roy; a white ground, blue top petals, and middle-sized margin, which is very regular; extra eye, shape, size, and substance. This, by some, was considered the best pansy in Scotland at the time. A few others are Campbell's Prince Charlie, Carnagie's Queen of the Isles, Lady Lorn, and Pearson's Prince Albert, a bright yellow ground, maroon purple top petals, and regular margin; eye, size, and shape, extra.

Ballykilbeg House, Downpatrick.

WILLIAM JOHNSTON.

[We very respectfully thank our correspondent for the descriptive remarks on the particular flowers; we shall be glad of more. We hope other readers of our Magazine will also assist us in this respect.—CONDUCTOR.]

A LIST OF AURICULAS.—In a recent Number of the CABINET, I noticed a correspondent asks for a list of some of the best Auriculas of each class, the following I know to be of first rate quality.

Green Edged.

Dickson's Matilda.	Smith's Waterloo.
Page's Champion.	Hudson's Apollo.
Lee's Colonel Taylor.	Dickson's Earl of Errol.
Booth's Freedom.	Dickson's Duke of Wellington.
Pollett's Highland Boy.	Dickson's Prince Albert.
Stretche's Emperor Alexander.	Lightbody's Lord Lynedoch.

Grey Edged.

Fletcher's Ne plus ultra.	Hedge's Britannia.
Waterhouse's Conqueror of Europe.	Gaines's Privateer.
Dickson's Unique.	Maclean's Unique.
Oliver's Lovely Anne.	Fletcher's Mary Anne.
Kenyon's Ringleader.	Dickson's Duke of Sussex.
Syke's Complete.	

White Edged.

Taylor's Glory.	Popplewell's Conqueror.
Taylor's Incomparable.	Thorpe's Magpie.

Self Coloured.

Redman's Metropolitan.	Dickson's Apollo.
Netherwood's Othello.	Bury's Lord Pimate.

ON CLIMBING ROSES SUITED FOR SHADY SITUATIONS.—In reply to Mrs. M—le, the following will succeed admirably where no other kinds will long exist. They can be had at from 6d. to 1s. each.

Alice Gray . . .	fine creamy salmon blush.
Countess of Lieven . . .	shaded white, cupped.
Dundee Rambler . . .	white, with pink edge.
Myrrh-scented . . .	fine creamy blush, very peculiar scent.
Queen of the Belgians . . .	pure white; cupped and double.
Rose Angle . . .	fine creamy pink, highly scented.
Ruga . . .	large pale flesh, very fragrant.
Splendens . . .	shaded white, globular and very double.
Variegated . . .	single white, with variegated foliage.

The kinds of Moss Roses have recently been much improved. The following is a selection of the best.

A Feuilles d'agate . . .	pale flesh, in large clusters.
luisantes . . .	rosy blush, very double.
pourpres . . .	fine dark red.
Alice Leroy . . .	light rosy pink, fine.
Angelique . . .	deep rose.
Asepala . . .	pale rose, curious.
Blush (new) . . .	pale blush, very fine.
Brilliant (Lee's) . . .	bright pink.
Celina . . .	brilliant crimson, splendid.
Charlotte Defor . . .	bright-rose.
Common . . .	large rose.
Comtesse de Murinais . . .	white, in large clusters.
Crimson, or Damask . . .	bright carmine, fine.
De Colmar . . .	
De la Flèche, or Scarlet . . .	fine purplish crimson.
De Metz . . .	deep rose colour.
De Vieillard . . .	delicate rose, very double.
Diâne de Colmar . . .	
Escarlate . . .	fine bright rose.
Eclatante . . .	brilliant rose, cupped.
Emperor . . .	
Ferrugineuse plena nova . . .	vivid red.
Globuleuse . . .	fine light crimson shaded.
Grandiflora . . .	fine veined rose, large.
Helène Maugét . . .	bright rose.
Hooker's Blush . . .	blush, with rosy centre.
Hortensia . . .	fine reddish lilac.
Josephine . . .	lake, superb.
Juliana . . .	rosy pink, semi-double.
Lancel . . .	fine crimson, very mossy.
Lanzezeur . . .	deep rose, striped with lilac.
Le Vésuve . . .	crimson, shaded with purple.
Louise Colét . . .	pale rose, cupped.
Malvina . . .	fine rosy lilac, slightly spotted.
Marbrée . . .	marbled rose.
Maugét . . .	superb bright red.
Mottled (Peacocks') or Prolifère, . . .	fine rose
Mousseuse partout, or Zoe . . .	rose, leaves mossy.
presque partout . . .	fine rose, leaves partially mossed.
Mrs. Wood . . .	bright purplish crimson.
Nivea . . .	pure white.
Oscar Foulard . . .	fine dark crimson.
Panaché pleine . . .	French white with rosy stripes.
Perpétuelle (Maugét) . . .	deep rosy crimson.
Picciola . . .	rosy flesh colour.
Pompons, or De Meaux . . .	pale blush, very pretty.

Pomponne feu . . .	small deep purplish crimson.
Ponctué nouvelle . . .	bright pink, spotted.
Pourpre de Laffay . . .	purplish crimson.
Précoçe . . .	fine deep rose.
Princesse Adelaide . . .	delicate rose, flowering in large clusters splendid.
Princess Royal . . .	dark purplish crimson.
Prolific . . .	fine rose, large.
Renoncule pourpre . . .	maroon purple.
Rouge Foncé . . .	deep red.
Rosinella . . .	purplish crimson.
Rouge du Luxembourg . . .	deep crimson.
Sage-leaved . . .	bright rose colour.
Sanguine . . .	superb dark crimson.
Single (Rivers') . . .	bright single crimson.
—— Lilac . . .	distinct, curious.
Splendens . . .	fine pink, large.
Spotted, or ponctué . . .	carmine, spotted.
Striped, or panaché . . .	pale flesh colour.
Unique de Provence . . .	large, pure white, fine.
Velour pourpre . . .	light crimson, very double.
Vimorin . . .	large, deep pink.
White Bath . . .	fine white, sometimes striped.
—— French . . .	very fine flesh colour, nearly white.

ON BUDDING RHODODENDRONS.—In order to insure success, August or September is the best time for budding or grafting Rhododendrons in the open air. This plant, being thin-rinded, does best by side-grafting, and buds of it had also better be inserted after the manner of side-grafting, with a portion of the soft wood retained behind the bud. (See Article in a recent Number.)

LACHENALIAS.—The very beautiful Lachenalias are plants that well deserve to be grown in the greenhouse; their varied colours, lovely pendant flowers, render them peculiarly interesting. To induce their more general culture, I give the mode of treatment I have most successfully practised. The bulbs which are not large should be potted in September, three in a pot. The soil should be a mixture of peat and sand, about three parts of the former to one of the latter, with a small quantity of leaf-mould. Select good sound bulbs for flowering, and pot the small offsets by themselves. The pots should be well drained, and after the bulbs are planted remove them to a frame where they will have light, and not be exposed to the cold autumn rains. Keep them in this situation until November, or when the nights become quite frosty, giving just sufficient water to keep the earth moist. At that time they may be removed to the parlour or greenhouse, placing them in a light situation, and watering them cautiously until they begin to grow. In February the flower-stems will appear, when more water should be given, though with care; the flower-stems will now shoot up, and in the course of a few weeks will be beautifully in bloom, remaining so for two or three weeks, or much longer, if they are kept in a partially shaded place. In May, when the foliage begins to turn yellow, the pots may be removed to the open air for a few weeks, when the bulbs should be taken out of the pots and laid away in a dry, cool place, until wanted for planting again in the autumn.

LONDON HORTICULTURAL SOCIETY.

October 7.—At this meeting several articles well worthy of attention were produced. Messrs. Henderson, of Pineapple-place, sent a collection of plants remarkable for the beauty of their foliage; among them was a plant named *Ruellia maculata*, whose leaves are finely overlaid with silvery markings equal in beauty to that of the foliage of some tropical Orchids. The plant is quite

new, and the beauty of its leaves alone will render it worthy of a place in every collection. In the same group were *Dioscorea discolor*, remarkable for its grey-looking velvety leaves; *Tillandsia zebrina*, with dull brown gilt leaves; the well-known *Crotons pictum* and *variegatum*; *Dracena terminalis*, distinguished for its dark red foliage; *Arundo Donax, variegata*; *Aspidistra lurida variegata*, *Begonia zebrina*, and a cut specimen of a white species of *Clerodendron*, a beautiful stove twiner, and apparently a rapid grower, sent from Sierra Leone, by Mr. Whitfield. A large silver medal was awarded for the *Ruellia maculata*.—From the gardens at Syon, were *Ruellia macrophylla*, a brilliant scarlet flowered species; a remarkable cut specimen of *Elate sylvestris*, one of those noble Palm trees, which can only be grown in large conservatories. The plant possesses little beauty in its flowers, but produces panicles bearing multitudes of pretty oblong orange-coloured berries, with a curious flat stem, differing much from the usual structure. From the same collection was also fruit of the Constantinople Nut, *Corylus Colurna*, which forms a small tree and does not often produce nuts in this country. The kernel is small, in a very hard shell, which is again covered by a thick fleshy very remarkable husk. Along with these was a cut specimen of a *Neptunia*, from Jamaica, whose long stems floating on the surface of the water send up numerous laterals bearing multitudes of small balls of yellow flowers; the foliage is as irritable as that of the Sensitive plant; a coarse sort of rice paper is prepared from thin slices of the pith of a plant of similar habit. A Banksian medal was awarded for the two first-mentioned plants.—Mr. Glendinning, of the Chiswick Nursery, sent *Statice purpurata*, a pretty species, having some resemblance to *S. Dickinsonii*; and Mr. M'Ewen, gardener to Colonel Wyndham, sent *Satyrium carneum*, a pretty terrestrial Cape Orchid, having a dense spike of pink flowers, which were, however, very much bruised in the carriage, which detracted considerably from its beauty. The plant was in excellent health, and amply proved that, with a little care, such things may be successfully cultivated in this country, where their beautiful flowers and singular forms would amply repay the trouble.—From Mr. Robertson, gardener to Mrs. Lawrence, were *Oncidium Harrisonianum*, a fine specimen, richly studded with brownish-yellow blossoms; *Lælia Lawrenceana*; a good *Saccolabium papillosum*, one of the early importations from China; and a group of cut flowers, composed of *Cattleya guttata*, *Brassia brachiata*, and *Dendrobium Chrysanthum*, whose bright orange blossoms contrasted well with those of the other two. A Banksian medal was awarded for these plants.—Other Orchids were produced by Mr. Redding, gardener to Mrs. Marryat. In this group were two fine plants of *Zygopetalum maxillare*, the old *Stanhopia grandiflora*, a very pretty *Odontoglossum grande*, and the handsome *Cattleya Loddigesii*; also a *Begonia*; the old *Guzmania tricolor*, a Pine-like plant, with a dense spike of bright red flowers, seldom met with in collections; and a basket of cut blooms, chiefly of *Tacsonia pinnatistipula*. A Banksian medal was awarded for the *Zygopetalum* and *Odontoglossum*.—Of florists' flowers, Mr. Kendall, of Stoke Newington, sent two seedling *Fuchsias*, named the Great Britain, and Miss Prettyman, and a cut branch of *F. Gigantea*.—Mr. Ivery, of Peckham, also exhibited a seedling *Verbena*, named Wonder of Scarlets, and Mr. Fairbairn, of Wandsworth-road, sent a seedling *Dahlia*, named King of Perpetuals, with a seedling *Polygala* named *Dalmatiana*.—From Messrs. Veitch and Son, of Exeter, was a *Philibertia*, sent by Mr. W. Lobb, from Peru. It is a greenhouse twiner, with pretty saucer-shaped flowers, which are said to be highly fragrant. Along with this was a *Cymbidium*, collected by Mr. T. Lobb, in Java, which, if not the same as *Lancifolium*, is very nearly related to it. A certificate was awarded for the *Philibertia*.—Messrs. Mountjoy and Son, of Kaling, produced *Liatris squarrosa*, a hardy North American plant, with *Centaurea*-like flowers, and *Tacsonia mollissima*, which is one of the best of the recent additions to this tribe; the flowers are smaller than those of the old *Tacsonia*, but their deficiency in this respect is made up in brilliancy of colour, which is much darker than that of the old *T. pinnatistipula*.—Mr. Ayres, gardener to J. Cook, Esq., sent blooms of an *Ipomœa*, from Ceylon, named *Variegata*, but which appeared to be the old *I. Nil*.—From D. D. Alves, Esq., was a Turk's Head Cactus, which had just been received from Jamaica.

FLORICULTURAL CALENDAR FOR NOVEMBER.

All greenhouse plants should have a free supply of air admitted, except when it is frosty. The plants should not be watered in the evening, but in the early part of the day, so that the damps may be dried up before the house is closed, as they are, during the night, prejudicial to the plants. The soil in the pots should frequently be loosed at the surface to prevent its forming a mossy or very compact state. The plants must not be watered overhead. *Luculia gratissima* is the finest ornament for the greenhouse and conservatory, now and through the winter.

The plants of the Cactus that have been kept in the open air during the summer may be brought to bloom successively by taking such as are desired to bloom immediately into the heat of a forcing pine-house. Other plants, to bloom afterwards, should be kept in a greenhouse protected from the frost.

Plants of the *Calceolaria* that have been grown in the open borders during the summer months, and now taken up and potted, should be kept in a cool frame, or cool part of the greenhouse, being careful not to give too much water: just sufficient to keep the soil moist will only be necessary. Offsets will be found rooted; take them off and pot them.

Dutch bulbs, &c., may be successfully planted this month. See articles on best mode of the culture of each, in former numbers of the CABINET. Many persons who take a delight in growing some showy Hyacinths or other bulbous plants for adorning a room or window, &c., in winter or early in spring, have been frequently disappointed by the abortiveness of some and weakness of others. This principally arises from the inability of the plant to develop itself with a rapidity equal to the quantity of moisture it imbibes, on account of its upper surface being acted upon too immediately by the atmosphere, &c.; hence arises the necessity of covering the bulb. That such is a fact is evidenced by the admirable and certain success of nearly every bulb, especially Hyacinths, that is covered with about six inches of old spent bark. This or some similar light material should always be used. Even bulbs intended to bloom in glasses we prefer starting in the old bark, and then transferring them to the glasses when the shoots are about two inches long. Where such covering is not adopted, it is of advantage to have the pots or glasses kept in a dark place till the shoots are two or three inches long.

Plants of some of the *Chrysanthemums* that are grown in pots and taken into the greenhouse will be found to have pushed a number of suckers. If the offset are wanted for the increase of the kind, it is advisable to pinch off the tops, so as to prevent their exhausting the plant to the weakening of the flower. If the flower-buds are thinned out freely it conduces to the increased size of those left. If the offsets are not wanted, it is best to pull up the suckers entire. Attention will be required to watering, as the roots absorb much if given: give manure water occasionally. If the plant is allowed to wither, it checks the flowers, whether in bud or expanded. So much do we admire this handsome genus of flowers, that we are fully persuaded their beautiful blossoms, exhibited in form and colour, will most amply repay for any labour that may be bestowed on the plants.

Dahlia seeds are best retained in the heads as grown, spread singly where they will not be liable to mould, and kept in a dry but not too hot a situation; being thus kept in the chaff, the small seeds will not shrivel, but be kept plump. The roots must be dried well before being put away, or will be liable to rot.

Fuchsias and greenhouse plants, intended to be inured to the open air, will require to have protection at the roots, and probably, for the first winter, over the tops too, by furze branches, canvass, wicker-baskets, &c.

Tubers of *Commelinas*, and bulbs of *Tigridias*, should be taken up and preserved dry through winter.

Shrubs, deciduous or evergreen, may now be successfully planted. If in exposed situations they should be secured to stakes.

Herbaceous border plants may still be divided and re-planted.

Roses, Persian Lilacs, &c., for forcing, should now be gently forwarded, if required for bloom by Christmas. Straw or reed hurdles ought now to be prepared for covering frames, &c., in the depth of winter.

Achimenes, withhold water from till February.



1. LISIANTHUS NIGRESCENS.

2. GARDENIA STANLEYANA.

Floricultural Cabinet.

THE
FLORICULTURAL CABINET,
DECEMBER 1st, 1845.

PART I.
EMBELLISHMENTS.

ARTICLE I.

1. GARDENIA STANLEYANA.—(LORD DERBY'S GARDENIA.)

THIS very fine stove-shrub is a native of Sierra Leone, from whence it was sent by Mr. Whitfield to the Earl of Derby. A flowering specimen was sent from Kew, and exhibited at the Horticultural Society's Rooms, Regent-street, London, during the past summer, and which we saw at Kew. Sir W. J. Hooker observes, "The young plant presented to us, when yet only a few months old, but placed on the table of a stove heated below by the tank system, threw out flower-buds from most of the dichotomies of its young horizontal branches; and, in the month of March, 1845, no fewer than ten of the noble flowers were expanded at a time." The plant, two years old, is now about five feet high, shrubby, having a central stem throwing out horizontal branches on all sides, and a spreading top. The flowers are produced numerously, rising in an erect position above the foliage, and are exhibited to full view. They are not only very handsome, but are powerfully fragrant. The plant is of easy culture, and, from what we see of its easy growth, we have no doubt but it will succeed well in a warm greenhouse, and it highly merits a place in every one; it does well with us so far, and appears to bloom freely when a dwarf plant.

2. PETASOSTYLIS NIGRESCENS.—(BLACK-FLOWERED.)

It was first discovered by Schiede at Papantla, in Mexico. Mr. Skinner, since then, found it in Guatemala. It appears to be a biennial plant, growing and blooming very freely in the greenhouse. It produces an upright stem, scarcely branched for half a-yard high, which terminate in a large, much branched panicle, two to three feet high. The graceful, dark, drooping flowers give a very interesting appearance, and continue for several months. The blossoms on the plant our drawing was taken from, it appears, were not grown to so perfect a state, although it was exhibited at the Chiswick Show; as we have seen it since with flowers upwards of double the size. It is so peculiarly interesting as to deserve a place in every greenhouse. It strikes readily from cuttings, and has produced seed, too, in this country.

ARTICLE II.

THE METROPOLITAN FLORAL EXHIBITIONS.

METROPOLITAN FLORICULTURAL SOCIETY, *September 25.*

(*Concluded from p. 270.*)

SOME observations upon the Seedling Dahlias only remain to complete our account of this exhibition.

The prizes awarded to seedlings at this meeting is, generally speaking, regarded as a tolerable guide to the purchaser; but it is to be considered that even there a difficulty is sometimes likely to arise in finding proper judges, because most of the best growers are themselves exhibitors of seedlings, and consequently precluded from acting,—who, on looking at a flower, duly bear in mind and consider all it ought to be. A kind new in colour, of remarkable shades, or brilliant lacing, is almost sure to confine the judgment of many. It is true, novelty in colour is entitled to some preference, and as all the points of perfection cannot be attained at once, it may be allowed to rank with better-shaped flowers until another, of the same colour, having an improved shape, is obtained to displace it. At the present day, in stands placed for competition, such flowers as Grand Tournament (Union), Princess Royal (Hudson), or Cleopatra (Attwell), claim to be placed side by side with Beeswing (Drummond), Non-

pareil (Proctor), or Standard of Perfection (Keynes), because they are of general good form, and there not being others of the same colour to beat them; yet had these very flowers been of a different colour, a crimson or red for instance, they would certainly be considered coarse and bad. A really good seedling, therefore, if not new in colour, ought to be a manifest improvement upon all others of the same class already out.

Size, again, is to some persons an equivalent for other defects, and consequently regularity of outline or perfection of the centre is too often sacrificed thereto. Compactness of form is the most necessary quality to all flowers, consequently unless the size be exceedingly small, it is entirely of a secondary character, and this should never be forgotten.

Compactness in form must not, however, be confounded with extreme doubleness, which is a fault in some of the new sorts; for in a flower that is too full the petals are prevented developing themselves properly, and it is, therefore, very defective. Another and more extended fault in Dahlias is, that the centre is not sufficiently high to be even with the surrounding surface; this is a peculiar blemish, arising from insufficiency in number in the unbloomed petals, and by their inclining too much inwards, so that, when the exterior ones rise and open, the inner remain sunk down. The centre, consequently, to be well up, must be composed of a sufficiency of short and stiff petals, and each regularly disposed.

The following notes were made from a very careful inspection, and their accuracy may be depended upon. As observed in our last, a considerable number of seedlings were produced, particularly of the "proved" ones, as they are generally called, or those which first bloomed in 1844. By a rule of the Society, six blooms of each of these are required to be placed, and of this year's seedlings one only of each.

CLASS VIII.

Seedlings of 1844: open to all.

Certificate of Merit.—Princess Radzewell; Mr. N. Gaines, florist, Battersea. White, laced with rosy purple; in some of the flowers the colour faded to the outside. Of the average size when well grown; centre full and regular; outline very perfect. The petals are disposed in the utmost regularity, and the flower throughout is remarkably compact and fit for the choicest stand.

Certificate of Merit.—Sir Edmund Antrobus; Mr. J. Keynes, florist, Salisbury; noticed page 245. Exceedingly compact and symmetrical, and will be grown by most. In one or two of the flowers produced we observed a small

notch or little point at the end of the petals, and the flower is somewhat too flat as compared with a perfect model.

Certificate of Merit.—Magician; Mr. Turner, florist, Chalvey; noticed page 246. Salmon-red, the disposition regular, but flower too thin, and consequently the outline presents angles between the petals; the flower, too, is deficient in depth. We consider it only a good second-class flower.

Certificate of Merit.—Burnham Champion; Mr. Bragg, florist, Slough; very much after the shape of Eclipse (Widnall), from which we should say it is a seedling, but of a deeper red colour; like that kind the flower is very double and symmetrical when perfect.

Certificate of Merit.—Queen of Perpetuals; Mr. Girling, nurseryman, Stowmarket; noticed page 245. Twenty-four blooms of this were exhibited, and the centre in all of them very even; some of the blooms appeared thin, but the six placed for the judges were compact enough; the size is quite of the average, it is a pretty colour, and its best blooms fit for any stand.

Certificate of Merit.—Mazeppa; Mr. Spary, florist, Hungerford; a beautiful clear orange colour, not above the medium size; the petals are broad and the outline is very good; the centre moderately high.

Certificate of Merit.—Lady Stopford; Mr. Trentfield, Lewisham; noticed page 245. Fourteen blooms of this were shown; it is a symmetrical flower and the outline is perfect; in two or three of the blooms the centre was tolerably high, but generally it appears rather too low; frequently, however, it may be found an useful show-flower.

Certificate of Merit.—Marchioness of Cornwallis; Mr. Whale, florist, Elcot; noticed page 246. A beautifully formed flower, though the eye is doubtful; it will be well to grow with Antagonist, as one may furnish a flower when the other fails. Both these flowers are somewhat too flat, though when perfect very excellent.

Certificate of Merit.—Newington Rival; Mr. Smith, Hackney; noticed page 245. A well arranged flower; rather more flat, yet partaking of the shape of Standard of Perfection, and near that colour, but certainly not so good a flower.

Certificate of Merit.—Prometheus; Mr. Smith; noticed page 246. This flower was shown better than when we saw it before; of the average size, and tolerably compact. Although the colour is not new, it is perhaps worth growing.

Certificate of Merit.—Pride of Surrey; Mr. N. Gaines; bright clear purple, of rather below the medium size; the petals well rounded and the outline very good. Like many of the cupped flowers, however, the centre is generally low.

Certificate of Merit.—Miss Prettyman; Mr. Turner. The colour is not favourable to this flower, though it may be sometimes very pretty; the disposition of the petals (as noticed in page 246, but where our printer very ungenerously transposed them into details), is very good, and we have no doubt it will be a desirable flower.

The following we noticed as being the best amongst the many others shown, to which no certificates were adjudicated:—

Dawn of Day (Mitchell). Only two blooms of this were shown; the colour is delicate peach and rather new; the outline is good and the centre tolerable; the size is rather deficient, but when well grown it will be a lovely flower.

Mrs. Caudle (Turner); noticed page 246. Though the disposition of the petals in this flower is very regular, the eye good, and the colour distinct, still it will never be a great favourite, because the petals fold over too much and sully the face of the flower with the dull colour of their backs; sometimes, however, flowers of this character produce blooms in the finest order, and we expect to see Mrs. Caudle now and then associated with the first quality.

Countess of Bandon (Sparry). A sort of nankeen orange tipped with a small point of yellow; shown very thin and is also deficient in depth.

Beauty of Hants (Oakley). Creamy-white, with a faint lace or tinge of pink; rather above the average size; the outline good, but the flowers are generally thin and flat.

Midland Beauty (Burbury). Rosy-peach, rather lighter to the centre of the

flower; some of the blooms were thin and the petals irregularly disposed; still it will prove an useful kind.

Captain Warner (Girling). Crimson; the character of the flower is after Beeswing, but the centre is not sufficiently elevated, and the outline appears generally imperfect.

Queen Mary (Edwards). A second-rate white, thin and deficient in the centre, but may be useful.

CLASS IX.

Seedlings of 1845: open to all.

Certificate of Merit.—Demosthenes; Mr. Maher, Anthorn-hill.

Certificate of Merit.—Lady of the Lake; Mr. Keynes. Milky-white, with a tinge of pink to the margin; the size is good and the character promising.

Certificate of Merit.—Model of Perfection; Mr. Sparry. Rich red colour, excellent petal, and appears very likely to be a real good kind, but the specimen exhibited was an over-blown one.

Certificate of Merit.—Miss Bevan; Mr. Bevan, Shacklewell. Blush, of good character.

Certificate of Merit.—Goldfinch; Mr. Wicks, Chelmsford. Deep straw-colour, mottled on the margin with light crimson, and has a novel appearance, though it will never make a good show flower.

Certificate of Merit.—Beauty of the Vale; Mr. Hunt. Lilac; poor, and unlikely to be seen in a show again.

Certificate of Merit.—Joan of Arc; Mr. Oakley. White, with small pencils of pink down each petal; the centre well up, and one of the most promising flowers.

Certificate of Merit.—Beauty of Alresford; Mr. Burgess.

A certificate was also given to Mr. Hoare for a seedling not named, and some others were shown, but not deserving particular notice.

ARTICLE III.

OBSERVATIONS UPON, AND CULTURE OF, FERNS.

BY CLERICUS.

For twenty years I have been most assiduously endeavouring to collect and cultivate every species and variety of Fern I could obtain, whether hardy or such as require protection in this country; and after so much practical experience with such a very interesting and elegant tribe of plants, I am induced to forward some observations thereon, in order to induce a more general cultivation of them.

I have above stated that I deem the Fern tribe of plants interesting and elegant. The tender verdure of their foliage, the disposition of their beautiful forms, and very graceful habit, also their charming figures and airy aspect, alike contribute to their specially pleasing character. They are, moreover, peculiarly admirable, on account of the manner in which their singular inflorescence (blossom) is borne. It is generally at the under side of the leaves, either in small round patches or long streaks, and the colour usually brown. The Paly-

podiums are especially pretty in the distinct coloured round patches, and *Adiantums*, with darker irregular ones; not one of the whole tribe but in these respects are exquisitely beautiful.

The Ferns are singularly useful for flourishing in shady situations, where scarcely any other plants will thrive. For ornamenting rock-work; for covering old walls, or otherwise unsightly ones; for growing in rustic baskets, or on logs of wood, suspended in plant-houses, in which mode the under side, where what is commonly termed the flowers are disposed, is very distinctly to be seen; for growing amongst some of the kinds of orchidæ, to hide the naked stems; for decorating any kind of rustic work; for planting amongst the shrubs in a conservatory, in order to enliven the surface of the border by their exquisite evergreen, which at all times is delightful to the eye.

I find that all Ferns flourish best in shade, hence those grown in the open air should be placed so as to be shaded from the sun during the heat of the day, and better still if there be a northern aspect to a rockery, and allow them the advantage of it. In many cases the shade of a grotto, summer-house, back of a wall, rocks or large irregular roots, or canopy of trees, supply very suitable situations for growing them in. In fact, where the direct beams of the midday sun do not shine upon them, the greater portion will flourish in luxuriance, and finely exhibit their beauty. In rockeries situated in the open air, they form admirable companions to mosses, lichens, &c. They are, too, the greatest ornaments to a rockery in the stove or greenhouse. I have a plant stove which is formed so that I have a four-feet pathway up the centre, and a raised stage for plants on each side. At the upper end of the house I have a tank, which forms a half circle, and water-plants are grown in it; and it contains a variety of gold and silver fish, &c. The end wall, which forms the back of the tank, was constructed of very irregular-faced portions of old rock, which I selected, being scattered about, in an unfrequented wood. They were covered over with moss, lichen, &c. I had them so disposed in the wall as to form bold outlines, and suitable interstices to deposit soil, &c., in which to grow ferns, mosses, &c., in order to give shade to them. I had canvass at first, and then had some climbers planted, which now spread wholly over the under side of the roof. The moisture, too, arising from the water in the tank contributes very essentially to their success. I have omitted to state

that the face of the rock-work is formed somewhat circular too, in order that the plants might be near enough to be inspected. I beg to assure the readers hereof that this rockery is one of the most interesting objects I ever saw in a plant-house. I have, within the last four years, planted a number of suitable orchidæ amongst the Ferns, &c., and they do admirably so placed. I have my plant-house heated by hot-water pipes, and a pipe is carried through the tank, and the water is of a gentle tepid warmth, and gives a moist vapour to the rock plants. I am careful to have the entire rockery watered, and in all respects attended to as my pot plants are, and they very amply repay for the attention. The soil I find all Ferns to thrive luxuriantly in is rotten vegetable mould and sandy peat. I have the former collected in the woods, under oak trees; in such compost I grow them, whether in-doors or out in the open air.

I have had a number of wire, wicker, and other rustic baskets formed, in which I planted Ferns, and suspended them in sundry places in my plant-house, and disposing them tastefully; they not only do well, but appear neat and interesting. A few of the small and neat Ferns planted at the sides of an orchidæa basket, so suspended, is very pretty. I have had several rustic portions of old decayed trees, stumps, &c., placed in suitable situations in my pleasure-ground under shade, and near to a walk, and in the hollows have planted Ferns with great effect; the shade, I find, always gives the fine lively green hue, which is not to be attained in bright sunshine. A moderate moist atmosphere is very beneficial to Ferns, and especially so when grown in plant-houses.

The wild specimens which are seen growing on the bank of a shady ditch or brook always flourish best; they there have the four essentials—a moist, cool, and shady situation, and a vegetable soil. Of course the coolness only applies to growing in the open air; exotic ones require a suitable temperature, but not a high one even there. When Ferns are grown in pots, plenty of bits of turf, rotten wood, or something of the kind, must be liberally supplied to form drainage, and well rotted leaf mould and sandy heath soil form the compost; with these necessary requisites, and attention to situation, watering, repotting, or replanting, this lovely tribe may be cultivated most satisfactorily.

Many of the beautiful ferns and mosses are now grown in dwelling-rooms in the Wardian glass cases.

They are generally easy of increase; this is done by offsets, cutting out a frond, or seed. The two former being taken off carefully by a knife, or otherwise, and properly treated in potting, &c., seldom fail to succeed.

Where my plants have matured seed, it has been scattered beneath, and multitudes of seedlings have sprung up.

Seeds of the ferns have often been obtained from dried specimens, which have been collected many years previous to sowing, some even fifty years old.

I have pursued the following mode of procedure:—Having provided a common garden-pot four inches and a half deep, and three and a half wide; I filled up an inch with broken pot, and an inch more with broken pieces of peat soil, for drainage, then the next remaining two inches with leaf-mould and sandy peat; over this I spread about a quarter of an inch of fine hair-sieve sifted soil, smoothed the surface, and upon it I scattered the seed, and very lightly pressed them to the soil. I then covered them with a bell glass. I placed the pot in a saucer, which, being half filled with water, reached about a quarter way up the pot side. I kept the saucer about half full afterwards, and had the pot removed to a shady part of my plant-house. In a month the young plants appear; I then commence to give a little air, and gradually increase it as they gain size, till I find they are strong enough to do without it. As the seed do not require to be covered by any soil, they often vegetate and spring up, even on a damp stone, or piece of wood, where such are constantly kept moist. A celebrated cultivator of Ferns very successfully raises the seedling on the following plan:—Having procured some pieces of very porous stone, with a flat surface, he sprinkled about one-eighth of an inch of fine sifted soil over the surface, pressing it close so as to fill up the pores even; the surface being then made smooth the seeds are sown upon it, the stone immersed in a saucer three parts up the side of the stone, and having been so saturated he removes the stone to a shady situation in the stove or frame, covering with a bell glass, and as occasion requires so as to keep it moist; he immerses the stone as before; and he states that in a fortnight the

germination was visible, and in a month the plants are fit to transplant into small pots. By this mode of growth the plants were not liable to interruption from worms. The best time to sow seed is from February to May; the plants then get strong during the summer.

ARTICLE IV.

EXTRACT ON WARMING BUILDINGS BY HOT WATER.

IN a former Number we noticed the very excellent "Practical Treatise on Warming Buildings by Hot Water; on Ventilation, and the various methods of distributing Artificial Heat, and their effects on Animal and Vegetable Physiology; to which are added, an Inquiry into the Laws of radiant and conducted Heat, the chemical constitution of Coal, and the combustion of Smoke. By Charles Hood, F.R.S., F.R.A.S., &c." We then promised to give an extract from it, to enable our readers more fully to appreciate so valuable a work.

The cheapness of glass for horticultural purposes is now a strong inducement to erect forcing and plant houses far more extensively than heretofore, and the approaching season is very likely to be a period of considerable increase in that particular. We therefore respectfully suggest the propriety of consulting Mr. Hood's Treatise.

"One of the greatest advantages which the plan of heating by the circulation of hot water possesses over all other inventions for distributing artificial heat is, that a greater permanence of temperature can be obtained by it than by any other method. The difference between an apparatus heated by hot water, and one where steam is made the medium of communicating heat, is no less remarkable in this particular than in its superior economy of fuel.

"It seldom happens that the pipes of a hot-water apparatus can be raised to so high a temperature as 212° ; and, in fact, it is not desirable to do so; because steam would then be formed, and would escape from the air vent, or safety pipe, without affording any useful heat. Steam pipes, on the contrary, must always be at 212° at the least, because, at a lower temperature, the steam will condense. A given length of steam pipe will therefore afford more heat than the same quantity of hot-water pipe; but, if we consider the relative per-

manence of temperature of the two methods, we shall find a very remarkable difference in favour of pipes heated with hot water.

“The weight of steam at the temperature of 212° , compared with the weight of water at 212° , is about as 1 to 1694; so that a pipe which is filled with water at 212° contains 1694 times as much matter as one of equal size filled with steam. If the source of heat be withdrawn from the steam pipes, the temperature will soon fall below 212° , and the steam immediately in contact with the pipes will condense; but, in condensing, the steam parts with its latent heat; and this heat, in passing from the latent to the sensible state, will again raise the temperature of the pipes. But as soon as they are a second time cooled down below 212° , a further portion of steam will condense, and a further quantity of latent heat will pass into the state of heat of temperature;* and so on until the whole quantity of latent heat has been abstracted, and the whole of the steam condensed; in which state it will possess just as much heating power as a similar bulk of water at the like temperature; that is, the same as a quantity of water occupying $\frac{1}{1694}$ part the space which the steam originally did.

“The specific heat of uncondensed steam compared with water is, for equal weights, as $\cdot 8470$ to 1; but the latent heat† of steam being estimated at 1000° , we shall find the relative heat obtainable from equal weights of condensed steam and of water, reducing both from the temperature of 212° to 60° , to be as $7\cdot 425$ to 1; but for equal bulks it will be as 1 to 228; that is, bulk for bulk, water will give out 228 times as much heat as steam, on reducing both from the temperature of 212° to 60° . A given bulk of steam will therefore lose as much of its heat in one minute as the same bulk of water will lose in three hours and three quarters.

“When the water and the steam are both contained in iron pipes

* The heat of temperature is that which is appreciable by the thermometer; and the term is used in contradistinction to latent heat, which is not capable of being measured in a direct manner by any instrument whatever.

† The results of different experiments on the subject of the latent heat of steam, although somewhat various, are yet sufficiently near for all practical purposes. Watts's experiments give 900° to 950° ; Lavoisier and Laplace, 1000° ; Mr. Southern, 945° ; Dr. Ure, 967° to 1000° ; and Count Rumford, 1006° .

the rate of cooling will, however, be very different from this ratio; in consequence of the much larger quantity of heat which is contained in the metal itself, than in the steam with which the pipe is filled.

“The specific heat of cast-iron being nearly the same as water, if we take two similar pipes, 4 inches diameter, and $\frac{1}{2}$ of an inch thick, one filled with water, and the other with steam, each at the temperature of 212° , the one which is filled with water will contain 4.68 times as much heat as that which is filled with steam; therefore if the steam pipe cools down to the temperature of 60° in one hour, the pipe containing water would require four hours and a half, under the same circumstances, before it reached the like temperature. But this is merely reckoning the effect of the pipe and of the fluid contained in it. In a steam apparatus this is all that is effective in giving out heat; but in a hot-water apparatus there is likewise the heat from the water contained in the boiler, and even the heat from the brick-work around the boiler; which all tends to increase the effect of the pipes, in consequence of the circulation of the water continuing long after the fire is extinguished; in fact, as long as ever the water is of a higher temperature than the surrounding air of the room. From these causes, the difference in the rate of cooling of the two kinds of apparatus will be nearly double what is here stated; so that a building warmed by hot water will maintain its temperature, after the fire is extinguished, about six or eight times as long as it would do if it were heated with steam.

“This is an important consideration wherever permanence of temperature is desirable; as, for instance, in hothouses, conservatories, and other buildings of a similar description; and even in the application of this invention to the warming of dwelling-houses, manufactories, &c., this property, which water possesses, of retaining its temperature for so long a time, and the very great amount of its specific heat, prevents the necessity for that constant attention to the fire which has always been found so serious an objection to the general use of steam apparatus.

“The velocity with which a pipe or any other vessel cools when filled with a heated fluid depends principally upon two circumstances; the quantity of fluid that it contains relatively to its surface, and the temperature of the air by which it is surrounded; or, in other words, the excess of temperature of the heated body above that of the

surrounding medium. The subject of the radiation of heat, and the rate at which a heated body cools, under various circumstances, will be fully considered in another chapter. But for temperatures below the boiling point of water, and under such circumstances as we are now considering with regard to hot-water pipes, the velocity of cooling may be estimated simply in the ratio of the excess of heat which the heated body possesses above the temperature of the surrounding air. The variation in the rate of cooling, arising from a difference of the superficies to the mass, is, for bodies of all shapes, inversely, as the mass divided by the superficies. Therefore the relative ratios of cooling, for any two bodies of different shapes and temperatures, is the inverse numbers obtained by dividing the mass by the superficies, multiplied by the direct excess of heat above the surrounding air; provided the temperature of the heated bodies be below 212° . Thus, suppose the relative ratio of cooling be required for two cisterns filled with hot water, one a cube of 18 inches, at the temperature of 200° ; the other a parallelopiped, 24 inches long, 15 inches wide, and 3 inches deep, at the temperature of 170° ; the surrounding air in both cases being 60° . Then, as

	Inches.	Inches.	
The cube contains . . .	5832,	divided by 1944,	the superficies = 3·0
The parallelopiped contains.	1080	ditto 954	ditto = 1·13

The inverse of these numbers is, to call the cube 1·13, and the parallelopiped 3·0. Then multiply 1·13 by 140 (the direct excess of temperature of the cube), and the answer is 158·2; and multiply 3·0 by 110 (the direct excess of temperature of the parallelopiped), and the answer is 330·0. Therefore the parallelopiped will cool, in comparison with the cube, in the proportion of 330 to 158, or as 2·08 to 1; so that, if it requires two hours to cool the cube, a half, or a quarter, or any other proportional part of its excess of heat, the other vessel will lose the same proportional part of its excess of heat in one hour.

“It is evident that these different velocities of cooling are quite independent of the effect that the respective bodies will produce in warming a given space; for as the cube contains upwards of six times as much water as the other vessel, so it would warm six times as much air, if both vessels were of the same temperature. But if six of the oblong vessels were used, they would heat just the same

quantity of air as the cube ; but the latter would require rather more than $2\frac{1}{2}$ hours to do what the oblong vessels would accomplish in one hour, supposing the temperature to be the same in both cases. In the previous example the temperatures are supposed to be different ; otherwise the relative ratio of cooling of the two vessels would have been as $2\frac{1}{2}$ to 1, instead of 2 to 1, as stated.

“ In estimating the cooling of round pipes the relative ratio is very easily found ; because the inverse number of the mass divided by the superficies is exactly equal to the inverse of the diameters. Therefore, supposing the temperature to be alike in all,

If the diameter of the pipes be . . .	1.	2.	3.	4 inches,
The ratio of cooling will be . . .	4.	2.	1·3	1

That is, a pipe of 1 inch diameter will cool four times as fast as a pipe of 4 inches diameter ; and so on with the other sizes. These ratios, multiplied by the excess of heat which the pipes possess above that of the air, will give the relative rate of cooling when their temperatures are different, supposing they are under 212° of Fahrenheit ; but if the temperatures are alike in all, the simple ratios given above will show their relative rate of cooling, without multiplying by the temperatures. When the pipes are much above 212° , as, for instance, with the high pressure system of heating, the ratio of cooling must be calculated by the rules given in the IXth Chapter.

“ The unequal rate of cooling of the various sizes of pipes renders it necessary to consider the purpose to which any building is to be applied that is required to be heated on this plan. If it be desired that the heat shall be retained for a great many hours after the fire is extinguished, then large pipes will be indispensable ; but if the retention of heat be unimportant, then small pipes may be advantageously used. It may be taken as an invariable rule, that in no case should pipes of greater diameter than 4 inches be used, because, when they are of a larger size than this, the quantity of water they contain is so considerable, that it makes a great difference in the cost of fuel, in consequence of the increased length of time required to heat them. For hothouses, greenhouses, conservatories, and such like buildings, pipes of 4 inches diameter will generally be found the best ; though, occasionally, pipes of 3 inches diameter may be used for such purposes, but never any of a smaller size. In churches, dwelling-houses, manufactories, &c., pipes of either 2 or

3 inches diameter will, perhaps, upon the whole, be found the most advantageous; for they will retain their heat sufficiently long for ordinary purposes, and their temperature can be sooner raised, and to more intensity than larger pipes; and, on this account, a less number of superficial feet will suffice to warm a given space.

In adapting the boiler to a hot-water apparatus it is not necessary, as is the case with a steam boiler, to have its capacity exactly proportional to that of the total quantity of pipe which is attached to it; on the contrary, it is sometimes desirable even to invert this order, and to attach a boiler of small capacity to pipes of large size. It is not, however, meant, in recommending a boiler of small capacity, to propose also that it should be of small superficies; for it is indispensable that it should present a large surface to the fire, because, in every case, the larger the surface on which the fire acts, the greater will be the economy in fuel, and, therefore, the greater will be the effect of the apparatus.

“The sketches of the boilers, figs. 16 to 26, are several different forms which present various extents of surface in proportion to their capacity.

“All except the first two, however, have [but a small capacity, relatively to their superficies, compared with boilers which are used for steam. There is no advantage whatever gained by using a boiler which contains a large quantity of water; for, as the lower pipe brings in a fresh supply of water as rapidly as the top pipe carries the hot water off, the boiler is always kept absolutely full. The only plausible reason which can be assigned for using a boiler of large capacity is, that as the apparatus then contains more water, it will retain its heat a proportionably longer time. This, though true in fact, is not a sufficient reason for using such boilers; for the same end can be accomplished, either by using larger pipes, or by having a tank connected with the apparatus which can be so contrived, by being enclosed in brick or wood, or some other non-conductor, as to give off very little of its heat by radiation, and yet to be a reservoir of heat for the pipes after the fire has been extinguished. If this tank communicates with the rest of the apparatus by a stop-cock, the pipes can be made to produce their maximum effect in a much shorter time than if this additional quantity of water had been contained in the boiler, and a more economical and efficient apparatus will be ob-

tained. The circulation will likewise be more rapid from a boiler which contains but a small quantity of water, because the fire will have greater effect upon it, and will render the water which is contained in it relatively lighter than that which is in the descending pipe."

ARTICLE V.

ON THE CULTURE OF THE ANEMONE,

BY A LADY FLORIST.

OBSERVING in the July Number of the *CABINET* the descriptive selected list of the finest Anemonies, and being an ardent admirer of that very handsome tribe of flowers, I forward for insertion in the September Number the particulars of a most successful mode which I have adopted for the last three seasons.

Having fixed on the place for the bed, dig out the soil to the depth of sixteen inches, and then place a layer of five or six inches of well-rotted cow dung, and on this a surface layer of light rich, mellow loam, quite free from manure, raised to two inches above the level of the surrounding surface; this should be done about the latter end of September. Plant the roots from the beginning to the middle of October; by this means they will be found to blow stronger, and the roots when taken up will be found of a larger size than if planted in November. When the bed is levelled, draw lines across about five inches apart, in which the roots are placed with the crowns upwards, which is easily discerned by a close examination, laying a little river sand under and upon each root; then cover them as near two inches as possible with pure mellow loam. Nothing more need be done to them till they appear above ground, except the winter be very severe, which, if that is the case, the roots will require a little protection. Lay a mat over the bed in very severe frost, and regularly take it off for about four hours at the middle of each day; but when the frost is not very severe place no mat over them, which, if kept on when not much occasion for it, rather injures than benefits them. When the leaves are above ground, choose a dry day to press the soil close to the plants, as the leaves generally remove the soil in coming up, which is very injurious to the roots if exposed. In dry weather they require watering. Give them a good soaking with

liquid manure; for it is wrong to wait till the leaves begin to flag for want of water, because leaves from a tuberous root show a vigour which does not entirely arise from the state of the soil, therefore the soil should be examined and treated accordingly. As the flowers expand, they must be shaded both from sun and rain. Shade them with a covering raised two feet from the ground, so that air can pass freely underneath, to prevent the stems being weakened, and unable to support the weight of the flowers. After the bloom is over, watering is no longer necessary, but the bed should be shaded in the middle of hot days, and from wet, or the tubers will be kept in a state of excitement, and be thereby materially weakened and injured. By these means the foliage will soon begin to change its colour, and become brown and dry, which will point out the time to take up the roots, which should be done a month after the bloom is over. In clearing away the fibres and soil that adheres to them, handle the roots very gently as they are exceedingly brittle. The pieces that happen to break off do not throw away, for in a few years they will become fine blooming roots. Finally, clean the tubers and put in a drawer, which place in an airy part of a room secure from frost, where they remain till the planting season. If any of the roots are large divide them, taking care to have two or three eyes to each piece; such usually blow the first year. In selecting roots for a flower-bed, choose such as are fresh and plump, of a medium size, for large overgrown roots are hollow, and decayed in the centre; these take care to avoid, as they never bloom strong, the flowers being very small. If the flower was originally very full and double, with age it loses that property; the petals become small, irregular, and diminish in number, and finally, the sort perishes.

PART II.

LIST OF NEW AND RARE PLANTS.

AZALEA LUDOVICIA. GARDEN HYBRID. (Bot. Reg.) The Hon. and Rev. William Herbert raised this very pretty variety from seed which had been obtained from *Rhododendron ponticum*, impregnated with the pollen of *Azalea pontica*. The flowers are numerous produced in fine heads. Each blossom has a short tube, and the expanded division of the flower is nearly two inches across, pale yellow, handsomely tinged with rose, and the upper segment having several distinct darker spots. The specific name *Ludovicia* was so given by Mr. Herbert, in compliment to his eldest daughter Louisa.

CATTILEYA GRANULOSA, VAR. RUSSELLIANA. THE DUKE OF BEDFORD'S ROUGH-LIPPED. (Bot. Reg. 59.) Orchidæ. Gynandria Monandria. It is a variety of the Guatemala *C. granulosa*, imported into this country by Mr. Skinner to the collection of the Duke of Bedford. Sepals and petals green, spotted with red. Labellum, towards the origin, is yellow, with red spots, and the broad termination white. Each blossom is about five inches across.

DENDROBIUM KINGIANUM. CAPTAIN KING'S. (Bot. Reg.) Orchidæ. Gynandria Monandria. Received by Messrs. Loddiges in a collection of New Holland plants. The flowers are produced in an erect spike. Each flower is about one inch across, beautiful pink, spotted with crimson.

GENISTA (TELINA) SPACHIANA. MR. SPACH'S GENISTA. (Bot. Mag. 4195.) Leguminosæ. Diadelphia Decandria. This pretty flowering plant is a native of the Canary Islands, found on the north-west mountains of Teneriffe. It is a shrubby plant, which will probably prove hardy in the warmer parts of this country. The flowers are produced profusely, in pendant terminal heads, of a bright yellow colour; it well deserves cultivation, being very showy.

HEBECLADUS BIFLORUS. TWIN-FLOWERED. (Bot. Mag. 4192.) Solanæ. Pentandria Monogynia. This most beautiful flowering plant is a native of the Peruvian mountains. Messrs. Veitch's, of Exeter, have lately received it. It is stated to be a greenhouse shrub, blooming very freely. The flowers are drooping; much like some of the drooping flowered *Corræas*. Each blossom is about one inch long; tube, purple, with green segments.

IXORA ODORATA. FRAGRANT. (Bot. Mag. 4191.) Rubiacæ Tetrandria. Monogynia. (Synonym *Ixora Brunonis*.) It is a native of Madagascar, and is in the collection of Messrs. Lucombe, Pince, and Co., of Exeter. It was exhibited at the London Floral Shows during the present year, and much admired. The leaves of this noble and highly fragrant shrub, Sir William Hooker observes, vie in size, and almost in firmness of texture, with those of the Indian Rubber-tree. The flowers are produced in large spreading panicles, each panicle being a foot or more in diameter; the branches being of a deep red purple colour. Each blossom is about five inches long; the tube, red below, white above, and the floral buds white, tipped with bright rose. The spreading segments of the flower, at first white, change to a rich buff as they become old. The plant exhibited at Chiswick Show by Messrs. Lucombe, Pince, and Co., was about a yard high. It deserves a place in every hothouse.

JACARANDA TOMENTOSA. TOMENTOSE. (Pax. Mag. Bot.) Bignoniacæ. Didynamia Angiosperma. (Synonym *Bignonia Mauritiensis*.) It is a native of South America, and grows to a moderate sized tree. It can be cultivated in this country, so as to bloom in the stove or warm greenhouse, in a dwarf state; a plant about two to three feet high. It has bloomed very freely in a dwarf state at the nursery of Messrs. Knight and Perry, of Chelsea, near London. The flowers are tubular; each about the size of a common foxglove, of a pretty rosy-lilac colour; they are produced in small lateral panicles of two or three in each; and, as there are very many of such lateral ones, they unitedly form a fine headed, spike-like, panicle. It well merits a place in every situation it can be successfully grown in. The plant may be purchased at a very reasonable price.

LYCANE FULVESCENS. TAWNY FLOWERED. (Bot. Mag. 4193.) Orchidæ. Gynandria Monandria. Received by Rev. John Clowes, of Broughton Hall, near Manchester, from Columbia. Each of the flower-stems are from nine inches to a foot high, one flowered. The sepals and petals are of a brownish yellow, and the lip of a rich orange colour. A separate flower is about five inches across.

ONCIDIUM INCURVUM. CURVE PETALLED. (Bot. Reg. 64.) Orchidæ. Gynandria Monandria. This very beautiful and rare species was first observed in bloom in this country in the collection of George Barker, Esq., of Birmingham. The flowers are produced in a long, erect, and even branched panicle. Sepals and petals white, with banded stripes of rich rosy red. Lip, white, with a spot

of orange at its origin. It is a very pretty and highly interesting species, meriting a place in every collection.

POTENTILLA BICOLOR. TWO COLOURED. (Bot. Reg. 62.) Roseaceæ. Icosandria Polygynia. An herbaceous plant from Nepal. The flowers are of a clear yellow, over which is a net-work of rosy red. Each blossom is an inch across. It is in the garden of the London Horticultural Society.

SCÆVOILA ATTENUATA. ATTENUATED-LEAVED. (Bot. Mag. 4196.) Goodeniacæ. Pentandria Monogynia. From the Swan River Colony. It is a very pretty flowering greenhouse shrub, blooming very freely through the summer season. The plant grows about two feet high, producing numerous terminal and lateral spikes of flowers, which are of a bright blue, tinged with purple. Each blossom is about an inch across, having much the resemblance of a cineraria flower having one-third cut out; and, as the flowers face sideways, it is the upper portion exhibits the deficiency. It will be a very suitable plant for grouping in the flower-garden. The foliage being narrow, and the flowers profuse.

SMEATHMANNIA LEVIGATA. SMOOTH STALKED. (Bot. Mag. 4194.) Passifloræ. Polyandria Pentagynia. A hothouse shrub, with glossy green foliage. It is an evergreen, with foliage somewhat like the bay-tree. The flowers are white, about the size of those of a Noblesse peach, and they are produced along the branches, in a similar manner, at the axil of each leaf. Mr. Whitfield sent the plant to the Earl of Derby.

STATICE FORTUNÆ. MR. FORTUNE'S SEA LAVENDER. Plumbaginæ. Pentandria Pentagynia. (Bot. Reg. 63.) Seeds of this yellow-flowered Statice were sent from China by Mr. Fortune in 1844. It has bloomed in the Horticultural Society's Garden at Chiswick, where, both in a frame and greenhouse, it bloomed beautifully from July to October. The flowers are produced in vast profusion in a branching panicle; have a pretty appearance: the calyx is flesh colour, and the petals bright yellow.

PLANTS NOTICED IN NURSERIES, &c.

At Mr. Henderson's, Pine Apple Nursery.

HINDSIA LONGIFLORA ALBA. This very handsome flowering plant was in profuse bloom. The flowers pure white, longer than *H. violacea*, and in large heads; also very fragrant. It highly merits a place in every stove.

HOITZIA COCCINEA. In the greenhouse we observed several very beautiful specimens in profuse bloom. The flowers are produced in long spikes, tubular, about an inch and a half long, a very beautiful rich scarlet colour. The plant forms a compact little shrub, and is very showy. It deserves to be grown wherever practicable.

CESTRUM AURANTIACUM. A very pretty greenhouse shrub, and, blooming at this late season of the year, gives more interest to it. The flowers are tubulous, of a rich orange colour.

JUSTICIA. A new species, with rich yellow flowers.

MELASTOMA NIVENIANA. A stove plant; the flowers are white, about an inch in diameter.

ERANTHEMUM STRICTUM. A stove plant, blooming profusely; a fine summer, autumn, and winter plant. The flowers are produced in spikes; each blossom in form and size like a Phlox, and a pretty bright blue colour. It will flourish, too, in a warm greenhouse, and deserves to be grown wherever it can be.

LISIANTHUS LONGIFLORUS. The flowers are long, drooping, and a pretty yellow colour.

RHODOSTEMMA GARDENIOIDEA. The flowers are pure white, tube formed, much like the common white jasmine. They are produced in fine corymbose heads, and the blossoms stand erect at the centre; it is a very neat flowering plant, well deserving a place in the greenhouse.

JUSTICIA. (New species.) The heads of flowers are something in the way of *J. speciosa*, but larger and broader, and of a rich purple. It blooms very freely.

TRACHELIUM LINEARIS. The heads of flowers are in fine corymbs, pure white. It is a shrubby greenhouse plant, very pretty.

COMBRETUM SPLENDENS ALBA. Like the original *splendens* this is a fine climbing plant, and its beautiful white flowers produce a very pretty effect. It deserves a place in every stove. The blossoms are very fragrant.

RUELLIA MACULATA. The leaves are a dark green, with beautiful silver patches. If it had not a flower, it is well worth having in every collection for its beautiful foliage.

THE NEAPOLITAN TREE VIOLET. The plant grows to about a foot high, forming a pretty head, and blooming profusely. The blossoms are quite double, blue, and highly fragrant.

STEPHANOTUS FLORIBUNDUS. This fine climber, with its beautiful waxy white flowers, can be made to have a second crop of bloom, by pruning in the shoots when the spring and early summer flowers fade. Thus treated, a fine autumn bloom succeeds. The same kind of attention with *CLEODENDRON SPLENDENS* is equally successful.

STACHYTARPHETA. New species. This very pretty flowering species we saw in the stove at the Royal Gardens at Kew. The flowers are produced in fine pyramidal heads, of a rich velvet-blue. Its fine tubular blossoms in such heads are very beautiful.

LIANTHUS LONGIFOLIUS. The foliage is very like a common jasmine, but a rich shining green. The flowers are tubulous, about two inches long, of a pretty yellow colour, and produced freely. It is a pretty plant for the greenhouse at this season of the year. We saw it at Kew.

RUELLIA MACROPHYLLA. The foliage is large and handsome; the flowers are of a bright scarlet, each near three inches long, and produced freely, renders it a fine plant, well deserving to be in every stove or warm greenhouse. We saw it at Kew.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERY.

ON *CHRYSANTHEMUMS* DECAYING BEFORE EXPANDING. I procured some healthy plants of *Chrysanthemums* when the flower buds were nearly bursting. I placed them in a pot-frame I have, not heated. I supplied them with a due quantity of water, but now when opening the petals rot before expanding. I have no house to put them in, where heat can be applied. What course should I adopt?

A. B.

[If the pit is kept much closed, the air will be too damp for the flowers; they being of so fleshy a substance, soon become mouldy and die away. Give all possible air when not frosty; that is essential in order to succeed. If the lights can be raised back and front, so as to have a current through, during the warmer part of the day, it will tend to dry the place. Light and air must be afforded.]

REMARKS.

BALSAM SEEDS.—It is not generally known that the case in which the seed of the balsam is enclosed, yields an orange dye of a beautiful colour. As the balsam seeds freely, this could be produced extensively at a cheap rate, so as to become an object of commerce.

TARGETS TRINIVOLIA.—This is one of the best orange-coloured annuals for flower-beds with which I am acquainted. The plants were moved out of pots about the end of June; they were then six inches in height, and in bloom; they soon covered the ground, and have been full of bloom ever since. To its other qualifications, this plant possesses the good property of not looking littery, for as soon as the flowers begin to fade, the shoots branch out again with a new crop of flower, and hide the decaying blooms. It is now a dense mass, about a foot in height, and though the majority of other flowers are fading from the effects of cold, this continues as fresh and blooming as ever. The leaves have a very agreeable balsamic scent.

ON JAPAN AND OTHER LILIES.—November or early in December is the latest to pot off the beautiful Japan lilies, and no greenhouse ought to be without them in summer. Such as *L. canaliculatum album*, *punctatum*, *speciosum rubrum*, and *cruentum* variety. Also *L. japonicum concolor*, *longiflorum*, *eximium*, *testaceum*, and *Thunbergianum*. A rough, but good, sandy, fibrous heath soil, is the best to grow them in. When potted, place them in a cool pit, frame, or the cool part of a greenhouse, so that they are kept from frost.

A LONDON PRACTITIONER.

FUMIGATING HOUSES, FRAMES, &c.—Most gardeners know by experience what it is to suffer from the effects of flower-pot and bellows fumigation. I think I have now fully remedied the evil. I dissolve a quantity (say $1\frac{1}{2}$ oz. to a large house) of saltpetre in water, and soak brown paper in it, (old linen answers too.) after drying it in the sun, I spread tobacco thinly over as many sheets of the prepared paper as I want for present use, and roll them up like a cigar very tightly. In using them, I invert a number of flower-pots, on which I place the rolls of tobacco, and light them at both ends, and then walk out, leaving them to do the rest, which they do effectually. A little practice will dictate the quantity to be used.

F. L., *United Gardeners' Journal*.

REGENT'S PARK GARDENERS' SOCIETY, October 30, 1845.—A paper was read, which had been forwarded by Mr. Davis, of Cambridge, on forcing flowers in the winter months. He advised, that in July and August selections of Pelargoniums, &c., should be made, taking away all bloom-buds, to be re-potted, and the plants be placed in a coal frame or pit, so as to have plenty of air. By this early preparation the plants will have laid up a store of nourishment necessary in order to insure the desired success when forced. The following plants were available for the purpose:—Pelargoniums, scarlet and other kinds; Heliotropes, *Aloysia citridora*, *Aloesoa grandiflora*, Camellias, Coronillas, Salvias, Cinerarias, Persian Lilacs, Azaleas, Rhodora Canallense, Rhododendrons, Kalmias, Sweet Briar, Lily of the Valley, Pinks, Roses, Violets, &c. The bulbs of Hyacinths, Tulips, Iris, Narcissus, Crocus, &c., should be potted early in autumn, be placed in a dark place, or be covered with tan. The seeds of *Primula sinensis* (the Chinese Primrose), and *Lobelia gracilis* (the little trailing blue and white species), if sown in March and April, and be kept growing in a cool situation, bloom very usefully during winter, and Mignonette sown in August the same. Mr. Jones thought, if Geraniums, &c., were cut down in summer, they could be grown to come in well in winter; he had found the Tom Thumb to be one of the best varieties for forcing, from its retaining its short jointed and shrubby habit. *Siphocampylus* was good; and Hydrangeas, struck early in spring, and kept in cool pits during summer, will be found useful. Mr. Cumming stated that *Myosotis palustris* (Forget-me-not) succeeded well, and should be flowered in winter.—*Gardeners' Journal*.

TRIP TO PARIS IN SEARCH OF AUTUMNAL ROSES.—Of the various floral improvements of modern times, nothing has probably produced such a beautiful change in the appearance of our gardens in autumn, or has been introduced

with more striking effects than the perpetual-flowering Roses. What can be more cheering at this season of the year than to behold the vivid colours of many of the Bourbon and Hybrid Perpetual Roses, contrasted with the more delicate tints of Tea-scented, set off by their dark green foliage, now that autumn has set its seal on many of nature's earlier productions? I am an ardent admirer of the Rose, and my enthusiasm has, ere now, carried me to the Continent in the sultry month of June, in search of new varieties. Having this year caught the autumnal mania, I resolved to delay my visit till September, in expectation of finding the perpetual-flowering Roses blooming in greater perfection. In this I was not disappointed, and would here advise connoisseurs of Roses, who are accustomed to visit the grounds of the large growers in England, to do so twice in the year—in June for summer varieties, and in September for the autumnal sorts. I feel assured they would be well recompensed by, and highly delighted with, a September visit. The Rose gardens then assume altogether a new feature; the summer Roses are gone, and the autumnal kinds appear in all their richness and beauty. True, the autumnal Roses bloom in June, but they seem to require the long dewy nights to bring out their flowers in true-ness of character, and the difference is oftentimes so great that the well-known Rose of June would be scarcely recognized when blooming in September. Thinking, however, that many lovers of Roses might not have leisure or inclination to travel so far in search of one object, which, among a multiplicity of affairs, becomes of small importance, I will endeavour to give an account of what struck me as most remarkable during my late trip. After having visited the grounds of the Hertfordshire growers, and collected the choicest of Rosa's train there, I departed well pleased with what I had seen, and resolving to make further additions from foreign cultivators. Having reached the French capital, the first cultivator to whom I paid a visit was M. Laffay, the raiser of Madame Laffay, William Jesse, La Reine, and many other of our most beautiful Roses. I there saw Hybrid Perpetual La Reine in great beauty, and should pronounce it one of the gems of the season; the colour is pink, with a lilac hue, very glossy; the flowers are globular in shape, large, and very sweet. Another of his seedlings, Comtesse Duchâtel, is a Hybrid Perpetual of a superior kind. The flowers are of a rose-colour, with thick petals, closely set; Perpétuelle Indigo is a distinct variety, of a peculiar colour, to which its name relates; Hybrid Perpetual, Mrs. Cripps, a pale Rose, appears likely to become a profuse autumnal bloomer; Perpétuelle ponctuée, a bright Rose with white spots, is a very pretty variety. Of the four last mentioned, M. Laffay has, I believe, the entire stock at present, but intends selling plants of them this autumn. He has also a Moss Rose, Princesse Adelaide, of a pale rose-colour, blooming in corymbs, and said to be very handsome. The habits of the plants were certainly remarkable, having a degree of vigour quite foreign to the Moss tribe. Their season of flowering was past, but he said that the flowers were like those of Ornament de Parade, a well known Gallica Rose; and other growers spoke well of it. Among others noticed here were Lady Alice Peel, Duchess of Sutherland, De Marx, Coquette de Bellevue, and Coquette de Montmorency—all Hybrid Perpetuals of recent introduction; the last-mentioned is in every respect a beautiful flower. M. Laffay is an enthusiastic cultivator of Roses, but a lover of fruits also.

To enumerate the various grounds visited would, I find, become tedious, and occupy too much space, having often looked through several in the course of a day. I must therefore arrange the varieties noted down as most remarkable in their respective families.

Among the Perpetuals and Hybrid Perpetuals were—Laurence de Montmorency, a free-flowering variety of a purplish-rose colour; Lady Elphinstone rosy-crimson, also a good autumn bloomer; Baronne Prevost, pale rose, sweet sweet, and of an immense size; Comte d'Eu, a most beautiful carmine, but scarcely double enough, though apparently superior to Gloire de Rosamenes; La Bedoyere, a variety of the character of Comte d'Eu, more double, and quite equal in colour; Marquise Boccels, delicate flesh, a decided acquisition among a class of Roses, the prevailing colours of which are purple and crimson; Prince de Galles, purplish-crimson, a free grower, and seemingly well adapted for a pillar Rose.

Among the Bourbons were—Charles Suchet, purplish-crimson, of a very pretty shape; Comte de Rambuteau, of the same cast; Delisle, a dark Rose, finely cupped; Duc de Chartres, pale red, and a most superb Rose; Dumont du Courset, bright carmine, sometimes curiously marbled; Edward Defosse, a bright pink, shaped like Madame Nerard, first-rate; George Buvier, pale rose; Glory of Paris, another crimson variety, marbled with violet, and a fine rose; Imperatrice Josephine, pale pink, of a very elegant shape, blooming in corymbs; La Gracieuse, reddish crimson, a seedling from Emile Courtier, and an estimable variety; Le Grenadier, vivid crimson, frequently tinged with violet; Madame Suchet, rose and blush marbled, a delicate and beautiful variety; Princesse Clementine, violet-crimson, good; Princesse de Modena, flush; Suchet, bright purplish-crimson, very fine; Souvenir d'Anselume, a lively cherry colour; Souvenir de Dumont d'Urville, crimson, changing to violet after expanding, and Souvenir de la Malmaison, a magnificent flesh-coloured Rose.

Among the Noisettes were—Mrs. Siddons, in the way of Le Pactole, but in its then state not superior; Similar, a yellowish buff, but in appearance a weak grower; and Chromatella, or Cloth of Gold, a Rose of yellow Noisette cast, of a paler yellow than I expected, and which does not appear to open too freely. It has, however, been an unfavourable season there for its flowering, and not being very plentiful, it may yet prove better than is anticipated.

Among the tea-scented I noticed Adam Rose, the flowers were bold and large, but not very abundantly produced; Barbot, yellow, tinted with rose, a very pleasing kind; Boutrand, rose; Comte de Paris, flesh, one of the finest tea-scented Roses; Delices de Plantier, copperas-rose, very rich looking; Josephine Malton, buffish yellow, of a beautiful form; Julie Mansais, sulphur white, the buds large and handsome; La Renommee, a whitish-yellow, not new but apparently little known; Madame Roussel, white; Marie de Medicis, rose, with fawn centre, good and distinct; Moire, large full pale yellow, a superb Rose; and Safranot, a distinct and striking variety, of a beautiful saffron colour when first expanding, gradually melting off into buff. Some of these varieties I had previously seen in England, and in equal beauty of bloom; but others I there claimed acquaintanceship with for the first time.

Roses in pots were numerous, but there were none remarkable as specimens of superior cultivation; certainly none that I saw were equal to those exhibited at the Horticultural Exhibitions about London by Messrs. Beck, Lane, Paul, and others; nor is it, perhaps, right to judge them by such a standard, as they were not grown to show what could be done with Roses in pots under good management, but merely as market plants. As such, the only objection to them by Englishmen would be the tall stems on which they were worked, and the little attention paid to their beauty. The head of the plant seemed to be considered the only part worthy of notice.

Cheshunt.

W. PAUL.

ON COTONEASTER MICROPHYLLA, TRAINED AS AN EDGING TO A FLOWER BED.—We recently saw a bed of hardy heaths surrounded with an edging, about nine inches high, formed of the Cotoneaster microphylla. It had been neatly firmed, so as to form a compact edging, and when in bloom, no doubt would produce a pretty effect; but now being loaded with its beautiful red berries, produced a very pleasing contrast to the heaths then in bloom.

CONDUCTOR.

ANSWER.

ON CULTURE OF CALCEOLARIAS.—A correspondent recently soliciting some directions about growing the Calceolarias, and as I grow plants, which I exhibit at the London shows every year, from two feet to three feet in diameter, in profuse bloom, I give him the plan I pursue in as concise a way as I can. As early in autumn as I find shoots pushing rootlets, I take them off, put in loam, peat, and vegetable mould, in small pots, and put them in a slight hot-bed frame; when well rooted I place them near to the glass in a plant-house; having

a double-roofed one, I have a broad shelf over the centre walk, suspended about two feet from the glass, and I place them upon it, there they get light and air, and are protected from the frost. As the plants fill the pots with roots, I have them re-potted, so as to keep them increasing in growth, for if allowed to be stunted they push weakly lateral shoots, which would bloom inferior. About the first week in March I give them a final potting, the pots being from ten to twelve inches in diameter, I then put them in a frame, give plenty of air front and back, and keep them from hot sun, shading from nine in the morning to five in the afternoon. Early in April flower-stems begin to push, I take such plants into the greenhouse, give them air and light, and a good supply of water, overhead as well as roots, shading them overhead too, and securing the shoots as they push, so as to retain only a proper proportion for blowing. The sprinkling overhead with soft water is a very essential attention when the plants are in a growing state; of course not over the blossom when they are in bloom. When the blooming season is over I cut off decayed flower stems, and have the plants placed in a sheltered situation, but a sunshine is very injurious to the *Cyclalaria*, I have them in the shade, but where a due degree of air is afforded. I occasionally gave manure water to the roots, which is very beneficial, but never put manure in the compost. The soil I grow them in is equal portions of good turfy loam and very sandy peat, using them in a chopped and broken condition, never sifted. A very free drainage is essential.

A PRACTICAL MAN.

FLORICULTURAL CALENDAR FOR DECEMBER.

PLANT STOVE.—Roses, Honeysuckles, Jasmynes, Persian Lilacs, Azaleas, Rhododendrons, Carnations, Pinks, Primroses, Mignonette, Stocks, Aconites, Persian Irises, Crocuses, Cyclamens, Rhodoras, Cinerarias, Hyacinths, Ribeses, Sweet Violets, Lily of the Valley, Correas, Deutzias, Mezereums, Hepaticas, Gardenias, &c., required to bloom from January, should be brought in early in the present month. The plants should be placed at first in the coolest part of the house; never allow them to want water. Pots or boxes containing bulbous-rooted flowering plants, as Hyacinth, Narcissus, Persian Irises, Crocuses, &c., should occasionally be introduced, so as to have a succession of bloom. Many persons who take a delight in growing some showy Hyacinth or other bulbous plants for adorning a room or window, &c., in winter or early in spring, have been frequently disappointed by the abortiveness of some and weakness of others. This principally arises from the inability of the plant to develop itself with a rapidity equal to the quantity of moisture it imbibes on account of its upper surface being acted upon too immediately by the atmosphere, &c.; hence arises the necessity of covering the bulb. That such is a fact is evidenced by the admirable and certain success of nearly every bulb, especially Hyacinth, that is covered with about six inches of old spent bark. This or some similar light material should always be used. Even bulbs intended to bloom in glasses we prefer starting in the old bark, and then transferring them to the glasses when the shoots are about two inches long. Where such covering is not adopted, it is of advantage to have the pots or glasses kept in a dark place till the shoots are two or three inches long. Cactus plants that have been kept out of doors, or in the greenhouse, should occasionally be brought into the stove for flowering, which gives a succession. If any of the forced plants be attacked with the green fly, a syringe with diluted tobacco-water will destroy them. If the leaves appear bit, and turn brown (the effect of damage by red spider), a syringe of soap-suds at the under side of the leaves is effectual to destroy them. The glutinous substance remaining not only kills those it is applied to, but prevents others returning there. The old *Eranthemum pulchellum* with its fine blue flowers, *Justicia speciosa*, *Gesneria Zebrina*, *Justicia pulcherrima*, and *Applandria cristata*, are fine winter ornamental blooming plants.

GREENHOUSE.—As much fire as will barely keep out frost will be necessary, and for the purpose of drying up damp arising from foggy nights, or from watering. All possible air should be admitted in the day-time, but mind to keep

the plants from damage of frost. Plants of some of the *Chrysanthemums* that are grown in pots and taken into the greenhouse will be found to have pushed a number of suckers. If the offsets are wanted for the increase of the kind, it is advisable to pinch off the tops, so as to prevent their exhausting the plant to the weakening of the flower. If the flower-buds are thinned out freely it conduces to the increased size of those left. If the offsets are not wanted, it is best to pull up the suckers entire. Attention will be required to watering, as the roots absorb much if given: give manure water occasionally. If the plant is allowed to wither, it checks the flowers, whether in bud or expanded. So much do we admire this handsome genus of flowers, that we are fully persuaded their beautiful blossoms, exhibited in form and colour, will most amply repay for any labour that may be bestowed on the plants. If seed be desired, retain the blooming stems on the plants, and keep them for some time in an airy warm situation to perfect.

Dahlia seed is best retained in the heads as grown, spread singly where they will not be liable to mould, and kept in a dry but not too hot a situation; being thus kept in the chaff, the small seeds will not shrivel, but be kept plump. The roots must be dried well before being put away, or will be liable to rot.

Fuchsias and greenhouse plants, intended to be inured to the open air, will require to have protection at the roots, and probably, for the first winter, over the tops too, by furze branches, canvass, wicker-baskets, &c.

If greenhouse plants require watering or syringing over the tops, let it be done on the morning of a clear day, when air can be admitted; and towards evening a gentle fire-heat should be given.

FLOWER-GARDEN.—Be careful to protect beds of what are technically called "Florists' flowers," should severe weather occur. *Calceolarias* that were cut down and repotted last month will require attention. Not to water too much, or they will damp off. Keep them in a cool and airy part of the greenhouse or pit. Whilst in a cool and moist atmosphere, the shoots will often push at the under-side numerous rootlets. Where such are produced, the roots should be taken off and potted; they make fine plants for next season, and are easier propagated now than at any other season. Protect the stems of tender climbing *Roses*, and other kinds, by tying a covering of furze over them, that whilst it fully protects admits sufficiency of air for the well being of the plant.

Auriculus and *Polyanthuses* will require plenty of air in fine weather, and but little water. The like attention will be required to *Carnations*, *Pinks*, &c., kept in pots. Dahlia roots should be looked over, to see if any are moulding or likely to damage. Let the roots be dry before they are laid in heaps. Newly planted shrubs should be secured, so that they are not loosened by the wind. The pots of *Carnations* and *Picotees* should be placed in a situation where they may have a free air, and be raised above the ground. If they are under a glass-case, it will be much better than when exposed to the wet and severity of the winter, or many will in all probability be destroyed. Where it is desirable to leave patches of border-flowers undistributed, reduce them to a suitable size by cutting them round with a sharp spade. When it is wished to have a vigorous specimen, it is requisite to leave a portion thus undisturbed. Ten week *Stocks* and *Mignonne*, in pots for blooming early next spring, to adorn a room or greenhouse, must not be over watered, and be kept free from frost. A cool frame, well secured by soil or ashes at the sides, and plenty of mats or reeds to cover at night, will answer well. Tender evergreens, newly planted, would be benefited by a little mulch of any kind being laid over the roots. During hard frosts, if additional soil be required for flower-beds upon grass lawns, advantage should be taken to have it conveyed at that time, so that the turf be not injured by wheeling. Pits or beds for forcing *Roses*, &c., should be prepared early in the month. Tan or leaves are most suitable, unless there be the advantage of hot water or steam. New planted shrubs of the tender kinds should have their roots protected by laying some mulch, &c. Suckers of *Roses*, &c., should now be taken off, and replanted for making bushes, or put in nursery rows; soils for compost should now be obtained. Beds of *Hyacinths*, *Tulips*, &c., should have occasional protection. Any roots not planted may successfully be done in dry mild weather till February.

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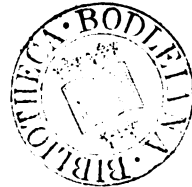
THE
FLORICULTURAL CABINET

AND

FLORISTS' MAGAZINE.

JANUARY TO DECEMBER, 1846.

VOLUME XIV.



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P R E F A C E.

TIME, which, amidst the various projects and occupations of man, pursues its course without interruption or delay, has at length brought our labours, as Conductor of the Floricultural Cabinet, to the conclusion of another volume, and it again becomes our duty to present to our readers those observations, which, in the nature of a preface to the present volume, they have a right to claim from us.

The close of our seventh volume (in 1839) was the termination of our **FIRST SERIES** of this Magazine. We then stated that the next seven volumes would form a **SECOND SERIES**, and the present volume (the fourteenth) is the concluding one. Our annual observations and engagements relative to the past volumes, have steadily been recorded in each, and when we now review the materials with which, by the aid of our respected correspondents we have been enabled to furnish our readers in the present volume, we cannot suppress a feeling of humble, but grateful satisfaction.

For useful, instructive, and varied interesting information,—for the choice of the newest, ornamental and beautiful subjects in its coloured figures of plants,—for the accuracy and effect of the execution, we are persuaded that this volume exceeds every predecessor. To enable us to accomplish this, we are deeply indebted, as in former years, to our esteemed correspondents, and it now is our pleasing duty again to tender our grateful acknowledgments.

Our next number will be the first of a **THIRD SERIES**, in which we shall attempt successively further improvements, and in the prosecution thereof we shall use our utmost exertions to merit the entire approval of those whom it will be our anxious aim to please; and all means that may be suggested to us, or which may occur to our own thoughts, for maintaining the unequalled eminence, to

which, as a floral publication, the *Cabinet* has attained, we shall promptly avail ourselves of.

We look back through the **TWO SERIES** of our Magazine, comprising the period of fourteen years, with considerable pleasure on those substantial and unwavering tokens of approval which we have been so signally and generously favoured with, and we wish them to have their legitimate influence, and to give a new impulse to our endeavours, conscious, as we are, that the right use of encouragement is to excite onward, and for us to go on increasingly demonstrating that our gratitude is felt, deep, and abiding. We again most respectfully solicit the continued assistance of our friends to enable us fully to accomplish our purposes, and realize our promises.

Downham, December 21st, 1846.

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MR PLANT'S SEEDLING CALCEOLARIAS.

Floricultural Cabinet.

Chabots Engraving, Skinner Street

THE
FLORICULTURAL CABINET,
JANUARY 1st, 1846.

PART I.
ORIGINAL COMMUNICATIONS
AND
EMBELLISHMENTS.

ARTICLE I.

CALCEOLARIAS, SEEDLING VARIETIES, RAISED BY MR. JOSEPH PLANT, FLORIST, CHEADLE, STAFFORDSHIRE.

In former volumes we have figured several of the fine seedling Calceolarias, raised by Mr. Plant, and remarked too upon his great perseverance and success in raising some of the best kinds which have been produced. We have now the pleasure to introduce an entire new section of these lovely flowers, viz., a striped class. Specimens were sent us during the past summer, consisting of several varieties, from which we selected those now figured; and we have no doubt the great beauty and novelty they possess will soon conduct them into every good collection. They are, we believe, shrubby kinds, which renders them more valuable. An intermixture of these with some of the large self-coloured varieties, will, no doubt, furnish additional beauties. We hope Mr. Plant will meet with that encouragement his industry entitles him to, in an extensive sale of the varieties we now figure.

Some judicious remarks upon the culture of Calceolarias was given in our last volume, p. 132, to which we beg to refer our readers; also to p. 118 in the same volume, and to several other communications inserted in previous volumes, giving ample particulars of the entire routine of treatment.

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A

ARTICLE II.

ON THE NORTHERN FLORISTS' TREATMENT OF THE
POLYANTHUS.

BY MR. JOHN SLATER, FLORIST, CHEETHAM-HILL, MANCHESTER.

No flower can more justly lay claim to the title of being beautiful than the Polyanthus. Its varied tints, the richness of its colouring, the grace and elegance of its form, agreeable fragrance, easy propagation, hardy nature, and being one of Flora's earliest visitors, it is welcomed with no ordinary feelings of satisfaction by every one who possesses the least taste for flowers. To the industry and zealous attention of the northern florists we are much indebted for the rapid and progressive improvement it has made during the last few years.

It is supposed to owe its origin from both the Primrose and the Oxlip.

The Polyanthus is grown to the greatest perfection in an airy situation, yet sheltered from the rays of the sun, as its excessive heat has a tendency to impair its strength. In the spring it is necessary to examine the plants and pots minutely early in the morning, as well as in the evening, to destroy all slugs and snails which may be found upon them, as they are very great enemies to this plant. The Polyanthus has also another formidable enemy, though small; this is the acarus, or red spider. When the plants are infected with this destructive insect the leaves become yellow and spotted. The best remedy is to remove the infected plant immediately from your collection, and place it in a more distant situation, and soak it in a strong infusion of tobacco-water. A sprinkling of quick-lime upon the plants has been found beneficial and effectual.

The young florist is recommended to select his plants in bloom.

The Polyanthus grows best in a light sandy soil, and some florists add peat when a yellow sandy soil cannot be got. The following compost will grow them well:—

1	peck light yellow loam.	
1	„ sand.	
1½	„ cow dung,	} to be at least two years old.
1½	„ horse ditto,	
1½	„ leaf mould.	

The properties of a fine Polyanthus are as follow:—

The stem ought to be strong, elastic, and erect, of such a height that the truss may be above the grass or leaves of the plant. The foot-stalks should be stiff, and of a proportionable length to the size and quantity of the pips, and not less than five or more in number, that the truss may be close and complete. The pipe, tube, or neck of the petal should rise above the impalement, be short, and finish fluted in the eye; the antheræ should cover the neck of the tube: this is what the florists call a *thrum eye*. When the style perforates and shows its stigma above the antheræ, this is called a *pin eye*, from its resembling a pin head. Such a flower is rejected by all modern florists, let its other properties be what they may.

The tube should be round, of a bright yellow colour, well filled with anthers, bold and distinct. The eye should be round, of a bright clear yellow, and distinct from the ground or body colour. The ground or body colour should be a dark rich crimson, resembling velvet, quite free from speck or blemish of any kind. The pips should be large, and of rich and lively colours, and nearly all of one size, and lie quite flat and smooth, as free as possible from ridges or fluting, and as round as they well can be to preserve their peculiarly beautiful figure, which is circular, excepting those small indentions between each division of the limb, which divide it into five or six heart-shaped segments. The edging should resemble a bright gold lace, exactly the same colour as the eye, and go perfectly round each petal, also down the centre of each division of the limb to the eye, and the lacing or edging to be all of one breadth.

The best period for potting plants is after blooming, which will be in June, when especial care should be taken to make a good drainage. The plants must be dressed, and all offsets or heads which have roots should be detached. After potting, water well, that the soil may be the better settled to the roots, and place them in a shady yet airy situation, and water them only when it is actually necessary, else there is a probability of their perishing by the rot. They will require protection during the winter months; a frame is the best, taking care to let them have the advantage of all fine weather. In March you may give them the benefit of all gentle showers of rain that may fall. Top dress them with a strong compost. The compost generally used is cow-dung and horse-dung, very old, and a very small quantity of coarse sand. If you intend to exhibit, you must

thin out all superfluous buds; those in the centre are the best to be taken away.

New varieties are raised from seed; and, if you wish to be successful, take seed only from those kinds which possess good properties. When the seed-vessels begin to open the seed is nearly ripe, and every day you must gather such heads as are brown, or else you will in all probability lose the best of your seed. The seed should be spread upon paper, and perfectly dried before it is laid by, to be kept in that state until the last week in January or first week in February, when it must be sown in small pots, and the seeds covered with soil about the thickness of a shilling, then covering the pot over close with a glass. The plants will make their appearance in about six weeks. When they are large enough, transplant them into other pots, about one inch apart, and in June or July transplant into other pots. When they require watering, do it with a brush by rubbing your hand over it, so that it may fall upon the soil like a heavy dew.

ARTICLE III.

ON THE DISPOSITION OF FLOWERS IN MASSES,

BY LUCY.

THE system of disposing plants in masses, so frequently and ably advocated in the FLORICULTURAL CABINET, is becoming very general, and certainly produces a much better effect than the tedious monotony of an indiscriminate mixture. In the practice, however, of this superior method, it should be remembered, that the groups and masses ought to be considered as parts of a whole, and as such, should harmonise and unite with each other, with regard to form and colour. Without attention to this point, the several disunited and independent parts will no more form a gardenesque landscape, than the colours arranged on the painter's palette will of themselves form a picture. I have known more than one small garden spoiled by a disregard of proportion, the shrubs and flowers being disposed in groups of far too large a size. In such a situation, a single plant, or a group of two or three, must be considered to bear the same proportion to the whole, as much larger masses or groups bear in the case of a park. Although I approve, as I have said above, of the principle of placing different species in groups and masses, I think that there are cases in which,

like all other principles, it may be carried too far. In a small flower-garden which I very much admire, I have seen a group, composed of myrtles and China roses, planted alternately in quincunx order, the larger plants being in the centre ; and, in my opinion, a better effect was produced than if the two genera had been in separate masses : the rich green colour of the myrtles' leaves, forming a ground to the beautiful white of the flower ; the light and elegant foliage and pendant bloom of the rose ; the mingled colour, and the associations connected with both, made an impression upon me which I shall not easily forget. In the same garden there was a group consisting of an acacia, the broader and more shadowy plumes of the sumach, and the pendulous clusters of flowers of the laburnum, composing a little picture of the most highly finished character.

Gardeners might find much instruction from an examination of even cottage gardens, in many of which I have seen a degree of good taste that is not always found where there is more reason to expect it. In such gardens, it often happens that very striking effects are produced by a judicious disposition of plants of the most common description ; and I think it would be a very useful study to endeavour to imitate them with plants of more rare and choice species. I was once much struck by a particular effect (not, however, of sufficient general interest for a place in your Magazine,) produced by a plant of the common hop ; and it was not until after many trials that I could find a substitute for it among more choice plants ; at length, however, I succeeded to my own satisfaction by means of one of the genus Clematis ; the species I do not with certainty know.

In small gardens, nothing can be more displeasing than a want of neatness and high finish ; it reminds me of a flower-painter of the last century, who used the most dingy and sombre colours that he could find, saying that he imitated Raphael, and painted for posterity. In the case of a small garden, it should be remembered that, whatever may be the beauty of the design, constant attention, and the frequent removal of plants, are indispensable : three or four years of neglect would leave nothing, either to posterity or the designer himself, but a tangled and matted thicket of such plants as might come off conquerors in the struggle for life incident to want of sufficient space.

ARTICLE IV.

THE METROPOLITAN FLORAL EXHIBITIONS.

HORTICULTURAL SOCIETY, *Chiswick, June 21, 1845.*

THIS was the second exhibition of the season, and fully merited equal commendation with that we expressed relative to the first grand show. The day, happily, on this occasion, was very favourable, and the number of visitors, we were informed, exceeded twelve thousand. The collections, and specimens of plants, were, as usual, very numerous, and a particular account of all would extend these remarks over a considerable portion of our pages, we must therefore only notice the finest specimens in the collections of stove and greenhouse plants with any deserving new kinds, and briefly enumerate the prize collections of "florists flowers."

CLASS I.

- PELARGONIUMS.

In collections of 12 new kinds: open to Private Growers only.

1st. Mr. E. Beck, Isleworth, with *Rosy Circle, Mustee, Arabella, Desdemona, Zenobia, Aurora, Isabella, Favorita, Marc Antony, Bellona, Hero, and Sunset.*

2nd. Mr. Cock, Chiswick, for *Shepherdess, Vixen, Sarah, Eliza Sauvage, Duke of Cornwall, Pulchellum, Cyrus Superb, Queen Philippa, Emma, Cora, Hector, and Magog, very fine.*

3rd. Mr. R. Staines, Paddington, for *Duke of Wellington (Staines), Emperor Nicholas (Staines), a fine flower, with a feathered spot in upper petals; Merry Monarch (Staines), Sir Robert Peel, Fair Maid of Leyton, Andromache (Staines), Witch, Sunrise, Superba, Adonis, Cedric (Staines), and Sir Walter Scott.*

Nurserymen.

1st. Mr. Gaines, Battersea, for *Rose of Arragon, Don Juan, Princess Alice, Prince of Wales, Ackbar, fine; Princeps, fine; White Surrey, a beautiful specimen; Fire King, Pirate, Oberon, fine; Mojub, fine; and Lord John Russell.*
The only exhibitor.

In collections of 12 older varieties.

Private Growers.

1st. Mr. Staines, with fine specimens of *Enchantress, Erectum, Alice Gray, Nestor, Lady Sale, Achilles, Roulette, Madeline, Sunbeam, Hebe, Superbum, and Duke of Cornwall.*

2nd. Mr. E. Beck, for *Matilda, Duke of Cornwall, Lucy, Zenobia, Favorita, Conflagration, Pulchellum, Bella, Arabella, Rosy Circle, Constellation, and Amazon.*

3rd. Mr. Cock, for *Pre-eminent, Duke of Cornwall, Mulberry, Milo, Queen Philippa, Rosetta Superb, Wizard, Black Dwarf, Tristram Shandy, Shepherdess, Nameless, and Constellation.*

Nurserymen.

1st. Mr. Gaines, for *Floridum, Lady Sale, Hermione, Prince of Wales, Albina,*

Albert Prince of Wales, Witch, Sylph, Duchess of Sutherland, Coquette, Madeline, and Cossack.

No other exhibitor.

In collections of 6 varieties, grown in large pots.

Private Growers.

1st. Mr. Bromley, gardener to Miss Anderson, Hammersmith, for Jubæ, Sylph, Annette, Ophelia, Lellia Jones, and Grand Duke.

No competitors.

Nurserymen.

1st. Mr. Gaines, for magnificent specimens of Mrs. Stirling, Matilda, Sylph, Erectum, Kinghornii, and Lady J. Douglas.

No other collection.

ROSES.

In collections of 25, grown in pots.

Nurserymen.

1st. Messrs. Lane and Son, Berkhamstead, with very compact dwarf specimens of Psyche, Duke of Devonshire, compact, pale rose; Moire, globular light yellow; Augustine Hersent, bright rose; Anteros, Eliza Sauvage, Henry V., Mirabile, straw with pink shade; Coup d'Amour, General Vallée, straw with flesh-coloured centre, very handsome; La Pactole, light yellow; Princesse de Lamballe, snowy white; Siléné, crimson; Princesse Marie, fine; Crimson Globe; Reine Victoré, light yellow, good; Eugene Beauharnais, light crimson; Souvenir de Malmaison, creamy with blush centre, large well-expanded flower; Bride of Abydos, Napoleon, blush; Harrisonii, Abba Mioland, Nemesis, Amie Vibert, and General Kleber.

2nd. Messrs. Paul and Son, Cheshunt, for Caroline, Clara, Sylvain, Armosa, Celestine, Bride of Abydos, Madame Rousseau, a good light flower; Celimene, Madeline, William Jesse, Blairii, Bouquet de Flora, large carmine; Emille Courtier, Don Carlos, Auberon, Velours Episcopal, Chenedole, Mrs. Bosanquet, Sophia de Marciy, bush, with rose centre, fine; Madame Aude, pale lilac-pink; Proserpine, compact, bright crimson; Princesse Helene, white, with lemon centre; Antinous, Graine Dusk, Madame Desprez, Bourbon Queen.

3rd. Mr. Laing, Twickenham; the best amongst which were General Allard, Marie de Mederis, Julie Manais, beautiful clear straw-colour; Grandissima, good form; Comte d'Osmont, Duchesse de Montello, General Soyex, Celestine, Mr. Ware, Julie d'Etanges, Blairii No. 2, Belle de Segur, pale straw, good; and Aurora.

In collections of 50 varieties, cut blooms, exhibited in bunches.

The exhibitions in this class were numerous, and comprised many very splendid specimens, but owing to the great heat of the day, the blooms soon began to wither.

Private Growers.

1st. Mr. H. Batteridge, Abingdon, with some fine grown flowers, particularly of Duke of Devonshire, Glory of France, Devoniensis, Charles Louis, and Princesse Marie.

2nd. Mr. Parsons, Enfield; the finest of these were Napoleon, Therese, Isabella, Aurora, Archduke Charles, and Flora.

3rd. Alexander Rowland, Esq. Rosenthal.

Nurserymen.

1st. Mr. Laing, Twickenham. Amongst these we noticed George IV., violet purple; Pompon Bicolor, La Majesteuse, fine; Belle Marie, Triumph de Laqueue, rosy lilac; Las Casas, Brennus, carmine; Belle de Rosny, delicate rosy lilac; Coup d'Amour, General Allard, Octavie, Coquerell, Reine de Français, Bonaparte, Aurelie, Lemaire, delicate rose; Queen Adelaide, Cristata, La Fiancée, Densiflore, Belle d'Anteuil, Coquette de Montmorency, Madame Laffay, Princesse Helene, Preval, Princesse de Lamballe, and Felicité Parmentier.

2nd. Messrs. Cobbett, Woking. Amongst these were fine blooms of Great Western, Comtesse de Lacepede, Miralba, Prince Albert, Lady Alice Peel, Charles Louis, General Christiana, unique, pure white; Royal Provence, Robin Hood, pinky lilac, fine; Madame Laffay, Bernard, La Ville de Bruxelles, Duchesse d'Orleans, Colonel Combes and Queen of Denmark.

3rd. Messrs. Paul and Son, Cheshunt. Amongst them we observed fine blooms of the beautiful yellow briars Harrisonii and Persian; also of Deesse de Flore, white, with flesh centre; Leon le Dix, Belle Marie, Carre de Boisdeloup, Coup d'Amour, Devigne, pale salmon; Eynard, large carmine; General Kleber, violet red, compact; Henri Barbet, crimson red; Madeline, french white, with crimson edge; La Grandeur, shaded purple crimson; Lady Fitzharris, Petit Pierre, violet red; Princess Augusta, Volney, rosy lilac, compact; Félicite, white, with blush centre; La Negresse, slate purple; Aspasie, blush; Belle Rosine, Duchesse d'Angouleme, Duchesse d'Orleans, Fanny Bias, Latone, Malesherbes, purplish crimson; Octavie, Princesse Marie, William IV., Auberon, Mrs. Elliot, pale rosy violet; William Jesse, Armosa, Bourbon Queen, Cramoise Superieur, Madame Bréon, rosy pink; Reine de Lombardie, crimson purple; Nina, rosy blush; and La Cameleon, blush changing to crimson.

In addition to the above, collections were shown by Mr. Mitchell, of Pittdown, and Mr. Rivers, of Sawbridgeworth. That from the former was considered by the judges the best collection, but disqualified on account of being improperly shown. In it we saw beautiful blooms of Lamarque, fine pale yellow; Auclain, fine crimson; Marshal Soult, Las Casas, Athalie, Couture, Celestial, bright rose; Camuzet carné, Leda, bluish white; Belle Allamande, shaded bluish and cream; Delphine Gaudot, large creamy white; De Valmage, Taglioni, Nitida, creamy bluish, globular; Originale, Fulgore, bright rose; Princesse Helene, Madame Laffay, Prince Albert, shaded red; Lord John Russell, Blairii No. 2, and Belle Helene. In Mr. Rivers's collection, we noticed Etna, a fine rich red; Royal Marbled, Clara Sylvain, Prince of Wales, very globular; Safrano, Triumph de Luxembourg, Leopold de Beaufremont, fine lilac; Velours Episcopal, and George IV.

*In collections of 25 varieties.**Private Growers.*

In this class collections of good flowers were sent by Mr. G. Wemyss, gardener to J. Slater, Esq., of Uckfield, and Mr. Terry, gardener to Lady Puller, of Youngsbury, Herts; but they did not contain any varieties which have not been enumerated.

Nurserymen.

Mr. Francis, of Hertford, was the only exhibitor. Amongst them were Agène, Blancheleur, La Vestale, Adèle de Lananges, Belle Parabere, Belle Marie, Charles Louis, Duchesse de Montebello, Fimbriata, General Kleber, La Grandeur, Triomphe de Laqueue, Las Casas, President Mole, Princesse de Lamballe, Bernard, Duc d'Aumale, Lady Fordwich, and Madame Laffay.

THE METROPOLITAN FLORAL EXHIBITIONS.

MOSS ROSES.

In collections of 12 varieties.

In this class collections were sent by Messrs. Paul, Mr. Mitchell, Mr. Rivers, and Messrs. Cobbett. Messrs. Paul's collection comprised *A. feuilles d'Agathe*, *Alice Le Roy*, *Angelique Quéfier*, *Cristata*, *De Meaux du Luxembourg*, *Eclatante*, *Louise Collet*, *Oscar Foulard*, *Pourpre de Laffay*, *Princess Royal*, and *Unique de Provence*. The other collections were nearly the same.

CAPE HEATHS.

In collections of 20 species.

Mr. Robertson, gardener to Mrs. Lawrence, was the only private grower who exhibited. We noticed *E. Radiata*, 3 feet by 3, a fine bush, not quite in bloom; *Cavendishii*, very good; *Tricolor*, very pretty; *Ventricosa carnea*, fine; *Ovata grandiflora*, very fine; and good plants of *Tricolor elegans*, *Ventricosa superba*, and *Ventricosa alba*.

Nurserymen.

1st. Messrs. Fairbairn, Clapham. The most conspicuous plant in this collection was *E. Cavendishii*, fully in bloom, nearly 4 feet high, and as much across: we do not recollect ever to have seen a finer specimen than this. We also observed fine plants of *Ventricosa breviflora*, *Ventricosa tricolor*, *Jasminiflora*, *Alba eximia*, *Savilleana*, var. *major*, pretty, and *Halicacaba*, with pale green flowers, very pretty.

2nd. Mr. Frazer, Lea Bridge.

3rd. Messrs. Rollisson, Tooting. Amongst this collection was *Coventryana*, small, but very pretty; *Tricolor elegans*, fine; *Tricolor elegans superba*, beautiful; *Metulæflora*, very neat; *Ventricosa globosa*, *Daphnæflora*, *Humeana*, and *Massonii*.

In collections of 12 varieties.

Private Growers.

1st. Mr. Green, gardener to Sir E. Antrbus, Bart. Amongst these was *E. propendens*, large; *Tricolor*, good; *Ventricosa alba*, a pretty bush; and *Beaumontia*, a fine plant.

2nd. Mr. Barnes, gardener to G. W. Norman, Esq., Bromley. We observed *Gemmifera*, a fine dwarf plant; *Tricolor*, very fine; *Tricolor major*; *Tricolor coronata*, a superb variety; *Impulsa*, very elegant; *Westphalingia*, *Dilecta*, and *Densa*.

3rd. Mr. W. Taylor, gardener to J. Costar, Esq., Streatham. Amongst these we noticed *Viridiflora*, a fine plant, full of its singular green flowers; *Tricolor nova*, very pretty; *Tricolor Leeana*, *Solandroides*, *Ovata*, and several varieties of *Ventricosa*.

Nurserymen.

1st. Messrs. Veitch and Son, Exeter. In this collection was a magnificent *Cavendishii*, densely covered with bloom, but badly coloured; *Cupressina*, equally fine; *Tricolor*, a superlative specimen; *Metulæflora*, very pretty; *Densa*, neat; *Vestita rosea* and *alba*, fine plants; with *Alberti rosea*, *Metulæflora*, *Halicacaba*, and *Ventricosa breviflora* and *globosa*. These plants were potted on the system practised with success in Devonshire, but which will not answer in the neighbourhood of London; elevating the collar of the plant considerably above the rim of the pot.

2nd. Mr. Frazer, Lea Bridge. We noticed a fine *Daphnoides*; *Tricolor dumosa*, good; *Tricolor*, fine; with *Ventricosa tricolor*, *superba*, and *teuiflora*, and good plants of *Bergiana* and *spæria*.

*In collections of 6 varieties.**Private Growers.*

1st. Mr. May, gardener to E. Goodheart, Esq., Beckenham; for Splendens, admirably bloomed; Massoni, a fine plant, in beautiful bloom; Elegans, very beautiful; Ventricosa alba, Odore rosæ, and a fine Tricolor.

2nd. Mr. Bruce, gardener to B. Miller, Esq., Mitcham; with Cavendishii, in fine bloom; Tricolor, very pretty; Bergiana, very neat; Vestita coccinea, well coloured; Ventricosa superba, and Eximæa.

3d. Mr. Jack, gardener to G. Loraine, Esq., Wallington; for Gnaphaloides, a singular kind, appearing as if covered with cobwebs; Ventricosa globosa, Tricolor, Westphalingia, and Carneæ.

Nurserymen.

1st. Mr. Dawson, Brixton; with Massoni, very fine; Prægnans minor, pretty; Campanulata, good; Odore rosæ, and a neat Tricolor.

2nd. Mr. Kpps, Maidstone, for Ventricosa, V. breviflora, Coccinea minor, Rosea superba, and Perspicua nana.

3rd. Mr. Glendenning, Chiswick. The best of these were Suaveolens, Vestita rosea, and Albicans grandiflora.

Single specimens of superior growth.

1st. Mr. May, Beckenham, for Massoni, a magnificent plant.

2nd. Mr. Dawson, Brixton, for Pulverulenta, a singular pyramidal plant, 4 feet in height, and about a foot in diameter at the base.

CALCEOLARIAS.

In collections of 6 varieties.

There were only three exhibitors in this class. Mr. Stanley, gardener to H. Berens, Esq., was the only private grower. His collection contained Emperor of Russia, fine; Fortune Teller, British Queen, Othello, King of Saxony, and Sylph. Mr. Gaines, nurseryman, Battersea, received the large silver medal for a neat and well-grown collection, containing Flash, Lady Ann Chartres, Prince of Wales, Beauty of Vellore, Prince Alfred, fine; and Tigrida. Messrs. Holmes, of Sudbury, sent Lady Vernon, a distinct and beautiful kind; Prince Alfred, Duke of Wellington, Duchess of Kent, Lady Cotton Sheppard, and Hon. W. C. Anson. All the plants were, however, much destroyed by a long journey.

PINKS.

*In stands of 24 distinct varieties.**Nurserymen.*

1st. Mr. Willmer, Sunbury; for Matilda (Willmer), Prince of Wales (Willmer), Splendid (Sharp) quite rose-leaf and an excellent flower; John Dixon (Neville), Queen Victoria (Bunkell), one of the best; Hodge's No. 16, fine rose-leaf; Coronation (Holmes), good; Queen Victoria (Willmer), Queen Victoria (Hardstone), Gaylad, President (Creed), Eclipse (Brown), Queen Victoria (Werden), Melona (Hodge), Model (Brown), Prince Albert (Hardstone), Tower (Church), Rosanna (Church), Sarah (Willmer), Navigator (Church), Mary Ann (Jelf), Alpha, Defiance (Norman), and Majestic (Collings.)

2nd. Mr. Hembrey, Croydon, for Beauty, Mellona, Earl of Stanhope (Neville), Jack (Wilson), Gem, Prince Albert, Sir R. Peel, Diamond, Fury, Coronation, Defiance (Marshall), and 13 Seedlings, not named.

RANUNCULUSES.

In stands of 12 distinct varieties.

Private Growers.

1st. Mr. Betteridge, Abingdon; for nice blooms of Rival, Hippolita, Melange des Beautés, Beauty, Brenda, Ponceau pourpre, Nomias, Queen Mab, Cedo Nulli, La Blanchisseuse, Oidet d'Anvers, and Naxara.

2nd. Mr. Airzee, City Road, London, for Edgar (Tyso), Mirabelle (Aust), Milo (Aust), Felix (Tyso), Attractor (Tyso), Lucia (Kilgom), Dr. Franklin, Emancipator (Lightbody), Dr. Gardner (Lightbody), Rob Roy, Emperor, and Harold.

In stands of 24 distinct varieties.

Nurserymen.

Messrs. Tyso and Son, of Wallingford, were the only exhibitors; their blooms, however, were very fine, and attracted much attention; the extreme delicacy of colour and symmetrical shape in some of the varieties were indeed beautiful.

The stand comprised Apollo, Belle Agreeable, Son, Financier, Burns, Glacia, Mirabelle, Niobe, Passe Cour de France, Philocles, Princess Royal, Queen Victoria, Alexis, Arbitrator, Attractor, Cathcart, Champion, Dilectus, Edgar, Glennete, Wilson's No. 5, Vendome, Victor, Tippoo Saib, and Nonsuch.

In addition to the preceding, Messrs. Tyso and Son exhibited a stand of 100 blooms, not for competition; amongst which we particularly admired Ada, Albinus, Saladin, Orlando, Amadis, Basilica, Comptroller, Creon, Laureate, Jubal, Grand Roman, Imbert, Herbert, Gippins, Felix, Flaminus, Arbriseau, Bishop Van Lima, Delphinium, Fête Nocturne, Marquis of Hertford, Louisette, Horatio, Hercules, Henrietta, Comtesse de Plaisance, Condorcet, Melpomene, Nestor, Rosney, Semiramis, Ores-us, Overwinnaar, Roi des Rénoncules, Rosney, Sir Sydney Smith, Sophia, and Temeraire.

CLASS II.

All persons competing without restriction.

STOVE OR GREENHOUSE PLANTS.

In collections of 40 different varieties.

1st. Mr. Barnes, Bromley. This group was an extraordinary production, and was allowed, by every cultivator who saw it, to be one of the best specimens of horticultural skill ever produced at the show. Among the most remarkable plants was a dense thicket of *Phœnocomia prolifera*, 2 feet in height, and about 4 feet in diameter, the branches hiding the pot, and profusely covered with flowers; closely allied to this genus were two magnificent plants of *Aphelixis humilis*, about 18 inches in height, and 3 feet in diameter, and densely clothed with bloom, which, on this occasion, owing to the brightness of the day, expanded beautifully; *A. sesamoides* formed a perfect cone; and there was also a small but very admirable specimen of *A. grandiflora purpurea*. Of the genus *Clerodendrum* there were several plants, all remarkable specimens; *C. paniculatum* had a spike of flowers 3 feet in height, and 4 feet in circumference at the base, and the extreme circumference was nearly 20 feet. A fine plant of *Ixora rosea* was very much admired, as were also two admirable dwarf and compact specimens of *I. grandiflora*. Not less remarkable were two immense bushes of *Pimelea decusata* and *Epacris grandiflora*, in admirable bloom. There were also fine plants of *Polygala cordifolia*, *Statice macrophylla*, *Dillwynia pungens*, and *Stephanotis floribunda*; the latter on a flat circular trellis, well bloomed;

and two grand plants of *Rondeletia speciosa*, in fine condition. In the genus *Erica* the collection was very rich, containing fine specimens of *Odore rosea*, in admirable bloom; *Vestita coccinea*; and *Vestita alba*, very fine; *Thunbergia*, a fine bush, with small orange flowers; the singular *Plukenetii*, a bush 3 feet in height, and 4 feet in width; an admirable plant of *splendens*, and others.

2nd. Mr. Robertson, gardener to Mrs. Lawrence, Ealing. In this collection were several specimens of great excellence, especially *Pavetta caffra*, 8 feet in height, and 4 feet through, forming a rich cone of verdure, prettily covered with white flowers, but not quite sufficiently in bloom. *Clerodendrum Kæmpferi* was also very fine, having a spike of flowers 18 inches in height, and 4 feet in circumference; *C. squamatum* and *fallax*, though rather too much drawn, were also very fine. A dwarf bush of the simple but pretty *Stylidium fasciculatum*, with its small white flowers, was very neat; as were also compact bushes, in fine bloom, of *Erica depressa*, and *Eriostemon buxifolium*. A large standard plant of *Polygala oppositifolia* was remarkable, and particularly so was the singular *Medinilla erythrophylla*, with its pretty pink flowers protruding all over the woody stem. We likewise noticed fine plants of *Beberia pulchra*, *Cestrum aurantiacum*, *Pentas carnea*, *Manettia cordifolia*, and several others, with a very neat bush of *Acrophyllum venosum*.

In collections of 20 different varieties.

1st. Mr. Frazer, Lea Bridge. In this collection was a fine plant of *Erica Bergiana*, 3 feet high by 4 feet across, most profusely in bloom, but the flowers were not well coloured; there were also several other fine *Heaths*. *Pimelia hispida* and *decussata* were dwarf and well managed. *Dillwynia floribunda*, very pretty; *Statice arborea*, large but rather destitute of foliage; *Gompholobium splendens*, with bright yellow flowers, very pretty; *Burchellia capensis*, 4 feet by 4, well in bloom; *Coleonema tenuifolium*, delicately pretty; and *Gloxinea Youngii*, very good.

2nd. Mr. Ayres, gardener to J. Cook, Esq. We noticed a finely bloomed *Crocea saligna*, 4 feet by 4; *Viminaria denudata*, a singular plant, with long hair-like foliage, and spikes of bright yellow flowers; *Ixora crocata*, dwarf and remarkably well bloomed, as also was *Clerodendrum fallax*; *Gloxinia cerina*, in fine condition; and *Achimenes Beatonii*, very pretty.

The collections of 12 and 6 were very numerous, and contained many fine grown specimens, but nothing particularly new or rare.

EXOTIC ORCHIDACEÆ.

Of this beautiful tribe was presented a wonderful rich display; want of space, however, forbids our mentioning more than a few. From Mr. Mylam, gardener to S. Rucker, Esq., jun., we saw *Stanhopea tigrina*, with 14 fine flowers upon it; *Aerides odoratum*, with 24 spikes of its delicate flowers; *Saccolabium guttatum*, with nine spikes of beautiful flowers; *Cirrhexa fuscolutea*, with a number of its curious pale green flowers; the rare *Mormodes luxatum*; *Cattleya intermedia*, in a fine state; *Galeandra Baueri*, very pretty; *Aerides pulchellum*, variety, very pretty; and the curious *Anæctochilus setaceus*, with its singular foliage. Mr. Robertson showed some remarkably fine plants, and from Messrs. Rollison, of Tooting, was a *Stanhopea oculata*, with nearly 40 flowers upon it; *Vanda teres*, remarkably beautiful; and *Scuticaria Steelii*, with long rush-like leaves and lemon-coloured flowers spotted with brown, very curious. From Mr. Eyles, gardener to Sir G. Larpent, was a new species of *Aerides*, with spikes of rich violet-purple flowers, allied to *A. affine*, a very beautiful plant.

FUCHSIAS.

In collections of 12 varieties.

1st, Messrs. Lane and Son, with dwarf bushy plants of Mrs. Lane, *Pulcherrima* (Harrison), tricolor, *Brockmannii*, *Gigantea*, Norfolk Hero, *Achilles*, *Mouey-pennii*, *Grovehellii*, *Rogersiana*, *Venus Victrix* and *Paragon* (Smith).

2nd. Mr. N. Gaines, for large plants of *Cassandra*, *Goldfinch* (Harrison), *Pearl* (Harrison), *Coronet*, *Reflexa*, *Duchess of Sutherland* (Gaines), a good light flower; *Gigantea*, *Duke of Wellington*, *Expansa*, *Modesta* (Smith), *Madonna* (Harrison), and *Miss Talfourd* (Salter).

3rd. Mr. Robinson, gardener to J. Simpson, Esq., Pimlico; for *Vesta* (Smith), *Hope*, *Formosa elegans*, *Eppsi*, *Cormackii*, *Prima Donna* (Harrison), *Goldfinch* (Harrison), *Robinsonii*, *Exoniensis*, *Chandlerii*, *Coronet*, and *Madonna*.

NEW OR EXTREMELY RARE PLANTS.

In this class the best thing present was *Gardenia Stanleyana*, to which a first prize was awarded, from Mr. Glendenning, of Chiswick, though this specimen was a very poor one, having but one imperfectly developed flower upon it: for a figure and description see our last Number. Another specimen of *Gardenia*, introduced many years ago, named *Rothmannia*, received a third prize: it was shown as a rare plant by Messrs. Veitch of Exeter; Mr. Jack received the second prize for *Dipladenia crassinoda*. Mr. Elliott, gardener to J. Boothby, Esq., the fourth, for a singular, but very beautiful succulent plant, with a bunch of rich flesh-coloured flowers, called *Plumieria acuminata*; and a fifth prize was awarded to Messrs. Rollisson, for *Pitcairnia punicea*, with a spike of bright crimson-scarlet flowers. In addition to these Messrs. Veitch showed *Morina longiflora*, a hardy herbaceous plant, having a spike of blush-coloured flowers, 2 feet high; also a species of *Hoya*, with dull lemon-coloured flowers, called *H. trinervis*; and from Mr. Green, was a plant of *Tremandria Hugellii*.

SEEDLING FLORIST FLOWERS.

1844.

Pelargoniums.—Prizes were awarded to the following; viz., *Aurora*, Mr. E. Beck, Isleworth; described in No. 151, p. 223. *Dædemonia*, Mr. E. Beck; figured and described in No. 151. *Mustee*, Mr. E. Beck, lower petals light pink, upper petals dark crimson belted with rose; a desirable flower. *Sunset*, Mr. E. Beck; see p. 223, No. 151. *Juno*, Mr. E. Beck, a flower of good qualities, and having very dark upper petals. *Gulnare*, Mr. McConack, gardener to E. Vines, Esq., under petals light rose with white to centre, upper petals dark crimson, and of good shape. In addition to these we noticed, as being almost equally fine, *Miss Halford*, Mr. Gaines, rosy-blush, lower petals, with rich crimson upper ones; a remarkably smooth and good textured flower, and an excellent trusser. *Alba grandiflora*, Mr. Gaines, a large white flower with a good eye, and a very desirable addition to this class, but it has a little too much roughness about it. *Standard of Perfection*, Messrs. Grady, Bristol, pale lilac, having a medium sized spot of deep crimson; it is a distinct and good flower, and opens remarkably flat. *Sunset*, Mr. Hoyle, of Guernsey, lower petals rosy-scarlet, upper ones deep crimson-scarlet with a dark spot; an excellent shaped and brilliant flower. *Heidos*, Mr. Hoyle; see our figure in No. 151.

Pinks.—Only one prize was awarded, to a seedling of Mr. Henbry's, named *Beauty*, a tolerably good flower, the white very pure, and the crimson lace unbroken; Mr. Henbry also showed another flower named *Fury*, a flower with a light red lace.

Verbena.—Hampstead Lily, from Mr. Pearson, of Hampstead, was the only one shown, it is a clear white in colour, compact in habit and a profuse bloomer. It received a prize.

1845.

Pelargoniums.—Two seedlings, named Competitor and Rosetta, from Mr. K. Beck, was awarded prizes; the former is a superior shaped flower with rosy-pink lower petals and dark crimson upper ones. Besides these Mr. Beck showed Dawn of Day, lower petals salmon-pink, upper petals salmon-scarlet, having a red spot; a pretty good shaped flower. Shiner, of similar colour and quality. Marcus, rosy lower petals with white centre; the upper ones dark crimson belted with rose; and Queen of the Isles, lower petals of a pretty rose colour, slightly feathered and lighter to the centre, upper petals dark crimson.

Calceolarias.—Prize, Compacta, Mr. Gaines, a distinct and fine flower. Prize, The Pet, Mr. Standish, Bagshot, a pretty dwarf variety. In addition, Mr. Standish exhibited Emperor, pale straw, full of small crimson spots; and Ovid, a distinct and good flower. Mr. Holmes, of Sudbury, showed London Rival, pale sulphur with large spots of maroon, fine; and Hon. Mrs. Harrison, a pretty spotted and good shaped flower; and Mr. Gaines showed Tricolor. Climax, Picta, and Flora, the latter a beautiful spotted flower.

ARTICLE V.

ON THE PROPAGATION OF PLANTS.

BY A LONDON NURSERYMAN.

A CORRESPONDENT having recently solicited some instructions on the best general methods of increasing stove, greenhouse, and similar plants, I forward you the mode I have pursued in each case for the last twenty years, on an extensive scale, and with great success.

1. *By Seeds*.—When an exotic is in flower that will produce seed, it should be put in a situation where it may receive benefit from the rays of the sun, and, if the weather permit, plentiful supplies of air and water, that the seeds may be sufficiently ripened and swelled to their proper size; for on these points much depends as to the future germination of the seed when sown. If the plant should happen to be exposed to the open air, as is the case with greenhouse ones in summer, it should be removed to a situation where showers cannot injure the impregnating and fertilizing part of the fructification. When the seeds (semina) become loose, and rattle in the seed-vessel or pod (pericarpium) when shaken, they are ripe, and should be gathered when quite dry; and, after exposure to the air in a shaded place, that they may still be further dried and hardened, done up in separate packets and named; they may then be carefully put by in a dry place till the following spring. From the latter end of February to the beginning of April is the most proper time for sowing exotic

seeds, unless they are imported from abroad, in which case some should be sown immediately, whatever season it may be when they arrive; for sometimes seeds will grow when first received, which will not if kept a few months longer. The remainder may be sown with your own collected ones, and spring sowing is always preferable; for the plant becomes strong to stand the succeeding winter. Pots of five inches diameter, and three and a-half inches deep, with plenty of potsherds, should be prepared previous to sowing, with a compost composed of two-thirds peat and one-third loam, well mixed together. In preparing the pots for sowing the seeds in, a large piece of broken pot, or oyster shell, should first be placed over the hole in the bottom of the pot; over this should be put an inch thick of finely-broken potsherds, to drain off the superabundant moisture from the seed; then fill the pot with coarsely screened compost (made as above directed), from an inch to a quarter of an inch from the top, according to the largeness or smallness of the seeds. The surface on which the seeds are sown, as well as the covering soil, should be sifted very fine. After the seeds are sown, cover them with soil to the top of the pot, and give them a gentle watering from a fine rose watering-can. The pots must now be plunged up to their rims in saw-dust in a previously prepared hot-bed, when the burning heat is over. Keep the frame-lights quite close, except allowing, in the middle of the day, a little for steam arising from the bed to pass off till the plants begin to appear. Due care must be taken to allow a supply of water when required. As soon as the rudiments of the second leaf are formed they must be removed to a shaded part of the stove, there to remain till the second leaf is perfectly formed, and the rudiment of the third leaf is perceived, when they must be carefully potted off in small thumb pots, in composts, according to their nature, and again placed in a sheltered place till they have taken root, when they may be finally but gradually exposed to their respective departments. The sooner seedlings are potted off the better, as they do not miss their moving when potted young. I should have observed that if hot sunny weather should occur (as is often the case) while they are in the hot-bed frames, they should be shaded in the middle of the day by means of mats.

2. *Cuttings*.—Most exotics will increase by this mode of propagation, and many of them by young cuttings a little hardened; some by ripened ones, and a few by means of very young ones. When it

is desired to propagate any particular kind by cuttings, an old shabby plant should be picked out for the purpose; and if an inhabitant of the greenhouse, taken about Christmas into the stove, that it may produce its young shoots early; and when grown to a sufficient length (say from one and a half to two inches), taken back to its own department to harden a little, and ripened more or less, as required. From Christmas to the end of April is the best time to increase by cuttings, as then the plants can root, and be potted off, in time to stand the winter season with success; but it sometimes happens that the desired kinds are late before they produce fitting shoots, especially those that strike best from fully ripened cuttings; these must, however, be put in when arrived at a proper state, and if they do not happen to have rooted sufficiently for potting till late in autumn, it would be best to defer potting them off in separate pots till early the following spring, but this must be left to the judgment of the propagator, as many kinds are apt to become wing-rooted, if left too long before they are potted off. Previous to commencing the operation, a sufficient quantity of pots (same size as recommended for seedlings), must be prepared after the following manner:—After a large piece of broken pot and potsherds have been put into the pot as already directed, fill it level with the top with fine clear sand in a moist state, and made as firm as it possibly can be with the hand, to exclude as much air as possible from the base of the cutting. In preparing the cuttings, care must be taken not to take any more leaves off than are requisite; for the more leaves a cutting has on it the sooner it will root. The shallower cuttings are put in, so as they are well fastened, the better they will root; for if planted deep, they are more likely to rot or damp off. The part planted in the sand should have its leaves taken off as close to the stem as possible without injuring it. From half an inch to an inch and a quarter may be considered the medium length to be inserted. *Ericas*, *Epacris*, *Diosmas*, *Brunias*, and all such fine-leaved delicate kinds, should be planted no deeper than absolutely necessary; but cuttings of *Pittosporum*, *Pomederris*, and such like hardy-leaved woody kinds, may be put in a little deeper. After the cuttings are prepared, and well fastened in the pots of sand, give a gentle watering; and when the moisture has dried off the leaves of the cuttings, place the bell-glass over them, and remove them to their respective situations—the stove kinds to a moist heat, plunged in a bark or dung bed; the greenhouse kinds to the front

shelves in the greenhouse. The bell-glasses must all be shaded when the sun is powerful, by means of white-brown paper; and every morning they must be regularly wiped, or the moisture accumulating on the sides of the glass will cause the cuttings to turn mouldy, and eventually die off, even after they are rooted. Water must only be given when the top sand is become dry, and then a sufficient quantity must be given in a morning, so as to reach the bottom part of the sand. At the end of June the greenhouse kinds must be removed out of the house, and plunged in a shaded dry border till the following September, (when such as remain unstruck, if any, must be taken back to their former residence.) When they are plunged, they must be defended from rains by means of hand-glasses, each covering four or five pots with their bell-glasses. When the cuttings are rooted, the sooner they are potted off the better, in as small pots as they can be safely got into; for if too long, the sand is apt to injure the roots. When they are first potted, they should be kept under a close glass for a few days, and shaded with a mat till they have taken fresh root, and then hardened to the open air by degrees. If the young plants are drawn up too slender, their tops must be pinched off, to make them grow bushy. Those kinds that require heat must remain plunged in a hotbed till they are struck, and not be put into the open ground, as directed for those that require no heat. Soft-wooded kinds and herbaceous ones will not strike well in sand, and must therefore be planted in light mould. Geraniums may be struck in the open ground, covered with a hand-glass, all the summer months; but, where a large quantity are required, the best time is September. A slight hotbed, with a surface of six inches of light rich soil, and covered with a one-light frame, will strike them very well at this season. Some plants, as *Aloysia cyrtiodora*, &c., will not strike freely from cuttings, unless the two bottom joints are cut through in a transverse direction. It is a very erroneous opinion, entertained by some people, to think that a plant can only be preserved a few years by cuttings, and that it is only by seed that a plant can be raised so as to be propagated successively for ages. For myself, I should never be afraid of losing any plant after having once got it to thrive, and succeeded in propagating it by cuttings.

In my next article I will give instructions of increase by means of offsets and the various plant-divisions.

PART II.

MISCELLANY

OF

NOTES AND CORRESPONDENCE.

New and Rare Plants.

ANEMONE JAPONICA. JAPAN ANEMONE. (Bot. Reg. 66.) Ranunculaceæ. Polyandria Polygynia. A native of Shanghai, the Japanese port of China. It was sent by Mr. Fortune to the London Horticultural Society. It has bloomed in the greenhouse in the Chiswick garden the past autumn. The flower stems rise about two feet high, bearing numerous very showy blossoms. Each flower is about three inches across, of a very rich purple, crimson and rose shades, with a yellow disk of stamens, much the appearance of a semi-double Dahlia. It inhabits damp woods on the edges of rivulets, on the Kifune Mountain near the city of Miako in Japan. Dr. Siebold says that it grows too at considerable elevations on the mountains of the centre of Japan, and that it is much cultivated by the inhabitants for the sake of its very beautiful blossoms. It is expected to be quite suited to the open border during summer, and probably endures winter too. It increases by offsets. It merits a place in every greenhouse or flower-garden.

ANTHOCERCIS ILLICIFOLIA. HOLLY-LEAVED. (Bot. Mag. 4200.) Scrophularinæ. Didynamia Angiosperma. A native of the Swan River Colony, where it grows on river banks. It has bloomed in the Glasnevin Botanic Garden, Dublin. It requires a warm greenhouse in winter, but a cooler situation in summer. The root is perennial; the stems woody at the base, growing to five feet high, copiously branched. The flowers are bell-shaped, with a five parted limb. The corolla yellow, the tube bell-shaped, greenish lines outside, but within marked with deep blood-coloured ones. Each blossom is about half an inch long, and three-quarters of an inch across. The plant blooms very profuse, and has a very interesting appearance; and as by pinching the ends of the shoots lateral ones are produced, the plant may readily be made bushy, and be brought into desirable limits.

CAMPANULA SYLVATICA. WOOD BELL FLOWER. (Pax. Mag. Bot.) Campanulacæ. Pentandria Monogynia. A native of Nepal, where it inhabits moist and shady places. It is a dwarf growing plant, annual. The flowers are about the size of the common way-side Bell flower of our own country, but stand erect, and are more spreading at the mouth. They are of a rich deep blue with a white eye. It makes a beautiful showy border plant. J. Allcard, Esq., of Stratford Green, in Essex, has it in profusion.

CYMBIDIUM GIGANTUM. THE GIGANTIC. Orchidacæ. Gynandria Monandria. A native of Nepal. Mr. Gibson sent it to the collection at Chatsworth. The flowers are produced in nodding spikes of about two feet long. Each flower is three inches across. Sepals and petals green streaked with brown and red. Lip yellow with rich red spots around it, but the margin is white. It is a very fine and interesting species.

EVOLVULUS PURPUREA-CERULEUS. PURPLE-BLUE FLOWERED. (Bot. Mag. 4202.) Convolvulacæ. Pentandria Digynia. A very neat half-shrubby plant, twiggy, grows about two feet high, perennial, producing a profusion of lovely flowers, of the most intense blue colour with a white and red star-like eye. Each flower is about half an inch across. It inhabits rocks near the sea in Jamaica. It bloomed beautifully the past summer in the plant-stove at Kew. It is worthy a place in every garden.

GOVERNIA FASCIATA. LINDEN'S GOVERNIA. (Bot. Reg. 67.) Orchidaceæ. Gynandria Monandria. It is a native of the northern district of South America in Venezuela, in damp forests. The flowers are produced in an erect spike. A clear yellow marked with crimson bands. Each blossom is near two inches across. It is in the collection of Mr. Rucker, at Wandsworth.

HABROTHAMNUS CORYMBOSUS. CORYMB-FLOWERED. Solanæ. Pentandria Monogynia. (Bot. Mag. 4201.) A native of Mexico, sent by Mr. Low, of Clapton Nursery, to the Royal Gardens at Kew. It is a vigorous shrub, growing about five feet high, erect, and numerous branched. The flowers are produced in large terminal corymbose heads. The blossoms are tube formed, each an inch long, and a five parted limb about three-quarters of an inch across. It requires to be grown in a greenhouse in winter, but does best in summer in the open air. The fine heads of rich rose coloured flowers have a very showy and beautiful appearance.

LÆLIA PEDUNCULARIS. LONG STALKED. (Bot. Reg. 69.) Orchidæ. Gynandria Monandria. A native of Mexico. In the collection of G. Barker, Esq. Each flower is about three inches across, of a pretty lilac-rose colour, the lower part of the labellum being stained with dark crimson.

OXALIS SENSITIVA. SENSITIVE WOOD SORREL. (Bot. Reg. 68.) Oxalidaceæ. Decandria Pentagynia. It is a very little pretty annual plant from the East Indies. It is found wild in all the tropics of Asia. The leaves are like the common Humble plant, and in their native country, it is said, are so sensitive that they cannot bear the wind to blow upon them, or even that they should be breathed upon, for the least irritation they close up. The flowers are yellow, each about half an inch across.

REEVESIA THYRSOIDEA. THYRSE FLOWERED. (Bot. Mag. 4199.) Sterculiaceæ. Monandria Polyandria. A native of China, and is grown in the plant stove at Kew. It is a shrub growing about a yard high, branching. The flowers are produced in terminating corymbs, white with a tinge of cream colour. It is a very interesting plant. Each blossom is tube formed, near an inch long, and a five parted limb half an inch across.

RHYNCHOGLOSSUM ZEYLANICUM. THE CEYLONESE. (Bot. Mag. 4198.) A lovely little plant, growing a foot high, from Ceylon, annual or biennial. Flowers small, in long leafy racemes. Each blossom is tube-formed, half an inch long, blue on the upper side and nearly white beneath.

RUPELLIA LILACINA. LILAC FLOWERED. (Pax. Mag. Bot.) Acanthaceæ. Didynamia Angiosperma. (Synonym *Justicia glabrata*.) An evergreen stove shrub, growing about two feet high. It blooms through the winter. The flowers are larger than those of the well-known beautiful *R. formosa*, something like a bloom of the common Indian *Azalea phœnicea*. It deserves a place in every hot-house. It is in the collection of Messrs. Rollisson's.

STANHOPEA INODORA. THE SCENTLESS. (Bot. Reg. 65.) Orchidæ. Gynandria Monandria. From Mexico. It is in the collection of Messrs. Loddiges. Sepals and petals straw coloured. Lip at the base a rich Apricot red colour, other portions pale yellow. Each flower is four inches across.

VERONICA LINDLEYANA. DR. LINDLEY'S SPEEDWELL. Sent from New Zealand to the Edinburgh Botanic Garden, where it has bloomed in the greenhouse. It is an evergreen under shrub, producing numerous pendant spikes of white flowers, each spike being from four to six inches long. It is an elegant plant.

NOTICED IN BOTANICAL REGISTER, BUT NOT FIGURED.

IRIS STYLOSA. Grows very extensively on the mountains of Corfu and Santa Maura, where, it is said, the mountains are in a blaze of blue from its flowers in January or February. Its leaves are about a quarter of an inch wide, spreading in a flat tuft, its large gaudy flowers supported, like those of the Crocus, by a long tube of five or six inches long. It has not yet bloomed in this country.

CYTINUS HYPOCISTUS. The Dean of Manchester discovered this very interesting plant growing from the underside of the roots of a *Cistus* towards the rocky summit of Santa Decca, 2300 feet high, in Corfu. The flower is pure white, and the rest of the plant intense scarlet. The plant rises about five inches high, and the flowers have some resemblance to short thick white Jasmine flowers.

LANKESTERIA PARVIFLORA, an *Acanthus*-like plant. A native of Sierra Leone, sent to this country by Mr. Whitfield. It is an evergreen stove plant, with yellow tube flowers changing to white.

DESCRIPTIVE CATALOGUE OF NEW CAMELLIAS.—In former Numbers of our Magazine we have given from time to time a descriptive list of the new Camellias of superior merit as they bloomed, we now insert those which have been sent out since our last list was published, in order to assist our readers in making selections of additional beauties which so numerous comprise this very handsome and noble race of plants. We are glad to know that, with the annual increased taste for the culture of flowers, the Camellia has had a considerable increase of admirers, and each recent year the demand for plants has greatly increased.

Acidalia, fine rose and white, beautiful form.

Adelaide, very deep red, petals imbricated, (petals laid regular over one another like tiles,) very regular; of first-rate excellence.

Admiral Nelson, very delicate peach colour; very fine form.

Adonidea, rose, with pale white veins; superior variety.

Agnesi, rose, very regularly imbricated.

Alba Cassoretti, pure white, fine imbricated.

Alba fenestrata, superb pure white, perfectly imbricated; first-rate excellence.

Alba illustrata, pure white, fine imbricated.

Alba Londonensis, or *Candida superba*, pure white, very superior form, imbricated.

Alba lucina, very regularly imbricate, a pure white, with some of the petals striped with carmine. The foliage is very thick and striking.

Alexina, pure white, with some pretty streaks of flesh colour. The flower has much the appearance of a ranunculus in form. Petals round, and beautifully imbricated; of first-rate excellence.

Alsatica, waxy rose, globe-shaped, very double, and superb.

Amabilis, of New York, finely imbricated, pale rose, with tints of white; very handsome.

Americana, delicate rose-striped, and blotched with carmine; ranunculus-formed; very neat.

Appollinea, splendid rose, very large, and imbricated.

Archinto, beautiful cream colour, imbricated; fine.

Atrio-Violacea, red, changing to violet purple; large flower, very full centre; superb.

Alba Prima, very pure white; centre so double as to form a rising globe; most superb of all whites.

Aurora, rosy salmon, marbled with white; very pretty.

Baltimoreana, delicate white, striped with rose; very superb.

Barni d'Italie, beautiful rose, with white stripes; form of the old double white; very fine.

Baron Sigism de Pronay, white, tinged with delicate cream colour.

Baronne d'Udekem, salmon-bronze, with white shade up the centre of each petal; very perfectly imbricated; of first-rate excellence.

Bellina major, rich deep salmon, striped with white; very large and superior flower.

Belle Gioja, white, rose, and red, in shades, quite distinct; very double and handsome.

Belle Irene, fine rosy white, with yellowish stripes, imbricated; handsome.

Bazzoni d'Italie, brilliant coral colour, and pæony-formed.

Binneyi, cream coloured, beautifully striped with white, imbricated; very superb.

- Bostonia*, cherry coloured, very transparent; very large and superb.
Biflora, red, and in the centre two tufts of petals congregated; very handsome.
British Queen, pure white, with delicate rosy carmine stripes, imbricate, and sometimes so double as to be like a pæony-formed.
Brochii, handsome cherry colour, with white stripes, the form of the old double white; very superb.
Brooklynia, very like *Amabilis*; superb variety.
Brownii, very large, pæony-flowered; fine salmon red.
Burchelli, rose, with brown veins; very large and fine form.
Bruceana, very rich red, and an immense flower; very superb.
Brozzoni, bright cherry colour, imbricated; very superior.
Calderari, beautiful delicate rose; the outer petals round and imbricated; the centre ones numerous, and form a beautiful crown. It is a very large double flower.
Calyso, pure white, very large, very double; petals most numerous; being a very distinct flower.
Campo Molendina, cream colour, with white stripes, imbricated; very fine.
Canova, flame colour, at first changing to purple; very superior form.
Caroline Smith, rose, shaded with orange, and having a flame-coloured centre; very large and handsome form, imbricated.

(To be continued.)

NOTICE OF A BOTANICAL EXCURSION AT NAVARINO.—On the 28th of April, after a delightful voyage of six days, the weather beautiful and the sea calm, the *Beacon* entered the Bay of Navarino, whither we resorted for water, that article being so scarce at present in Malta, that ships are not allowed to water there. The Bay of Navarino is a semicircle, about three miles across at the mouth, the greater part of which is closed in by the rocky island of *Sphacteria*, in which Lord Byron has laid the scene of his *Corsair*. Near the southern extremity are the town and fort of Navarino, the former a small collection of dirty Greek houses; the northern termination is a high rock, on which are the ruins of the ancient *Pylus*. The southern half of the bay is bounded by high cliffs of limestone and tertiary clays; the northern by a low sandy shore, bordering an extensive marsh. In the distance are hills of considerable elevation, the sides of which seem to be covered with forests. A bare and rocky hill rises to the height of a thousand feet immediately behind the town. On landing, the first plant which strikes the eye of the visitor is the *Chrysanthemum coronarium*, the common Basket-flower of our gardens, which here exhibits its yellow blossoms in great profusion on every heap of rubbish. Ascending from the town to the heights, the blue flowers of *Psoralea bituminosa* first greeted us, and it was pleasant to look upon the abundance of green myrtle bushes. Thickly covering the limestone, and giving a brown hue to the vegetation, were bushes of various species of *Cistus*, with beautiful white or red flowers, and on the ground beneath them were their relations the *Helianthemum* in great numbers. Some pretty species of *Echium*, *Linum hirsutum*, *Anemone coronaria*, and some pretty Bell-flowers were among the gayest of the lesser plants; and in grassy places there was a rich contrast between the bright red flowers of *Tetragolobus siliculosus* and the as bright blue ones of *Anagallis Monelli*, a variety of our common *Anagallis*. It is singular that the two plants I have just mentioned should so habitually change colours as we advance southwards; for the former in the north is almost always yellow, and the latter most frequently red. In the crevices of the rocks were little tufts of *Valantia muralis*, and a pretty species of *Asplenium*. A little white-flowered *Allium* was very abundant everywhere, and *Cerintho aspera* was common. Among the most conspicuous bushes were *Phlomis fruticosa* and *Pistacia lentiscus*; whilst in many places the ground was thickly covered with *Salvia officinalis* and *Poterium spinosum*, the last a curious plant which I had not seen before, and which is very abundant here. Besides these, were numerous Thistles, some *Ranunculi*, and a few Orchideous plants which were new to me, though possibly common species in the south. A visit to the marsh yielded nothing remarkable, nor did

the sandy shore display many plants peculiar to itself; but the short time our circumstances permitted me to remain on that side of the bay was not sufficient for making any observations. Among the sands I noticed quantities of *Polygonum maritimum*. An excursion to the rocky island of *Sphaacteria* did not yield any additional species. We found it covered with bushes of *Cistus*, *Spartium*, *Pistacia*, *Phlomis*, and *Poterium*. *Matthiola incana* grew near the margin of the sea, with some *Statice* not in flower, and a yellow flowered plant which I do not as yet know the name of. Among the grasses, *Lagurus ovatus* and *Aegilops* were conspicuous. *Plantago lagopus* and *Psyllium* were not uncommon, and we noticed that *Plantago coronopus* was always very broad-leaved, so much so as at first sight to appear a different species. *Malcomia maritima* and *Koniga maritima* were both very abundant, and *Sedum cepæa* filled with its fleshy branches the crevices of the rocks. Generally speaking, the characteristic and prevalent plants around Navarino, those which gave a tone (if I may say so) to the vegetation, were *Cistus* and *Phlomis*. With the exception of the tertiary banks, which were limited in extent, they prevailed everywhere. Mr. Thompson did not forget to look for Algae, but found them almost all species which are common in the south of England. Among the most abundant and prettiest was the *Padina pavonia*, which, studding the bottom of the rocky pools, had a very elegant appearance beneath the water. The dredge brought up, however, some more characteristic Mediterranean species. In a few fathoms' water, *Zostera* is extremely abundant here.—Since the above was written, we have left Navarino, and after another voyage of seven days arrived at Syra. Hitherto I have only made one short excursion into the island. The vegetation is apparently very different from that of the Morea. The shore is clothed with *Mesembryanthemum* and some beautiful species of *Statice*. Inland, the country is well cultivated, chiefly for Vines; there are scarcely any trees, a few Crabs and one or two Olives being the only trees I have yet seen. I hope in the course of the summer to transmit more satisfactory botanical notices to the Society, and as the ship is to visit some of the less known islands before going to Candia, I expect to forward some interesting results.—E. FORBES.
Read before the Botanic Society of Edinburgh.

TO TAKE IMPRESSIONS FROM LEAVES.—Take green leaves of trees and flowers, and lay them between the leaves of a book till they are dry. Then mix some lamp-black with drying oil, and make a small dabber of some cotton wrapped up in a piece of small leather. Lay the dried leaf flat upon a table, and dab it very gently with the mixture till the veins of the leaf are covered; being careful not to dab it so hard as to force the colour between the veins. Moisten a piece of paper, or what is better, lay a piece of paper between some sheets of moistened paper for several hours, and lay this over the leaf that has been blackened with the liquid, press it gently down, and then lay a heavy weight upon it and press it down very hard. By this means you obtain a very beautiful impression of a leaf with all its veins; even the minutest will be represented in a more perfect manner than they could be drawn with the greatest care. Impressions thus taken may also be coloured in the same manner as prints.

ON GRASS SEEDS FOR A GRASS PLOT.—Having a grass plot of half an acre in preparation, I am desirous of knowing what are the best kinds of grass seeds to sow upon it, and the proportions of each, an early answer will oblige.

Tynemouth.

LOUISA.

In a former number of the Cabinet a list was given, which we refer our correspondent to. The following has been stated to be an excellent assortment:—*Poa nemoralis*, 1 lb. *Poa nemoralis sempervirens*, 1 lb. *Festuca duriuscula*, 2 lbs. *Festuca tenuifolius*, 1½ lb. *Poa trivialis*, 1 lb. *Lolium perenne tenue*, 12 lbs. *Trifolium repens*, 4 lbs. *Trifolium minus*, 1 lb. *Cynosurus cristatus*, 2 lbs.

HYACINTHS, CROCUSES, &c.—In reply in Lucy, we say, don't water them until they begin to push root. If the soil be just moist, it will do.

ON CARNATIONS AND PICOTÉES.—Louisa requested a list of a few of the best Carnations and Picotées. I have sent a list of the best I have seen at the principal shows this season.

J. WOOD.

CARNATIONS. *Scarlet Bizarres*: Twitchett's Don John, Martin's Splendid, Ely's Lord Pollington, Headley's William Cobbett, Rainforth's Game Boy, and Stroud's Duke of York. *Crimson Bizarres*: Puxley's Prince Albert, Ely's Lord Milton, Cartwright's Rainbow, Mansley's Robert Burns, Ely's Duke of Bedford, Holmes' Count Paulini. *Purple Flakes*: Mansley's Beauty of Woodhouse, Pollard's First-rate, Ely's John Wright, Nix's Lady Chetwynde. *Scarlet Flakes*: Jones' Brilliant, Chadwick's Brilliant, Weldon's Earl of Lichfield, Ivan's Marchioness of Westminster. *Rose Flakes*: Brook's Flora's Garland, Wilson's Harriet, Lowe's Marchioness of Westminster, Ely's Lady Ely.

PICOTÉES. *Red-edged, heavy*: Sharp's Duke of Wellington, Barraud's Cornelius, Wildman's Isabella, Brinkler's Master-piece. *Light-edged*: Sharp's Gem and Criterion, Kirtland's Duke of Wellington, Burroughes' Mrs. Bevan. *Purple-edged, heavy*: Mansley's Nulli Secundus, Sharp's Invincible, Dickson's Trip to Cambridge, Luff's Seedling. *Purple-edged, light*: John's Prince Albert, Brinklow's Purple Perfection, Burroughes' Lady Douro, Gidden's Vespasian. *Rose, or Scarlet-edged*: Burroughes' Miss Osborne, Willmer's Princess Royal, Barnard's Mrs. Barnard, Green's Queen Victoria, Barraud's Bride, Twitchett's Fair Rosamond, Wilson's Miss Fanny Irby, and Kirtland's Squire Annesley.

THE DEODAR, OR HIMALAYAN CEDAR (*Cedrus Deodara*).—Its botanical range extends from 7000 to 12,000 feet above the level of the sea; and, in its most congenial locality, attains a great height, and a circumference of above thirty feet. When young it closely resembles the real Cedar, but never sends forth spreading branches. The cone resembles that of the Cedar, and is preceded by a catkin of a bright yellow colour; so that the tree, when in full blossom, appears covered with a rich mantle of gold. These catkins are loaded with a golden dust, which the wind shakes from the branches in such quantities that the ground, for a considerable distance about the tree, becomes as it were sheeted with gold. So durable is its timber that some used in the building of one of the wooden bridges over the Jailum was found little decayed after exposure to the weather for above 400 years.—*Thornton's Gazetteer of India*.

OXALIS BOWEIANA.—Early the last spring I had two dozen plants of Oxalis Boweiana, and wanting something pretty to fill up a flower-bed in a warm situation in the flower garden, I resolved to make a trial with them. I turned them out as entire as possible the first week in May. They have flourished amazingly and are now (September 3) a vast profusion of bloom. The lovely rose-coloured blossoms producing a fine effect.

LOUISA.

Floral Operations for January.

IN THE GREENHOUSE.—Keep everything clean and in good order, that alone is a recommendation to anybody; at this season few plants are in flower, and therefore filth and confusion will be more perceptible. This department should have good attendance during this month, and place every family of plants together; they grow best so classed, because the same temperature and attention usually suits them all.

The herbaceous kinds of plants will require occasional waterings, but less frequent and in less quantities than the woody kinds. Succulents, as Aloes, Sedums, &c., should be watered very sparingly, and only when the soil is very dry. When water is given it should be as much as will moisten all the soil, where water is only given to moisten the soil an inch or two at the top and the other kept quite dry, the result is generally certain, namely, the death of the plant. The plan to be attended to is, water only when necessary, but a full supply when it is done, and water at the early part of the day so damp may be dried up before evening. Air should be admitted at all times when the weather is favourable, or the plants cannot be kept in a healthy state. When the weather

is damp, foggy, &c., do not give air, then let a dry air only be admitted. If any of the Oranges, Lemons, &c., have naked or irregular heads towards the end of the month, if fine mild weather occur, begin to reclaim them to some uniformity by shortening the branches and head shoots; by this attention they will break out new shoots upon the old wood, and form a regular head; be repotted in rich compost in April, reducing the old ball of earth carefully, and replacing the new soil. After shifting, it would be of great use to the plants if the convenience of a glass case could be had in which to make a dung-bed that the pots might be plunged in; this would cause the plants to shoot vigorously, both at the roots and tops. Repot *Amaryllis*, &c. Tender and small kinds of plants should frequently be examined, to have the surface of soil loosened, decayed leaves taken away; or if a portion of a branch be decaying, cut it off immediately, or the injury may extend to the entire plant and destroy it. *Gloxinias*, *Achimenes*, &c., now beginning to push, should be potted singly.

IN THE GARDEN.—*Auriculas* should, at the end of the month, be top-dressed, taking off old soil an inch deep, and replacing it with new; give air freely when dry weather.

Bulbs, as *Hyacinths*, &c., grown in water-glasses, require to be placed in an airy and light situation when coming into bloom. The water will require to be changed every three or four days. The flower stem may be supported by splitting a stick at the bottom into four portions, so as it will fit tight round the edge of the glass at the top.

The seed of *Calceolarias* should be sown at the end of the month, and be placed in a hot-bed frame, also cuttings or slips be struck, as they take root freely now. Sow *Pentstemon*. Seed does best sown now in pots.

Cuttings of *Salvias*, *Fuchsias*, *Heliotropes*, *Geraniums*, &c., desired for planting out in borders or beds during spring and summer, should be struck in moist heat at the end of the month, in order to get the plants tolerably strong by May, the season of planting out.

Dahlias.—*Dahlia* roots, where great increase is desired, should now be potted, or partly plunged into a little old tan in the stove, or a frame, to forward them for planting out in May. As shoots push, take them off when four or five inches long, and strike them in moist heat. Seed, sow at the end of month.

Herbaceous Perennials, Biennials, &c., may be divided about the end of the month, and planted out where required.

Hydrangeas.—Cuttings of the end of the last year's wood, that possess plump buds at their ends, should now be struck in moist heat; plant one cutting in a small pot (60's).

Mignonette, to bloom early in boxes or pots, or to turn out in the open borders, should now be sown.

Rose Trees, Lilacs, Pinks, *Hyacinths*, *Polyanthuses*, *Narcissus*, *Honeysuckles*, *Persian Lilacs*, *Primroses*, *Rhodoras*, *Persian Irises*, *Sweet Violets*, *Cinerarias*, *Hepaticas*, *Aconites*, *Jasmines*, *Azaleas*, *Lily of the Valley*, *Correas*, *Gardenias*, *Cyclamens*, &c., should regularly be brought in for forcing.

Tender Annuals.—Some of the kinds, as *Cockscombs*, *Amaranthuses*, &c., for adorning the greenhouse in summer, should be sown by the end of the month.

Ten-week Stocks, Russian and Prussian Stocks, &c., to bloom early, should be sown at the end of the month in pots, placed in a hot-bed frame, or be sown upon a slight hot-bed, also some other of the tender kinds, to prepare them strong for early summer blooming.

Protect the stems of tender plants with *Furze* branches, dry leaves, Fern, &c. The stems of tender climbing *Roses* are screened by such precaution.

Chrysanthemums.—The heads of decayed flowers should be dried, and saved for the seed, which probably they possess, and be sown in spring and raised in a hot-bed frame.

Protect beds of *Tulips*, *Hyacinths*, &c., *Carnations*, *Polyanthuses*, *Auriculas*, *Pinks*, *Pansies*, &c., with *Furze*, *Fir* branches, dry leaves, &c., or, if in pots, in frames.

Camellias, if not regularly supplied with soft, not too cold, water, the buds will drop; if too much, frequently that will cause them to drop too.



1, HINDSIA LONGIFLORA ALBA. 2, EVOLVULUS PURPUREO-CÆRULEUS.

Floricultural cabinet.

THE
FLORICULTURAL CABINET,
FEBRUARY 1st, 1846.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I. EMBELLISHMENTS.

1. HINDSIA VIOLACEA ALBA.

IN our Number for September, 1844, we figured the handsome species *H. violacea*, violet coloured flowers, and since that time many of our readers have seen that lovely species in bloom exhibited at the metropolitan and other first rate shows. Recently we saw the plant we now figure in fine bloom at Messrs. Hendersons, Pine Apple Nursery. The plant was cultivated in the stove, but we think it will also flourish in a warm greenhouse. It appears to be more vigorous than the *H. violacea*. The flowers are produced in fine corymbose heads, a most lovely white, longer in the tube than the other kind named, and very highly fragrant. It deserves to be in every collection.

2. EVOLVULUS PURPUREO—CERULEUS. PURPLE-BLUE FLOWERED.

Amongst the many novelties we found in the fine collection of plants in the Royal Gardens at Kew during the past summer, is the pretty lovely flowering plant now figured. It is a native of Jamaica, and requires to be grown in a plant stove or warm greenhouse. It is what is usually termed half shrubby, the shoots grow about half a yard high, and it blooms very freely during the summer. It deserves to be grown wherever it is practicable, being easy of culture, and remarkably showy and ornamental.

ARTICLE II.

THE METROPOLITAN FLORAL EXHIBITIONS.

ROYAL BOTANIC SOCIETY, *Regent's Park, July 2, 1845.*

THIS was the last exhibition of the Society for the season, and, we must briefly remark, it was an exceedingly good one, deficiency of space necessitates a very abstracted copy from our notes, and that only of the most useful portion, therefore these remarks will, generally speaking, convey but an inadequate conception of the brilliancy of the exhibition.

In Class I. we shall confine our notice to the

NEW OR RARE PLANTS

In bloom.

The first prize amongst which was awarded to Messrs. Henderson, Nurserymen, Edgeware Road, for a well managed plant of *Clerodendron paniculatum*; having a spike of bloom about two feet and a half long. The magnificent foliage and distinct bright orange blossoms, certainly render this kind one of the finest in the genera. The second prize was given to Mr. Green, gardener to Sir E. Antroub, Bart., Cheam, for *Tremandria Hugellii* (*Tetratheca hirsuta*), a neat greenhouse shrubby plant, from the Swan River Colony, and of which we published a representation in our Number for October last. The third prize was obtained by Messrs. Veitch, of Exeter, with *Hoya trinervis*, a species inferior to that old favourite *H. carnosae*. Extra prizes were awarded to Messrs. Veitch for *Pterodiscus speciosus*, a figure and notice of which plant we gave in Vol. XII., No. 142; to Mr. Hunt, gardener to Miss Trail, for a species of *Gesneria* from Mexico, a plant of tall upright growth, and having woolly yellow coloured flowers. To Mr. Taylor, gardener to J. Costar, Esq., Streatham, for *Chonostoma polyantha*, a very pretty plant, well adapted for bedding out, and of which a figure accompanied our Number in October last. To Messrs. Henderson for a fancy variety of *Pelargonium*, named *Anias*. This plant was perhaps more attractive than any other at the exhibition. Its habit is dwarf and remarkably compact, resembling that of the variety named "Queen Victoria," and to which it is quite equal in profusion of bloom; the flowers are, however, much more ornamental, being of a delicate blush white in the interior, surrounded with a broad and almost unbroken ring of beautiful rosy-purple, which is again surrounded on the margin of the petals with a belt of white. The plant altogether presents the appearance of a very lovely nosegay, and is sure to merit the approbation of all who grow it. We are not aware with whom it originated, but believe plants will be offered for sale in the spring ensuing. Messrs. Henderson also received another extra prize for *Oxybaphus longiflorus*, a noctyagiaceous shrub, with white flowers. An extra prize was also given to Mr. Barnes, gardener to G. W. Norman, Esq., Bromley, for *Blandfordia nobilis*.

In addition to these, and to which no awards was made, we noticed from Messrs. Henderson, *Gloxinia cartoniana*, a new species of *Angelonia*, and a well grown plant of *Scutellaria splendens*, having several spikes of its bright scarlet flowers.

Not in bloom, but remarkable for beauty in foliage or growth.

The first prize in this section was given to Mr. Mylam, gardener to S. Rucker, Esq., Wandsworth, for an extraordinary plant of *Nepenthes ampullacea*, with

c

several of its curious spotted and fringed pitchers; the plant was supported by an upright cylinder trellis, and was seven or eight feet high. The second prize, for *Jacaranda Clansoniana*, was given to Messrs. Henderson. Mr. Mylam obtained the third prize for a well-cultivated plant of *Nepenthes distillatoria*. And an extra prize was given to Messrs Veitch, for *Phyllocladus asplenifolius*.

CLASS II.

This comprises all collections exhibited in natural groups, excepting "Florists' flowers." The numerous and general elegance of the varieties of Cape heaths, at all times present an eminent object to the competitor in this class, and the assemblage of them on this occasion was therefore, as usual, extensive and excellent. The collections of Orchidaceous plants too were very good, although not numerous; and amongst the Cacti were a number of curious species of *Mammillaria*, which attracted a good deal of notice.

CLASS III.

Conducts us to the most distinguished portion of the show, the "florists' flowers," and here we intend to transcribe our notes more entire. Of the kinds grown in pots we will begin with the—

PELARGONIUMS.

By far the finest grown plants of which were exhibited by Messrs. Lucombe, Pince, and Co., of Exeter, and twenty-four such plants together we unhesitatingly assert we never saw before. The mere value of an award of the highest prize for these collections, could but be inadequate enough; the mere cost of bringing the plants about 200 miles to the show was, we understood, 1*l.* each; the object of the spirited growers, however, was not a lucrative one, and they received their reward by beating the London growers upon their own ground, and that is indeed a point of ambition not readily to be attained, but in this case very clearly done. The kinds were, Othello, Fairy Queen, Admiral, Black Prince, Stella, Dido, Leonora, Zanzummim, Stromboli, Cleopatra, Enchantress, and Meteor; each of these plants were about three feet high by four feet in diameter, and full of large heads of bloom.

In the Amateurs' division for 12 plants,

Mr. Staines, of Paddington, received the first prize; the varieties were *Superba*, *Madeline*, *Duke of Cornwall*, *Hebe*, *Rowena*, *Enchantress*, *Sunbeam*, *Achilles*, *Cedric*, *Fair Maid of Leyton*, *Grand Turk*, and *Duke of Wellington*.

In the collections of 12 new varieties amongst Amateurs,

The first belonged to Mr. E. Beck, of Isleworth, and contained Lord J. Russell, Zenobia, Sultana, Sunset, Deademona, Marc Antony, Bellona, Isabella, Rosy Circle, Margaret, Belinda, and Favourite.

Mr. Cock, of Chiswick, obtained the second prize; his varieties were Countess of Morley, Queen Philippa, Rosetta, Symmetry, Cinderella, Diadem, Sarah, Milo, Plantagenet, Emma, Cyrus Superb, and Erectum.

The third prize was obtained by Mr. Stains, of Middlesex Place, New Road, who had La Polka, Clio, Sunbeam, Amy Robsart, Andromache, Comet, and Emperor Nicholas, all varieties raised by Mr. Stains; and Hero, Lord Ehrlington, Sir R. Peel, Aurora, and Archbishop of Canterbury.

Nurserymen.

The first prize was given to Mr. Gaines, Battersea, who had Lady Sale, Camilla, Hebe, Witch, Prince of Wales, Caroline Douglas, Alba grandiflora, Trafalgar, Airanama, Rising Sun, Exoniensis, and Arabian.

The second prize was obtained by Messrs. Lucombe, Pince, and Co., of Exeter, with Othello, Superb, Meteor, Martha, Admiral, Duke of Cornwall, Deademona, Unique, Leonora, Zanzummim, Pluto, and Fairy Queen.

Messrs. Henderson obtained the third prize with Black Prince, Ackbar, Lord Ehrlington, Hesperis, Lady Mansell, Lady Farnham, Wonder of the West, Saxon King, Symmetry, Lady Vernon, Rising Sun, and Marchioness of Lothian.

ROSES.

20 varieties, open to all.

The first prize was deservedly obtained by Messrs. Lane and Son, of Berkhamstead, for very excellent managed plants of *Illustre Beaute*, *Madame Plantier*, *Anjou*, *Gracilis*, *Barbot*, *Yellow China*, *Flora M'Iver*, *Duchess of Sutherland*, *Acidalie*, *Diana Vernon*, *Eugene Beauharnais*, *Charles Duval*, *Felicite*, *Persian Yellow*, *La Pactole*, *General Allard*, *Bizarre Marl-tree*, *Mielles*, *Boula de Nautieul*, and *Celina*, a dark moss.

To Mr. E. Beck, of Isleworth, was given the second prize; his kinds were *General Allard*, *Duchess of Sutherland*, *Bourbon Queen*, *Robin Hood*, *Souvenir de 30 Mai*, *Charles Duval*, *Armosa*, *Great Western*, *Darius*, *Fulgens*, *Coupe de Hebe*, *William*, *Jesse*, *Countard*, *Prudence Ræser*, *Hamon*, *Emperor Probus*, *Augustine Marget*, *D'Aguessa*, *Comte de Paris*, and *Yellow China*.

The third prize was given to Messrs. Paul and Son, of Cheshunt, who showed *Augustine Marget*, *Princesse Marie*, *Celime*, *Moire*, *Phoenix*, *Madame Nerard*, *Taglioni*, *Fulgurie*, *Clara Silvain*, *Madame Despres*, *Belle Marie*, *Crimson Madame Despres*, *Charles Duval*, *Pauline Plantier*, *Mrs. Elliot*, *Aulernon*, *Miss Glegg*, a pretty white; *Great Western*, *Duchess of Sutherland*, and *Madame Beaureau*.

An extra prize was given to Mr. Laing, of Twickenham; these varieties were *Bourbon Queen*, *Triomphe de Gand*, *Eugene Beauharnais*, *Bon Silene*, *Princess de Joinville*, *Madame Despres*, *Mrs. Bosanquet*, *Duchess of Buccleugh*, *Belle Marie*, *Le Baron Louis*, *Cramoise superieur*, *Brennus*, *Angolique*, *Armosa*, *Celsa Multiflora*, *Nouvelle Bourbon*, *General Soyer*, *Safrano*, *Julie Mansais*, and *Amie Vibert*.

CALCEOLARIAS.

A first prize was awarded to Mr. Gaines, whose collection was the only one produced; it comprised compact dwarf specimens of *Ada*, *Flash*, *Prince Alfred*, *Lady Ann Charteris*, *Tigrina*, and *Kinghornii*.

FUCHSIAS.

12 varieties, open to all.

Equal first prizes were awarded to Mr. Robinson, gardener to James Simpson, Esq., Pimlico, and Mr. Gaines, Battersea. The collection belonging to the former comprised Prima Donna (Harrison's), Lowryii, Vesta, Chandlerii, Exoniensis, Gem (Harrison's), Formosa elegans, Hope (Barnes's), Magnet, Robinsonii, Epsii, Magnet and Coronet. Mr. Gaines showed, Duchess of Sutherland (Gaines's), Hector, Zenobia (Harrison's), Expansa, Decora, Gigantea, Fosterii, Cassandra, Pearl (Harrison's), Britannia, and Reflexa. An extra prize was given to Mr. Ottey, of Peckham, for Marginata, Coronet, Brockmannii, Gem, Chauverii, Kppsii, Defiance, Lowryii, Fulgens multiflora, Sir H. Pottinger, Paragon, and Britannia.

CLASS IV.

CUT FLOWERS.

In this class the exhibition of Roses and Pinks was very extensive, and some of the collections appeared unusually fine; our limited space, however, will only permit us to enumerate a few of the best flowers in the large stands of Roses.

In the collections of 100 varieties, Messrs. Laue and Son obtained the first prize; amongst these we noticed extremely fine specimens of Bougere, Strombio, Devoniensis, Chenedolle, Sophia de Marully, Princesse de Lamballe, Bizarre Marbre, Egle, Cambronne, Blairii No. 2, La Grandeur, Prince Albert (Hooker's), Baronne, Provost, Duchess of Sutherland, and Emma Dampiere.

Mr. Francis, of Hertford, obtained the second prize; we remarked fine blooms of Blanchfleur, Octavie, Vandael, Fanny Parisot, Angela, Coup d'Hebe, and Great Western.

The third prize was awarded to Mr. Rivers, of Sawbridgeworth; in whose collection the best blooms were Victor Hugo, Cambronne, Chenedolle, La Vesuve, Madame Rameau, Felicite, Jenny, Great Western, Rose Devigne, Emerance, Cramoise picotee, Charles Fonquier, La Ville de Bruxelles, Duke of Devonshire, Paul Perais, Triumph d'Angers, Sylvain, Amandau, Duchess of Buccleugh, and Decandolle.

Extra prizes were given to Mr. Cole, of Bath, Mr. Laing, of Twickenham, and Mr. Paul, of Cheshunt. The best blooms in these three stands were Sandeur Panache, Magna Rosea, Safrano, Nina, Niphotos, Coup d'Hebe, Colombrienne, Heureuse Surprise, Duc de Treviso, Boule de Nantieu, Fanny Bias, La Volupte, Grandissima, Echantress, Julie d'Etanges, Triumph de Guerin, and Madame Campan.

In the collections of 50 varieties, open to Amateurs only,

Mr. Collison, of Bath, was first; Mr. Milne, gardener to G. Chauncey, Esq., of Little Morden, Herts, was second; and Mr. Betteridge, of Abingdon, third. Besides which several extra prizes were awarded.

In collections of 25 new and fine varieties,

To Mr. Paul was given the first prize; the kinds were Galien, La Boquetiere, La Reine, Clementine Siringe, Baronne, Provost, Lansii, Marquise Boucella, Dr. Maix; Lady Canning, Souchet, Cornice de Seine et Marne, Princess Clementine, Du petit Thouars, George Cuvier; Oeillet Parfait, Josephine Oudin, Colonel Coombes, Persian Yellow, Unique de Provence, Alice Le Roi, Niphotos, Nisida, Madame Roussel, Richeheu Duval, and Belle de St. Cyr.

The second prize was obtained by Messrs. Laue, whose varieties were Visconte de Schymacker, Duke of Tuscany, Cupidon, Souchet, Hercules

Oberlin, Belle Moccanise, Comte de Murrinais, Solfatara, Comte de Rambuteau, Souchet, Bourbon, Charles Souchet, Madame Souchet, La Grenadier, *Georgius Cuvier*, Queen Elizabeth, Persian Yellow, Yolande de Arragon, Queen, Duc de Chartres, Laurence de Montmorency, Countess Plater, Sextus Popinus, Marie de Champlonis, and Beaufremont.

Mr. Rivers gained the third prize with Madame Zoutman, Deuil de Dumont d'Urville, La Esmerelda, Madame Bréon, Helene Mauget, Eclair de Jupiter, Dombrouske, Comte de Paris, Pourpre de Tyre, Marguerite d'Anjou, Safrano, Elizabeth Plantier, Sextus Pompeius, Josephine Malton, La Reine, very fine; Moire, Imperatrice Josephine, Marie de Medicis, Solfaterre, Ebene, Souvenir de la Malmaison, Devoniensis, Belle Menes, and Persian Yellow Briar.

Mr. Francis obtained the fourth prize with Mrs. Elliott, Madame Laffay, Duc de Nemours, Madame Damene, Augustine Mouchelot, Earl Talbot, Dr. Marjolin, Riversii, Lady Alice Peel, Baronne Prevost, Duchess of Sutherland, William Jesse, Unique de Provence, Lamarque à Cœur; Hooker's Prince Albert, Flora M'Iver, Chenedole, Safrano, Eliza Sauvage, Eugene, Adam, Triomphe de Laquere, Coupe d'Hebe, and Great Western.

In addition to the above, several other collections were shown.

PINKS.

24 distinct varieties.

Mr. Turner of Chalvey, obtained the first prize, with Omega, Tower, Prince of Wales, Mary Ann, Weedon's Victoria, Masterpiece (Turner's), Model, Melona, Napoleon, Majestic, Little Wonder, Hardstone's Prince Albert, Eclipse, Alpha, Defiance, President, Rosanna, Miss Blackstone, Willmer's Victoria, Beauty, Warden, Enchantress, Duchess of Kent, and Gem.

Messrs. Norman, of Woolwich, obtained the second prize, with Wallis's Unique, Willmer's Sarah, Cousins's Village Maid and Little Wonder, Church's Wonder, Hodges' No. 166, Warden, Garrett's Queen of Roses, Headley's Duke of Northumberland, Willmer's Duchess of Kent, Weedon's Queen Victoria, Lady Flora Hastings, Brown's Eclipse, Alpha, Jelph's Marianne, Gem, Butler's Sedling, Kirtland's Gay Lad, Dr. Daubeney, Cousins's Paragon, Willmer's Queen Victoria, Omega, Norman's 1844, and President.

The third prize was awarded to Mr. Ward, of Woolwich, for Omega, Gay Lad, Earl of Uxbridge, Unique, Mars, Weedon's Queen Victoria, Garrett's Prince Albert, a very good light rose; Matilda, Bunkell's Prince Albert, a good flower, in the way of his Queen Victoria; Alpha, Hardstone's Queen Victoria, President, Ward's Great Britain, one of the best; Brown's Eclipse, Willmer's Duchess of Kent, Huntsman, a good dark laced flower; Hart's Prince Albert, Warden, Melona, Duke of Northumberland, Majestic, Mary Ann, Defiance, and Henry Creed.

An extra prize was given to Mr. Willmer, of Sunbury, for Omega, Attila, Bunkell's Elizabeth, Prince Albert, Willmer's Prince of Wales, Church's Rosanna, Willmer's Sarah, Melona, Parker's Queen Victoria, Bexley Hero, Church's Navigator, Hardstone's Queen Victoria, Gay Lad, Brown's Eclipse, Alpha, Brown's Model, Duchess of Cornwall, Weedon's Queen Victoria, Little Wonder, Duke of York, Jelf's Mary Ann, Defiance, and Willmer's Queen Victoria.

An extra prize was also awarded to Messrs. Brown and Attwell, of Uxbridge, in whose stand we noticed fine flowers of Omega, Kentish Wonder, Rosanna, Gem, Gay Lad, and Bunkell's Queen Victoria.

Besides the above, several other stands were shown.

VERBENAS.

24 distinct varieties.

The first prize was given to Mr. Smith, of Hornsey, who had *Cælestina*, *Delicata*, *Superba*, *Messenger*, *Duchess of Sutherland*, *Excelsa*, *Hebe*, *Beauty*,

Rose d'Amour, Lilac perfection, Atro-purpurea, Princess Royal, Queen of England, The Giant, Poulton, Miss Watson, Beauty Supreme, Vesta, Beauty, Garland, Enchantress, Boule de feu, Defiance, and Emma.

The second prize was given to Mr. C. Turner, of Chalvey. The varieties were:—Enchantress, Lilac perfection, Favourite, Speciosa, Beauty Supreme, Delicata, Surprise, Blue Queen, Lovely Rambler, Emma, Defiance, Rosea multiflora, Excelsa, Princess Alice, Atro-sanguinea, White's Perfection, Giant, Rose d'Amour, Garland, Array, Ingramii, Messenger, Triumphant, and Princess Royal.

Several other collections were also shown, but in which we did not notice anything different to the preceding.

CLASS V.

SEEDLINGS.

PELARGONIUMS OF 1844.

No prizes were awarded, but a certificate of merit was given to Mr. E. Beck, for *Prairie Bird*, a compact flower, but rather too rough on the margin, the colour is lower petals, blush; upper ones, dark crimson belted with blush. Several other varieties were shown, the best amongst which, however, was *Miss Halford* (Gaines) and *Desdemona* (Beck), which have already been described in our pages.

PELARGONIUMS OF 1845.

Mr. Whomes, gardener to K. Foster, Esq., of Clewer, who has long been famous for having raised many of the best kinds grown; obtained the first and only prize awarded in this class, for *Paragon*, lower petals, bright rosy-purple; upper maroon, belted with crimson; a very even, distinct, well-shaped flower, and is likely to be an improvement on *Sir R. Peel*. Several certificates of merit were awarded by the judges, and of which Mr. Whomes obtained three for the following very deserving kinds; viz.: *Satellite*, lower petals, bright-rosy scarlet, with a small blotch in each, and terminating in white at the interior part; upper petals, deep maroon, belted with light crimson: *Painted Lady*, lower petals, lively ruby-pink, having a small spot of deeper colour in each, and terminating in the centre with pure white; upper very dark maroon, surrounded with crimson red, and belted with pink on the margin; a distinct and very promising flower: *Aspasia*, lower petals, clear light crimson; upper ones maroon, belted with red, a pretty and novel flower, but rather too angular. Mr. Catleugh, of Chelsea, received two certificates for *Salome* and *Gertrude*. The former has slightly feathered lower petals, of a pretty purple colour, and the upper ones being maroon, with a crimson belt, it is, however, somewhat angular in shape. *Gertrude* has light pink lower petals, white in the centre, and upper ones crimson maroon surrounded with pink. This appears to be a good kind, though we liked better a similar coloured flower named *Kuclid*, to which no prize was awarded; it possessed a more even, smooth surface, and was larger without being a loose flower. Amongst the other unsuccessful sorts, the only one deserving notice was Mr. Kinghorn's *Robert Burns*, a clear ruby-purple coloured flower, having a large maroon blotch in the upper petals, and of a very good shape.

CALCEOLARIAS.

Mr. Standish, of Bagshot, obtained first prizes for *Matchless* and *Trumpeter*,—the former, an excellent variety, cream colour, with rosy-purple chequered blotches; the latter yellow, with coarse dark blotches. *Oriada*, from Mr. Standish,

was considered first-rate, but not being entered for competition, received only a certificate: it is cream-coloured, with rosy spots. Mr. Gaines obtained a second prize with Alpha, bright yellow, with light crimson marks.

In addition to these numerous others were shown, all in the old spotted style, but of which we already possess so many that it is difficult to produce a really distinct variety; through the aid of Mr. Plant, however, we hope soon to see the striped flowers introduced.

FUCHSIAS.

Many of these were exhibited, but the only good and distinct one was shown by Mr. Hally of Blackheath, named *Candidissima*. It is a very pretty flower, rather larger than *Venus victrix*, and appears to be a free bloomer, the tube and sepals are white and the corolla is light crimson. No award was made.

PINKS.

Extra prizes were given to Mr. Ward, of Woolwich, for *Great Britain*, and to Mr. Turner, of Chalvey, for *Masterpiece*. Each of these flowers we have described and published figures of in the *CABINET*. Mr. Turner also had *Beauty*, a much better flower than many which are generally shown, Mr. Hembrey, of Croydon, showed *Rubens*, a rich crimson laced flower of general good quality.

In addition to these seedlings we have now enumerated, many others of *Verbenas*, *Petunias*, *Pansies*, *Cinerarias*, &c. were displayed, and of some of the best we made notes, but they do not appear deserving mention.

ARTICLE III.

OBSERVATIONS ON THE ARRANGEMENT OF PLANTING ORNAMENTAL TREES AND SHRUBS, &c.

BY AN AMATEUR LANDSCAPE GARDENER.

THE present season of the year being that in which the laying out and planting of pleasure gardens is usually carried on, and as it is an operation of considerable gardening importance, not merely for the present, but for the future too, to do it as effectually as circumstances admit of, both in forming the ground, and arranging the trees, shrubs, and flowers, I am induced, as a constant practitioner, to forward some hints in furtherance of so desirable an object.

The style of this sort of a pleasure garden very much depends on the extent, situation, and character of the ground, that I can only, in this place, offer more than general remarks.

The plantation must be carefully formed to suit the building it is to shelter and ornament. As the villa and ornamental cottage form the largest portion at present of edifices that claim a pleasure garden, I shall therefore confine my observations to grounds attached to these dwellings. As such houses are generally built on situations too flat to admit of much variety, the first study should be to find how and where we can break the level by throwing up elevations, so as to answer the double purpose of obscuring private walks, and screening other parts from the wind.

But it requires considerable ingenuity to hinder these elevations from having the appearance of artificial ones, which would make them as ridiculous as a circular lake on a lawn. As the removal of earth is attended by the expense of labour only, this is one of the most advantageous manners of laying out money in the formation of a shrubbery, since five feet lowered in one part, and raised above, will give a slope or bank about double that height. A considerable effect will thus be obtained; for in a flat country a small elevation gives a great command of prospect, and adds itself considerably to the beauty of a landscape, especially when planted with lofty growing trees, as larches and pines. An undulating appearance may be given to level ground by judiciously planting the trees and shrubs.

The too general error of planting close to the dwelling-house should be avoided; for although such a plantation may have a pretty appearance in the infant state, a few years' growth will cause it to cast a gloom over the apartments, and keep off a free circulation of air. Besides, as plants give out a noxious air in the evening, it should be more particularly guarded against in this moist atmosphere.

The training of trees to the walls of houses is also objectionable, as they cause damp, harbour insects, and collect leaves and other substances that become offensive by their putrefaction, whilst the view of the plants themselves cannot be enjoyed from the windows. However, all offices, out-houses, and unsightly buildings, may be covered with vines, and ornamental climbers.

However small the plantation be, those abrupt terminations which mark the limits must not be permitted. The shrubbery should harmonize with the surrounding scenery, and appear to blend with it into one.

The plants which stand nearest the dwelling must be of the dwarf

kind, and of the most beautiful sorts. The trees, also, should be selected so as to correspond with the style of building. The villa shows best when surrounded by light ornamental trees, such as the birch, the acacia, the sumach, the laburnum, and cypress; and a clump of poplars may sometimes be introduced, so as to break the line with good effect. The cottage may have more rustic trees; while to the castle belong the oak, the ash, and the pine: the mansion admits of all at their proper distance, and in suitable situations.

One of the most important things in planting is to attend particularly to the shades of green, especially where the view from the house or lawn catches the trees. Flowers, which Pliny calls the joys of the trees, continue but for a short period in comparison to the duration of foliage; therefore the picture should be formed by judiciously contrasting the greens. Even the effect of perspective may be considerably increased by the proper arrangement of hues. Trees whose leaves are grey or bluish tint, when seen over or between shrubs of a yellow or bright green, seem to be thrown into the distance. Trees with small and tremulous leaves should wave over or before those of broad or fixed foliage. The light and elegant acacia has a more beautiful effect when its branches float over the firm and dark holly or bay-tree. In some situations the bare trunk of trees may be shown; in some it should be concealed by evergreens and creepers. Vines, also, may be suffered to embrace it, and form natural festoons where the extent of ground will allow of wilderness scenery. In all situations nature may be assisted, but should never be deformed by clipping; for ingenuity ought to be employed to disguise art, not to expose it.

The beauty of plants cannot be displayed when they are too much crowded; as they are then drawn up into unnatural shapes. Therefore the oftener open spaces can be admitted, the more will the shrubs exhibit themselves to advantage, and the more cheerful will be the walk; for it becomes insipid and gloomy when confined for any distance. The winds also claim our attention. Care must be taken so to arrange the position of the trees, that only those gales which are most congenial to the growth of particular plants should be allowed access to them.

The undulating appearance of a plantation will be considerably assisted by a gradual progression from the lowest shrub to the highest

tree, and again, from the highest to the lowest. But as some shrubs will not flourish under certain trees, their respective situations demand consideration. These shrubs may indeed exist under such unfavourable circumstances, but their unhealthy appearance will never be pleasing. Where the shade of any tree is too powerful for laurel or privet to thrive, ivy may be planted with advantage, if it be desirable to cover the ground with evergreen.

In proportion as the shrubbery or plantation recedes from the dwelling, it should become more rural in its character, more especially if the house be in the cottage style. Here climbers, and such plants as require the support of others, are to be introduced. The most delightful groups in a pleasure-ground are generally those where nature, freeing herself from the shackles of art, depends only on her own assistance for support. Her beauty is chiefly to be seen there where her various creations combine spontaneously, and without restraint.

The means by which these plants raise themselves up, so as to offer their flowers to the sun, are as various as they are curious, and they seldom blossom whilst trailing on the ground. The ivy and bignonia ascend by the help of little fibres, which fix themselves to the bark of trees or crevices in walls so tightly as to render their disengagement a difficult thing to be accomplished without injury to the trunk or building they are attached to. The honey-suckle, like the hop, twines itself spirally around the trunk or branches of trees, and often clasps them so closely as to make an impression on the hardest timber. Others, as the vine and passion-flower, rear themselves by means of corkscrew tendrils, which hold so fast that the strongest winds seldom disunite them from their support. Some plants climb by means of a hook in their leaf-stalk, or have a kind of vegetable hand given them, by which they are assisted in mounting, as the pea and several others.

To return from this digression.—The sombre, gloomy walk of yew, cypress, or holly, should lead to the spot from which there is the most beautiful prospect, or to the gay parterre, where Flora has diffused her flowery beauties; as the contrast, particularly if sudden, adds greatly to the cheerfulness of the terminating view.

Bad taste is seldom more conspicuous than when we see trees or plants marshalled in regular order, and at equal distances, like beaux

and belles standing up for a quadrille or country dance. Where the situation will permit, four or six lilacs should be grouped in one place, and as many laburnums in another, so as to give effect in various parts by a mass of colour.

The guelder rose should appear as if escaping from the dark bosom of evergreens, and not a plant should be set in the ground without adding to the harmony of the whole. A shrubbery should be planted as a court or stage dress is ornamented, for general effect, and not particular and partial inspection. Boldness of design, which seems to be more the offspring of nature and chance than of art and study, should be attempted; but though boldness is what the planter should aspire to, all harshness, or too great abruptness, must be avoided, by a judicious mixture of plants whose colours will blend easily into one another.

The most beautiful shrubs should occupy the most conspicuous and prominent places. For instance, a projecting part of the plantation should be reserved for the purple rhododendron, the flaming azalca, and other bog plants. Here it must be observed, that unless proper soil be provided for these American plants, the cost of the shrubs will be lost, as they will soon decay when not placed in earth congenial to their nature. With these shrubs may be planted the hardy kinds of heath, as the same soil suits both species. With respect to evergreens, considerable judgment is required in order to relieve their uniform appearance during winter. This may be done by skilfully arranging different kinds, and those with variegated leaves, or such as retain their brilliant berries during the cold months.

However, a well planted shrubbery depends not so much for its beauty on the expense or rarity of the plants it contains, as on the selection of trees and shrubs which succeed each other in blossoming throughout the year, or whose various-coloured fruits grace them for the longest duration of time. We shall, therefore, not dwell upon those plants alone that are the ornaments of the summer season, but also point out some that will contribute to the gaiety of morning and evening of the year; so that the gloom may be banished at all times as much as possible from the grove, and nature's repose shortened between the plaintive good-night of autumn and the cheerful good-morrow of spring.

(To be continued.)

ARTICLE IV.

REMARKS UPON THE PROPAGATION OF PLANTS.

BY A LONDON NURSEYMAN.

3. *Offsets.*—Bulbous and tuberous-rooted kinds of exotics are most commonly raised this way, or else by seed ; but seedlings being so much longer than offsets before they arrive at a state for flowering, occasions this mode of propagation to be seldom resorted to. The bulbous genera, such as *Ixia*, *Gladiolus*, *Morcea*, *Antholyza*, &c., after they have done flowering, should be suffered to dry till the following October, when they must be taken out of the pots, for repotting in fresh soil ; this is the time for increasing by offsets, which, after they are divided and taken from the main or principal bulb, may be potted in small separate pots, in a mixture of equal parts of loam, decayed leaves, and sandy peat ; the pots being previously well drained by broken potsherds. After they are potted they must be set in a cool frame, requiring only to be protected from frost and heavy rains. The smaller bulbs may remain here all the season, but the larger ones, and those likely to produce flower-stems may, after the pots are well filled with roots, be taken and placed in a convenient place in the greenhouse, where, if kept regularly watered, they will flower well.

4. *Layers.*—Many kinds of exotics, as *Punica*, *Nerium*, *Jasminum*, *Myrtus*, &c., succeed best by this mode of propagation. In April or May choose for this purpose some pliable young branches of the desired kinds, properly situated for laying ; let them be brought down gently and inserted into the pot of the parent plant, or, where this is not conveniently practicable, into other pots, filled with the same kinds of compost, and placed near enough for this purpose. Secure them firmly down with wooden pegs, and cover them about an inch and a half with soil ; then lay a little mulch or some mowings of short grass on the surface to preserve the moisture ; refresh them with water when required. Some of the shoots thus laid will be effectually rooted the same summer, or by Michaelmas, and fit for repotting into separate pots as directed for cuttings ; such as are not, must be permitted to remain till the following spring.

5. *Inarching, or Grafting by approach.*—*Citrus*, *Punica*, and

similar exotic genera are often propagated by this means on stocks raise from pips. When it is intended to inarch any particular kind, it must be observed that the stock to be grafted on, and the plant from which the graft is procured, must stand near enough to allow the branch intended to be inarched, as it grows upon the parent tree, to approach and join readily to a convenient part of the stock, forming a sort of arch; for the graft is not to be separated till some months after performing the operation, nor is the head of the stock to be cut off till that time. Some genera, as *Camellia*, *Magnolia*, &c., are often inarched upon the commoner kinds, or those species that will strike root readily from cuttings. From April to June is the most proper time for performing this mode of propagation. Two or three kinds are sometimes inarched on the same graft, which makes a pleasing and varied appearance.

6. *Root Divisions*.—Cultivators at the present day often resort to this mode in increasing those exotics that will not seed or propagate readily by other means; but this way cannot be acted on extensively, unless the propagator has the acquisition of a conservatory to supply his wants; and then care must be taken not to approach too near, or to injure the parent plant. As large pieces as can be spared must be procured and planted in the same kind of soil as the whole plants, in pots proportioned to the size of the roots, with their points above the surface, when they must be plunged in a prepared hotbed, not too hot, nor containing much rank steam. A little air must be allowed in the middle of the day, and shade when the sun is powerful. After they have taken fresh root, and the tops begin to produce leaves, they must be removed and hardened by degrees to the respective departments. Many species of the ornamental and interesting genus *Acacia* can only be readily increased by this means, as *A. decipiens*, *Sophora fulcata*, &c.

7. *Leaves*.—Some exotics, as *Hoya carnos*a, *Gloxinias*, *Gesnerias*, &c., propagate freely by this mode, and often easier than any other way. In the spring months let the leaves of the kinds intended to increase be taken off close to the stem, and inserted into the same kind of soil in pots. The whole of the petiole (leaf-stalk) and about half an inch of the leaf should be covered; let it lie in a slanting direction, and cover the pot with a bell glass, laying it into a slight hotbed; and if regular watering be given and the steam out of the

glasses be constantly wiped it will soon strike root. If any should happen to damp off, let it be instantly removed, or probably it may endanger the whole. As soon as the leaves begin to put out young shoots, take the glass off and remove them to a dry hut for a few days previous to potting off.

8. *Suckers*.—Exotics, similar to Pitcairnia, Aloe, Yucca, Tillandsiæ, &c., after they have done flowering, generally produce in the summer months suckers for propagation, either from the stem or roots. These can be carefully taken off in the following spring, potted, plunged, and otherwise treated as root divisions.

9. *Plant Divisions*.—The exotics that are generally propagated by this mode are deciduous herbaceous kinds, as Lobelia unidentata, lutea, and campanuloides, Sowerbea juncea, and such like. The plants are best divided when they receive their summer potting, and then their divisions can be potted into separate pots, and placed along with their fellow-denizens in their proper departments. I have endeavoured to illustrate by the above hints (for such they are) the principal modes of increasing exotics used by propagators, with the way each mode may be performed with success.

REVIEW.

The Lady's Country Companion, or, How to enjoy a Country Life rationally. By Mrs. Loudon, author of "Gardening for Ladies, &c.," with an Engraving on Steel, and Illustrations on Wood. London, Longman and Co., 1845.

(Concluding Notice.)

THE following observations upon Cape bulbs and on the utility of a reserve garden, may be read with advantage, as also may the remarks on the management of annuals, for which, however, we must beg leave to refer our readers to the work itself, the extracts we have already given being a sufficient indication of its general merits. In conclusion we have only to observe that to all those desirous of "enjoying a country life rationally," the book will be found an excellent guide, and it has our most cordial recommendation.

"Many persons fancy that the Cape bulbs require to be taken up

every year, but this is altogether a mistake; all the kinds of gladiolus, ixia, tritonia, and other similar plants, will live in the open ground, and flower well, if suffered to grow in masses, which would be killed by a single English winter if planted separately. The finest bed of the scarlet gladiolus I ever saw was at Blair-Adam, near Stirling, where it was suffered to remain year after year without alteration; and the Honourable and Reverend William Herbert, now Dean of Manchester, in his celebrated work on the Amaryllidaceæ, states that he has had beds of gladiolus, ixia, tritonia, and other Cape bulbs, at Spofforth, in Yorkshire, which have remained for several years without protection in the open ground. Some persons say that, by manuring the beds every year, tulips and hyacinths may also be grown in the same beds without taking up, for several years in succession; but this I have never seen tried.

“ You must observe that you have no chance of keeping your flower-garden in a proper state, unless you have in some retired place what is called a *reserve-garden*, in which the plants are brought forward till they are in a proper state for transplanting into the proper flower-garden. This reserve-garden is generally placed near the stable, both to have it out of sight, and for the convenience of manure; as it must contain hotbeds and frames for rearing tender annuals, striking cuttings, and, in short, for performing all those gardening operations which require to be carried on behind the scenes. In this reserve-garden you must bring forward your Californian annuals.

“ Choose a piece of hard ground, a walk will do, or any place that has been much trodden on, and cover it about an inch thick with light rich soil. In this the seeds of the annuals should be sown the first week in September, and suffered to remain till the bulbs have faded, and the annuals are wanted to cover the beds, which will probably be about April. The annuals must then be taken up with the spade, in patches, and being removed to the flower-garden, they must be laid carefully on the beds, so as to cover them exactly; the spaces between the patches being filled with soil, and pressed gently down, so that the surface of the beds may be as even as possible. These annuals will come into blossom in May, but they are killed by the dry heat of summer; and, though they would sow themselves if permitted to seed, it is better to remove them as soon as they have

done flowering. The worst of permitting plants to sow themselves is, that early in autumn the flower-beds will have a very untidy appearance, as the ground not only becomes rough, but it is covered with dead stalks and leaves, which have always a most miserable and desolate appearance; and these cannot be removed till the seed has fallen, while the beds must not be forked over and raked for fear of destroying the seedlings. It is therefore much better, as soon as the annuals have done flowering, to take them up, and throw them away; a supply of seed being preserved by having left some plants in the reserve-ground for that purpose. A second or spring sowing of the Californian annuals may be made in the reserve-ground, to be ready for use in case any should be wanted in the autumn."

PART II.

MISCELLANY

OF

NOTES AND CORRESPONDENCE.

New and Rare Plants.

ACACIA LONGIFOLIA. LONG LEAVED. Leguminosæ. Polygamia Monœcia. A very handsome greenhouse shrub, of graceful form. The flowers are produced on the terminal and lateral shoots, each laden with numerous large globular blossoms, of a rich orange-yellow colour. It has been introduced into this country many years, but is not grown as it merits. Its natural habit is to form a lofty plant, but by stopping the leading shoots, lateral ones are freely produced, and the plant may easily be kept a handsome blooming bush, at any desired height. It succeeds best when grown in equal portions of sandy loam, peat, and leaf mould. (Pax. Mag. Bot.)

BUDDLEA LINDLEYANA. THE PURPLE CHINESE BUDDLEA. Scrophularine. Didymia Angiosperma. The Horticultural Society's collector in China, Mr. Fortune, discovered the present plant almost immediately on his arrival at Chusan. He sent a Chinese drawing of it in bloom, and a packet of seeds. A dried specimen branch has since then been received; it was about half a yard long, having seven spikes of flowers. Each spike is from three to five inches long. The blossoms are tube formed, each about an inch long; the limb spreading, four parted; the outside of the blossom is a pretty violet purple; the upper surface of the limb is a rich crimson red, showing a white inside of the tube; the spike, which is figured here, is four inches and a-half long, and represents about sixty flowers. The plant is shrubby, very branching, and about as hardy as the Fuchsia in general. It is easy of cultivation, and deserves a place in every greenhouse and conservatory. It appears to be likely to grow against an open wall during summer, and not to have a very rich soil to grow in. Now the plant can be procured at about a shilling each. (Bot. Reg., 1846, No. 4.)

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CATTLEYA MAXIMA. THE LARGER. (Bot. Reg. 1.) Orchidæ. Gynandria Monandria. This fine flower approaches to *C. Mossia* and *C. labiata* in many particulars; but it differs in its very hollow wavy petals, the others being nearly flat and thin; the lip is very remarkable, too, for its beautiful net-work of dark crimson veins and purple streaks. When the flower at first opens, too, it is nearly white, and its colours become more vivid every day. Each flower is about six inches across.

CUPHEA CORDATA. LARGE RED FLOWERED. (Bot. Mag. 4208.) Lythraceæ. Dodecandria Monogynia. A native of Peru, from whence seeds were sent to Messrs. Veitch, of Exeter, by their collector, Mr. Lobb. It has bloomed in the stove in their establishment. It is what is termed half shrubby, the flowers being produced in terminal panicles, formed of loose racemes, each bearing from two to four large (for the genus) bright scarlet-red flowers. Very showy and handsome.

FAUREA OBOVATA. OBOVATE-LEAVED. (Bot. Mag. 4205.) Loganiacæ. Pentandria Monogynia. A very handsome hot-house shrubby plant, much like an intermediate growing *Magnolia*. In a pot it grows about six feet high. The flowers are tubular, funnel shaped, having a wide spreading five-lobed limb, three inches across; they are of pretty cream colour, very fragrant. It is in the Kew collection, as well as the Liverpool Botanic Garden.

GLOXINIA PASSINGHAMII. MR. PASSINGHAM'S. (Pax. Mag. Bot.) Gesneraceæ. Didynamia Angiospermia. This new *Gloxinia* was found in Rio Janeiro in a deep ravine, much shaded, high up the Coreovado mountain. It is of a very vigorous habit, profuse bloom, and large rich deep violet purple flowers. It has been received by Mr. Passingham, of Trew, in Cornwall, with whom it has bloomed.

HEINSIA JASMINIFLORA. JESSAMINE FLOWERED. (Bot. Mag. 4207.) Rubiacæ. Pentandria Monogynia. A native of Sierra Leone, a small hot-house shrub, having somewhat the appearance of a *Gardenia*, with flowers much like a *Jasmine* in form, but an inch and a-half across, white, with a yellow eye. It requires to be grown in the stove. It is in the collections at Kew and the Earl of Derby's.

IPOMÆA SIMPLEX. SIMPLE-STALKED. (Bot. Mag. 4206.) Convolvulacæ. Pentandria Monogynia. A native of South Africa, and is in the collection at the Earl of Derby's garden, Knowsley Park. The root is a solitary tuber, larger than a good-sized apple. From it stems are produced about a foot long, slender and feeble, clothed with long, slender, almost grass-like leaves. It only requires a small pot, to be placed in a greenhouse, and not any trellis or other support for the stems. The flowers are about two inches across, a beautiful rose colour, with five deeper coloured plaits. The plant blooms very freely, and is very pretty.

LOBELIA GLANDULOSA. THE GLANDULAR. (Bot. Reg. 6.) Lobeaceæ. Syngenesia Monogamia. From North Carolina, and has bloomed in the garden of the Horticultural Society. The stem rises about four feet high; the spike of flowers is about a foot long, a pale rosy-lilac colour. Each blossom is about three-quarters of an inch long.

MASIFACANTHUS SINENSIS. CHINESE BEARDWORT. (Bot. Reg. 2.) Verbenacæ. Didynamia Angiospermia. Sent to the Horticultural Society's garden by their collector from China; discovered in Chusan. It is an autumn-flowering herbaceous plant, growing about half a yard high, forming neat tufts. The flowers are small, produced on little clusters, and forming whorls around the stem. It is a neat and pretty plant, requiring to be grown in a greenhouse.

MELASTOMA SANGUINEA. BLOODY-VEINED. (Pax. Mag. Bot.) Melastomacæ. Decandria Monogynia. A native of Sunda Islands, where it grows to a bush six feet high. It requires a stove here, and there grows about three feet high. The flowers are about four inches each across, of a beautiful soft rosy-pink colour, forming a blaze of beauty. It has been some years in this country, and

is in the collection of stove plants in the garden of R. G. Loraine, Esq., Wallington Lodge, Carshalton, in Surrey.

NEPTUNIA PLENA. DOUBLE-YELLOW WATER SENSITIVE. (Bot. Reg. 3.) Fabaceæ. Polygamia Monœcia. (Synonym, *Mimosa plena*.) A native of Brazil, Mexico, &c. It is a hothouse water plant, and, in order to succeed, must be grown in water that is eighty degrees of temperature. It has a pretty Mimosa-like foliage, and the flowers form pendant yellow heads.

PERISTERIA BARKERI. MR. BARKER'S DOVE FLOWER. (Bot. Mag. 4203.) A native of Xalapa, in Mexico. Mr. Ross, the collector of G. Barker, Esq., discovered it, and sent it to that gentleman. It is a magnificent flowering species; they are produced in long pendant racemes. Each blossom is globular, an inch and a-half in diameter, a rich yellow colour.

FROM COMPANION TO THE BOTANICAL MAGAZINE, NOTICED, BUT NOT FIGURED.

PLATYCERIUM BIFORME. An Epiphytal Fern, from East and West Indies. It is the noblest of all Ferns of its class. A fine plant is flourishing in the Kew Gardens, and another in the Palm stove at Sion Gardens.

PLATYCERIUM SIMMARIA. A native of Sierra Leone, and was presented by Messrs. Loddiges to the Kew collection. A fine Fern for the hothouse.

MANIETIA UNIFLORA. From New Andalusia. Mr. Purdie, the collector for the Royal Gardens at Kew, discovered it, and sent it there. The whole plant is hairy, even the outside of the flower. It blooms very copiously from August to Christmas, when it arrives at perfection, and appears likely to continue paler as they advance in age. It is a very distinct and fine species.

PASSIFLORA DIFFORMIS. From the West Indies. It is a stove climber, blooming through autumn and winter. It does well trained to a balloon-formed trellis. The flowers are rather small, green and black.

DESCRIPTIVE CATALOGUE OF NEW CAMELLIAS (*continued from page 21*)

- Carbonara, very dark and very double, superb
 Castiglioni, very double white, the centre is pale yellow, with green stripes; superb.
 Catharine Longhi, very large and double, a rich carmine colour; very superb.
 Centifolia (Low's).
 Cinzia anemoneflora, very double, rosy salmon, finely shaded with white; very handsome.
 Cœlestina, a delicate rose, form of the old double white; very handsome.
 Columbo, fine red large flower, very handsome. The outer petals form a semi-double flower, imbricated. The centre is very full, like the Pomponé; very pretty.
 Clio, beautiful rose, exquisite form; very double.
 Comte de Rouvroy, a very large flower, deep rich red, with delicate white spots.
 Commensa, imbricated form, very extra; rose, with white streaks.
 Comte de Flandre, very large and very double, rich carmine; handsome, extra.
 Contessa Antonin di Castelbarco, a very double flower, imbricate, the outer petals white, and the other portion cream colour, spotted; very superb.
 Concolor perfecta, fine form, double, reddish purple; magnificent.
 Comtesse de Spauri, white, tipped with red, similar to a Dahlia; very handsome.
 Cooper (not Cooperii), a very elegant form, and a brilliant.
 Cushingtonia, very large and double, brilliant cherry, with large white spots; handsome.
 Dahliaflora ignea, imbricate, brilliant red; superb.
 Darius, imbricate, red, marbled with white; very beautiful.
 De Notaris, very superb form, crimson, shaded with purple violet; fine flower.
 Diva Maria, very beautiful double rose; superb.

- Duc de Brabant, very superb form, pure waxy white, with carmine stripes; a very beautiful kind.
- Duca de Litta, imbricate, very double, rich red spotted, and striped with white; very superb.
- Ducea de Reichstadt, imbricate, very double, deep carmine, spotted with white; very beautiful.
- Duchess of Northumberland, imbricate, very large, beautiful waxy white, striped and spotted with rich rosy red; very superb flower.
- Duchessa de Litta, the outer petals imbricate, white, the centre petals in very neat bundles, a delicate yellow; very magnificent.
- Duchesse de Nemours, imbricate, very transparent white, beautifully spotted with carmine; very handsome.
- Duchesse d'Orleans, form of a *Ranunculus*, beautifully imbricate, pure waxy white, blotched and spotted with carmine; a very beautiful kind.
- Dunlap's Imbricata, very fine rosy carmine.
- White Warratah, pure white; a most superb Pœony flowered kind.
- Elena Monti, imbricate, very double, white, striped and spotted with carmine rose; very superb.
- Ugoni, imbricate, white, spotted with red.
- Emélia Gavuzzi, the outer petals white, with red shades; fine form.
- Taverna, form of a *Ranunculus*, outer petals carmine, streaked with white; the centre ones white, spotted with carmine; very superb.
- Estherii, a very large, double, globe-shaped flower, pure white, dappled with rose.
- Exquisite (Low's), form of a *Ranunculus*, bright red, very double; a very handsome kind.
- Franklin, a very large, double, noble, white, handsome flower; it is stated to be nearly as large as a Pœony; very magnificent.
- (To be continued.)

In former Volumes of the *CABINET* we noticed the magnificent Conservatory at his Grace the Duke of Devonshire's at Chatsworth, and desirous of giving our readers further information as to its very successful adaptation for the purpose designed, we extract from the *Gardener's Chronicle* of December 13th the following particulars:—The superstructure represents a curvilinear dome of progressive elevation, the lower side-wings rising 25 feet from the ground-level, from the angle of which the upper dome rises to a final elevation of 60 feet, the length being 270 feet, the width of the ground area is nearly 100 feet, and the upper dome is 70 feet in diameter. The principal side-fronts face the east and west. The general entrance is at the north end, forming a direct communication with the grand central carriage-road which passes through the conservatory to the south end in immediate connection with the pleasure-ground which surrounds it. The ground-level is formed into four pits or borders, two on each side of the central path; a pathway is also formed between the borders for convenience of access to the plants. A platform surrounds the entire area along the side-wings for the arrangements of plants in pots, the north-east end of which is occupied with a select collection of Ferns; amongst them were vigorous plants of *Aspidium Serra*, *Polypodium spectabile*, *Gymnogramma ochracea*, *Woodwardia radicans*, *Asplenium nidus*, *Loucheitis pubescens*, a species of great delicacy and beauty; *Cænopteris japonica*, and *Aspidium falcatum*. On the right of the north-east front is an immense pile of rocks, from the recesses of which some of the larger growing Ferns are thriving luxuriantly. Amongst the most conspicuous, were—*Cibotium Barometz*, having noble fronds or leaves 9 feet in length; *Asplenium præmorsum*, *Didymochlæna pulcherrima*, and *Dicksonia ferruginea*. As a continuation of the east front, the artificial rock-work extends 54 feet at a lower elevation, and forms an aquarium (for water-plants), having a massy belt on the back-ground, formed of fossil-rock and tufa stone, amongst which were growing in ornamental masses luxuriant specimens of *Caladium odoratum*, *C. esculentum*, *Arum venosum*, the latter remarkable for its immense leaves. The elegant *Papyrus antiquorum* was displaying its

graceful terminal clusters of rush-like stems, from 6 to 9 feet in length, near the margin of the water. *Limnocharis Humboldtii* was also unfolding its lovely lemon coloured blossoms, which reposing upon the dark green foliage had an admirable effect. Amongst the miscellaneous species upon the margin and inner verge, were extraordinary plants of *Richardia æthiopsica*, forming a striking ornament throughout the winter. *Nymphaea cœrules*, with azure-blue flowers, and *Sagittaria gigantea*. On the more elevated parts of the rock, large masses of *Hedychium coronarium*, *Alpinia nutans*, and various species of *Canna*, together with the beautiful-habited *Papyrus*, formed a highly picturesque background to the whole. Passing the aquarium, a noble group of the *Musaceæ* appears as a commencement of the east front ground-pit, in which all the plants now under notice are planted. The species of *Musa* comprise *rosacea*, *coccinea*, *Cavendishii*, and a new species with large irregular purple blotches upon the leaves. These noble specimens were from 18 to 20 feet in height, with leaves from 7 to 10 feet in length, and 2 to 3 feet in width, and presented a rich contrast to the differently-habited plants around them.

Amongst the finest plants, as they occurred in continuation, were *Erythrina Crista-galli*, 8 feet in height, and the same in diameter, producing a second crop of flowers, in spikes of from 2 to 3 feet in length. *Salvia splendens*, 8 feet in height, and 25 feet in circumference, with several hundred spikes of orange-scarlet flowers. An *Aralia*, a noble plant, 16 feet in height; *Euphorbia jacquiniflora*, 7 feet in height, and 12 feet in circumference, promising a rich harvest of bloom; *Hibiscus Jerroldianus* (same as *speciosus*) 10 feet in height; this is a fine herbaceous species, with rich crimson flowers, 6 and 8 inches in diameter. *Michelia oblonga*, a fine specimen, 16 feet in height, and 36 feet in circumference, producing thousands of fragrant blossoms, similar to those of a *Magnolia*. *Lagerstrœmia indica*, 12 feet in height, and 22 feet in circumference, crowned with rose-coloured blossoms; and *Carica Papaya*, 12 feet in height. On the south end border were *Lagerstrœmia elegans*, a magnificent shrub, 14 feet in height and 44 feet in circumference (differing from *L. indica* in its more diffuse habit of growth) producing hundreds of rosy-pink blossoms. *Hibiscus sinensis Parkeri*, 13 feet in height, and 21 feet in circumference, one of the most beautiful shrubs for conservatory culture, and ornamented with crimson blossoms from 4 to 6 inches in diameter. *Saccharum officinarum* (the Sugar Cane) about 20 feet in height, *Cookia punctata*, a neat habited tree, with dark green winged leaves. *Inga Harrisii*, 13 feet in height, and 30 feet in circumference, producing thousands of delicately-shaded crimson, tassel-like flowers in spring. Amongst plants on the east front border, were amazingly fine specimens of the old stove shrub, *Eranthemum pulchellum*, from 2 to 3 feet in height, and 12 feet in circumference; *Justicia speciosa*, equally neat in its habit of growth, producing numerous purple flowers in autumn; *Geanera oblongata*, also one of the finest winter-flowering plants. On the south-west end border are beautiful specimens of *Cycas revoluta*, and *C. glauca*, extending their elegant feather-like fronds, or leaves, 24 feet in circumference. A large and noble group of *Musa Cavendishii* introduces the visitor to the west front, in the border of which was a matchless specimen of *Poinsettia pulcherrima*, 17 feet in height and 18 feet in circumference, displaying its gorgeous orange-scarlet bracts, from 12 to 18 inches in diameter; also, *Hibiscus rosa sinensis*, 10 feet in height, and 24 feet in circumference, forming a compact tree, richly ornamented with scarlet blossoms; *Lantana mixta*, 10 feet in height, and 33 feet in circumference uniformly studded with orange blossoms; *Duranta Plumierii*, 11 feet in height, and 15 feet in circumference.

A varied feature is assumed in the continuation of the west-front border, by a group of plants, representing the natural order of Cycads, in the genera of *Zamia* and *Cycas*, planted between the interstices and divisions of artificial rock-work, representing their native modes of growth; amongst these were *Cycas revoluta*, 21 feet in circumference, and *C. circinalis* (Sago Palm), 15 feet, the latter producing its elegant feather-like fronds (from a central column), 5 feet in length. *Zamia pungens*, 8 feet in height, and 26 feet in circumference. *Z. Altensteinii*, 10 feet in height, and 27 feet in circumference. *Z. caffra*, with column-like stems, 10 feet in height, each surmounted with a crown of winged

leaves, 15 feet in circumference. *Elate sylvestris*, with a pillar-like trunk or stem, 10 feet in height. In the west-front border is a small but luxuriant grove of the Mandarin Orange (*Citrus nobilis*), many of the plants measuring 6 feet in height, and from 10 to 14 feet in circumference. On the north-west end, a plant of *Abutilon striatum* presents a fine appearance, being nearly 20 feet in height, and as much in circumference, gaily ornamented with hundreds of pendant bell-shaped orange blossoms. Near this were two magnificent specimens of *Brugmansia suaveolens*, nearly 15 feet in height, and 40 feet in circumference, on each of which were several hundred flowers, each measuring 12 inches in length. A portion of the west and the north-west borders is margined in front with a row of the *Agave Americana*, relieved with occasional specimens of the variegated variety, and with good effect. Amongst the plants on the west border, which appeared well adapted for under shrubs, or for marginal effect, were *Justicia carnea superba*, a beautiful shrub, with large terminal racemes of lively rose-coloured flowers; *Stachytarpheta mutabilis*, with long flower-spikes of light rose and pink; *Melastoma Mexicanum*, a neat habited species, with white blossoms; *Goldfussia anisophylla*, a compact and dwarf-growing shrub, producing purplish-lilac *Gloxinia*-like flowers in winter; *Barleria purpurea*; *Ruellia formosa*, a valuable but neglected plant, which produces numerous scarlet blossoms in spring and summer; and lastly, a plant which every body ought to possess, viz., *Franciscea Hopeana*; this has a good habit, is easily managed, and a profuse bloomer; it is also admirably adapted for forcing. Amongst the principal plants occupying the inner borders right and left of the great central path, were two specimens of *Dracæna fragrans*, 16 feet in height; *Charlwoodia stricta*, 18 feet; and a noble specimen of *Sabal Blackburniana*, extending its elegant fan-shaped fronds nearly 60 feet in circumference; *Bombax aculeata*, 35 feet in height; *Carolinea alba*, 22 feet in height; *Hibiscus liliflorus*, a wonderful tree-like specimen, 18 feet in height, and 48 feet in circumference, expanding hundreds of bright rose-coloured flowers, 6 to 8 inches in diameter; *Coccus plumosa*, 40 feet in height, with terminal feather-like fronds, each 18 to 20 feet in length; *Cassia corymbosa*, a very beautiful object, 14 feet in height, and 36 feet in circumference, having large terminal racemes of golden yellow blossoms, forming a fine contrast with its dark green Ash-like leaves; *Dracæna draco* (the Dragon tree), with a trunk or stem 18 feet in height; *Crotalaria laburnifolia*, 18 feet in height, with drooping panicles of flowers like the *Laburnum*, but of a larger size; *Araucaria Braziliensis*, 30 feet in height. Several fine specimens of *Furcraea gigantea*, extended their immense crowns of leaves upwards of 40 feet in circumference; *Hibiscus splendens* (producing large light rose-coloured flowers, from 6 to 9 inches in diameter), 30 feet in height; *Sterculia platanifolia*, 40 feet in height; *Acacia cornigera*, 12 feet in height; *Erythrina arborea*, a robust branching species, 12 feet; *Corypha umbraculifera* (the Great Fan Palm), 20 feet; *Corypha australis*, 14 feet in height, and 45 feet in circumference; *Cedrela serrata*, a fine habited plant, with beautifully-winged leaves, from 4 to 5 feet in length. Amongst plants of medium sized growth, were *Strelitzia reginae*, *S. angustifolia*, *S. ovata*, *S. juncea*—the last four species are extremely valuable for winter decoration; *Solanum Quitense*, an extremely large-leaved species with axillary blue flowers, 2 inches in diameter; *Hedychium Gardnerianum*, one of the most ornamental of the genus; *Hibiscus militaris*, a neat herbaceous species, 8 feet in height; the buff-flowered *H. Cameronii*; *H. palustris*, a robust herbaceous species, with large pink blossoms, 5 inches in diameter; *H. hirta*, a fine herbaceous species, 5 feet in height; the well-known *Manihot*, a very ornamental half-shrubby species, with red and yellow blossoms, measuring from 6 to 8 inches across. A central cross-path passing at right angles from east to west, has parallel borders planted with *Musa sapientum*; the specimens being from 16 to 25 feet in height, have a very noble and imposing effect. From the south entrance the general view of the inner borders is partially intercepted by a lofty screen, formed of *Bambusa arundinacea*, (the Himalayan Bamboo Cane), which is admirably adapted for the object in view, on account of its immensely long and elegant reed-like stems. Returning to the north entrance, attention is again arrested by the immense mound of rock and tufa-stone, which is rendered not less subservient to ornamental effect, than to

its primary object—of access to the upper dome; on its summit were specimens of the Mandarin Orange, 25 feet in circumference, bearing a profusion of fruit; also luxuriant plants of *Anona Cherimolia* (Cherimoyer). Various species of *Opuntia* (Indian Fig), and *Epiphyllum*, also gave a diversified feature, whilst the numerous masses of Ferns and of the still more delicate *Lycopodium* (Club Moss), and the creeping stems of the *Ficus repens* (*F. stipulacea*?) adhering to the surface, softened down the rugged outline to the harmony of natural effect. In the centre of this artificial arrangement is the winding ascent to the gallery and the spacious dome, which is nearly 30 feet from the ground-level, and from whence a view may be obtained of the central area, where the rare and unique specimens which meet the eye impress the stranger with a belief that every climate under heaven has contributed its richest ornaments to adorn this magnificent fabric."

LONDON HORTICULTURAL SOCIETY'S MEETING, REGENT STREET, JAN. 20.—Mr. Green, gardener to Sir E. Antrobus, of Cheam, Surrey, obtained a Banksian medal for a splendid plant of *Epiphyllum truncatum*, three feet high and four feet in diameter, covered with bloom. This plant had been grafted on *Cereus speciosissimus*, which Mr. Green finds to be the best stock for grafting Cacti on. His treatment is, to graft in March, to grow the plants two summers in a stove until they attain some size, and then to place them in an airy greenhouse until the spring, when they are moved to the stove, and from thence to a warm exposed part of the garden when their growth is over, which sets the flower buds; the plants are then kept in a warm greenhouse, and removed to the stove or forcing-house in succession; they are occasionally watered with guano water. Mr. Green also exhibited a fine specimen of *Gesnera zebriana*. Messrs. Veitch and Sons, of Exeter, exhibited two *Collanias*, upright, rigid *Alstromeria*-like plants, which were received from Peru, and supposed to be hardy; the flowers are drooping, of a pinkish colour, tipped with dull green. Mr. Fraser, of Lea-bridge road, had a new *Epacris*, of a deep crimson, a desirable variety named *fulgens*. Mr. Dawson, of Brixton-hill, had a fine bush of *Erica Banksii*, and one of *E. mutabilis*; the former obtained a certificate. Mr. Ivery, of Peckham, sent a seedling *Cineraria*, named *Conqueror*, of excellent properties; the colour is deep rich blue, and the petals fine.

WEIGHELA ROSEA (Order *Caprifoliacea*).—This shrub, which is supposed to be capable of enduring our climate without protection, was sent from China by Mr. Fortune to the Horticultural Society. It is a shrub like a *Syringa*, with smooth whitish stems, the young ones green, and slightly veined. The flowers are axillary and terminal, three or four springing from each end of the shoots; they are tubular, the mouth reflexed, and cut into five equal segments. Each flower is rather more than an inch long and one and a-half in diameter; a deep rose outside and white within. Blooming so freely renders it a very beautiful and showy plant.

Floral Operations for February.

IN THE GREENHOUSE.—Keep everything clean and in good order, that alone is a recommendation to anybody; at this season few plants are in flower, and therefore filth and confusion will be more perceptible. This department should have good attendance during this month, and place every family of plants together; they grow best so classed, because the same temperature and attention usually suits them all.

The herbaceous kinds of plants will require occasional waterings, but less frequent and in less quantities than the woody kinds. Succulents, as *Aloes*, *Sedums*, &c., should be watered very sparingly, and only when the soil is very dry. When water is given it should be as much as will moisten all the soil, where water is only given to moisten the soil an inch or two at the top and the other kept quite dry, the result is generally certain, namely, the death of the

plant. The plan to be attended to is, water only when necessary, but a full supply when it is done, and water at the early part of the day so damp may be dried up before evening. Air should be admitted at all times when the weather is favourable, or the plants cannot be kept in a healthy state. When the weather is damp, foggy, &c., do not give air, then let a dry air only be admitted. Cause the plants to shoot vigorously, both at the roots and tops. Repeat *Amaryllis*, &c. Tender and small kinds of plants should frequently be examined, to have the surface of soil loosened, decayed leaves taken away; or if a portion of a branch be decaying, cut it off immediately, or the injury may extend to the entire plant and destroy it. *Gloxinias*, *Achimenes*, &c., now beginning to push, should be potted singly.

IN THE GARDEN.—*Auriculas* should, at the end of the month, be top-dressed, taking off old soil an inch deep, and replacing it with new; give air freely when dry weather.

Bulbs, as *Hyacinths*, &c., grown in water-glasses, require to be placed in an airy and light situation when coming into bloom. The water will require to be changed every three or four days. The flower stem may be supported by splitting a stick at the bottom into four portions, so as it will fit tight round the edge of the glass at the top,

The seed of *Calceolarias* should be sown at the end of the month, and be placed in a hot-bed frame, also cuttings or slips be struck, as they take root freely now. Sow *Pentstemon*. Seed does best sown now in pots,

Cuttings of *Salvias*, *Fuchsias*, *Heliotropes*, *Geraniums*, &c., desired for planting out in borders or beds during spring and summer, should be struck in moist heat at the end of the month, in order to get the plants tolerably strong by May, the season of planting out.

Dahlias.—*Dahlia* roots, where great increase is desired, should now be potted, or partly plunged into a little old tan in the stove, or a frame, to forward them for planting out in May. As shoots push, take them off when four or five inches long, and strike them in moist heat. Seed, sow immediately.

Herbaceous Perennials, Biennials, &c., may be divided about the end of the month, and planted out where required.

Mignonette, to bloom early in boxes or pots, or to tarn out in the open borders, should now be sown.

Rose Trees, Lilacs, Pinks, *Hyacinths*, *Polyanthuses*, *Narcissus*, *Honeysuckles*, *Persian Lilacs*, *Primroses*, *Rhodoras*, *Persian Irises*, *Sweet Violets*, *Cinerarias*, *Hepaticas*, *Aconites*, *Jasmines*, *Azaleas*, *Lily of the Valley*, *Correas*, *Gardenias*, *Cyclamens*, &c., should regularly be brought in for forcing.

Tender Annuals.—Some of the kinds, as *Cockscombs*, *Amaranthuses*, &c., for adorning the greenhouse in summer, should be sown immediately.

Ten-week Stocks, Russian and Prussian Stocks, &c., to bloom early, should be sown in pots, placed in a hot-bed frame, or be sown upon a slight hot-bed, also some other of the tender kinds, to prepare them strong for early summer blooming.

Protect the stems of tender plants with Furze branches, dry leaves, Fern, &c. The stems of tender climbing *Roses* are screened by such precaution.

Chrysanthemums.—The heads of decayed flowers should be dried, and saved for the seed, which probably they possess, and be sown in spring and raised in a hot-bed frame.

Protect beds of *Tulips*, *Hyacinths*, &c., *Carnations*, *Polyanthuses*, *Auriculas*, *Pinks*, *Pansies*, &c., with Furze, Fir branches, dry leaves, &c., or, if in pots, in frames.

Camellias, if not regularly supplied with soft, not too cold, water, the buds will drop; if too much, frequently that will cause them to drop too.

Pelargoniums.—(See Articles on Culture.) To have show specimens this month, repot, and thin shoots, &c. Allow plenty of air.

Roses.—Plant immediately, or will be too late for success this season. Now give a good top-dressing to, of well-rotted manure. Prune them, weak-growing kinds cut in short, to two or three buds. More vigorous leave more lengthly. Arrange to have the branches left tolerably apart.



1, *TETRAITHECA HIRSUTA* 2, *CUPHEA CORDATA*.

Floricultural Cabinet.

THE
FLORICULTURAL CABINET,

MARCH 1st, 1846.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I. EMBELLISHMENTS.

1. CUPHEA CORDATA.

THIS beautiful and very showy flowering plant is a native of Peru, from whence it was sent to Messrs. Veitch's, of Exeter, three years ago, with whom it bloomed last summer, and from whence our drawing was made. It is what is termed half-shrubby; and although it has been grown in a hot-house with Messrs. Veitch's, yet is very likely to flourish in the green-house. It is readily increased by cuttings, and merits a place wherever it can be grown.

2. TETRATHECA SPECIOSA. SHOWY TETRATHECA.

Our drawing of this very pretty plant was made from a specimen recently bloomed in Mr. Low's nursery at Clapton.

It is a native of the Swan River colony, where it was discovered, and seeds were transmitted to Mr. Low. The plant forms one of the most pleasing and elegant of little greenhouse shrubs; the light and airy appearance of its branches, ornamented with bright starry flowers, having a very attractive effect.

This, and other kinds belonging to the natural order Tremendraceæ, succeed well in the ordinary light composts of peat soil and loam, which are used for delicate greenhouse plants in general, a free drainage and plenty of air in the summer season being the essentials.

In transferring the drawing to the plate, we regret that our artist, by

mistake, added an erroneous specific name. *T. hirsuta* is a species figured in No. 152, by its original name of *Tremandra Hugelii*, and the only resemblance which this kind bears to that variety is in the flowers; here, however, they possess this very decided advantage, that of continuing open many days, whilst those of *T. hirsuta* close on the evening of the day they open.

ARTICLE II.

THE METROPOLITAN FLORAL EXHIBITIONS.

HORTICULTURAL SOCIETY, *July 12, 1845.*

THIS terminated the grand shows for the season, and the splendour of the closing scene was worthy of that magnificent display with which it was ushered in. Many of the plants produced on this occasion were superior to similar ones exhibited at previous shows, particularly in the Orchids and Heaths.

The collections of greenhouse and stove plants were not only numerous but rich in fine specimens of cultivation. Our limited space, however, will only permit us to address our remarks to the Florist's flowers, with this brief observation, that in new and rare plants, the best were *Fuchsia serratifolia*, *Siphocampylus coccineus*, and *Calandrinia umbellata*, each of which we have already figured and described. Of a lower rank with these was a graceful little novelty named *Salpichroa glandulosa*, with trailing shoots and pale yellowish green pendant tube-shaped flowers; and a new *Statice* from China, with minute pale yellow and white flowers, pretty, but by no means remarkable. We now, therefore, pass on to the

FLORISTS' FLOWERS IN POTS.

PELARGONIUMS.

12 new and first-rate kinds.

In the nurserymen's section the judges considering it their duty to withhold the first prize, as the express stipulations for which this class was established—to bring into early notice new and first-rate flowers—had not been complied with. The second prize was given to Mr. Gaines, for *Alba grandiflora*, Duchess of Leinster, fine; Prince of Wales, Begum, Cecilia, Floridum, Tafalgar, beautifully feathered; Lady Sale, Rising Sun, Indispensable, fine; *Rhododendron*, and Amelia. A third prize was given to Mr. Ambrose, also of Battersea, whose collection was composed of these, not very new kinds, Madeline, Constellation, Witch, Duke of Cornwall, Erectum, Sir W. Scott, Acme, Sunrise, Mogul, Symmetry, Victory, Superb, and Aurora. In the private growers class, Mr. E. Beck, of Isleworth, received the first prize with Pompey, (Hoyle,) Sultana;

Amazon, Rajah, Margaret, Isabella, Repealer, Sunset, Desdemona, Mark Antony, Titus, and Effect. Mr. Cock, of Chiswick, obtained the second prize for finely grown plants of Mary, Sunrise, Repeal, a fine purple; Conflagration, Gipsy Queen, Jessica, Achilles, Milo, Duke of Cornwall, Rosetta, Hector, and Katinka. The third prize was awarded to Mr. R. Staines, of Paddington, for La Polka, Clio, Ackbar, Audromache, Sunrise, Nestor, fine; Duke of Cornwall, Emperor Nicholas, Nova Elegans, Black Dwarf, Fairy Queen, and Merry Monarch.

12 kinds, containing older varieties.

Mr. Gaines, in the nurserymen's class, was the only competitor; a first prize was, however, adjudicated to him for Spartan, Priory King, Trafalgar, Duchess of Leinster, Triumphant, Henrietta, Don Juan, Ariamane, Rising Sun, Hermione, Lady Sale, and Ackbar's Star. Amongst private growers Mr. Cock obtained the first prize with Emma, Milo, Sarah, Hector, Cora, Pulchellum, Vesta, Comus, Symmetry, Erectum, Countess of Morley, and Diadem. Mr. Staines won the second prize with Merry Monarch, Archbishop of Canterbury, Clio, Andromache, Sapphire, Hero, Witch, Queen of the East, Aurora, Lord Ebrington, Amy Robart, and Sylph.

6 varieties.

Only one collection of these was produced by Mr. Cock, and it was awarded a prize; the kinds were Cyrus, Superb, Nameless, Sarah, Black Dwarf, Redworth, and Pulchellum, all very well grown.

ROSES.

These were shown in the very finest condition by Messrs. Lane and Co., in the nurserymen's class, who obtained the first prize; the kinds were White Bath, Chas. Duval, Josephine Malton, Besnor, Comte de Paris, Gen. Kleber, Devoniensis, La Pactole, Madam Plantier, Coup de Hebe, Gracilis. Great Western, Floralis, Triumph de la Guillotière, La Page, Proserpine, Colbert, Eugene Beauharnais, Miellez, Eliza Sauvage, Guillaume, Blanch fleur, Gen. Allard, Scholastique, and Comtesse de Lacedepe.

To Mrs. Stedman, of Isleworth, the second prize was given, but the collection did not contain anything remarkable; the best were, Souvenir de la Malmaison, Triumph du Luxembourg, Duc de Luxembourg, Gen. Allard, and Mrs. Bosanquet.

In the private growers' class, Mr. Slowe, gardener to R. W. Baker, Esq., deservedly received the first prize, for excellent specimens of Hymene, Duchesse d'Orleans, Alcine, La Pactole, Bougere, Sir W. Scott, Phoenix, Anteros, Safrano, Eliza Sauvage, Napoleon, and Belle Emilé. Mr. E. Back obtained the second prize. The best specimens in this group were the same kinds as we have mentioned in Mrs. Stedman's.

FUCHSIAS.

Three collections only were exhibited. Mr. Robinson, gardener to T. Simpson, Esq., gained the first prize, with the following 12 sorts:—Formosa elegans, Prima Donna, Goldfinch, Hope, Queen (Pawley), Robinsonii, Kpsii, Chandlerii, Exoniensis, Vesta, King John, and Magnet. Mr. Gaines received the second prize for Goldfinch, Pearl, Pirolle, Duchess of Sutherland, Prima Donna, Miss Talfourd, Vesta, Gigantea, Exoniensis, Madonna, Decora, and Cassandra. Mrs. Stedman exhibited Prima Donna, Goldfinch, Sir H. Pottinger, Attractor, Hector, and some older kinds.

FLORIST'S FLOWERS.—CUT BLOOMS.

ROSES.

An immense quantity of these were present, and amongst them all the finest kinds in cultivation. We were unable, from the crowds

which surrounded, to obtain a list of all of them; the following brief selections, however, shows some of the best :—

In collections of 50 varieties,

Messrs. Lane and Son was first amongst the nurserymen; we here noticed splendid specimens of Adele Provost, Jane d'Urfe, Prince Albert, (Hooker,) Cambronne, Chenedole, Robin Hood, Baronne Prevost, Comte de Paris, Fleur d'Amour, La Reine, Cynthie, Franklin, Glory of France, Paul Perras, Colu-melle, La Belle de Bruxelles, Beauté de Nantieul, Calypso, Bizarre Marble, and Bernardii. Mr. E. P. Francis, of Hertford, obtained the second priz-; amongst these was Devoniensis, Coup d'Hebe, Franklin, Felicite, Earl Talbot, Boule de Nantieul, Proserpine, Mad. Dubarry, Sophie de Marsilly, Flora McIvor, La Volupte, Melanie Walder, Aspacie, Triomph de Laqueue, Duchesse de Nemours, Conspicua, Comte de Paris, Louis Buonaparte, and Belle Cle-mentine. To Mr. Hooker, of Brencley, was given the third prize. We ob-served Fulgorie, Belle de Segur, Heureuse Surprise, William Tell, Novaleuska, Souvenir de la Malmaison, Richelieu (Duval), and Rose Unique Panache. In addition to the above was collections—from Mr. Rivers, of Sawbridge-worth, in which we saw Le Vesuve, Schonbrunn, Coupe d'Hebe, Crivalis, Sidonie, Cra-moise Picotie, Melanie Cornu, La Reine, Cynthie, Paul Perras, Felicite, Boule de Nantieul, Leonel Dumonstier, and Cornu;—from Mr. Cuthush, the best of these were La Moskowa, very dark; Waricus, Belle Satiree, Guerin's Gift, and Cour Amiable;—from Messrs. Cobbett, of Woking, who had fine blooms of Brennus, Triphtholeme, Franklin, Earl Talbot, Lady Cooper, Madame Dubarry, Col. Bounaire, Victor Hugo, and Waterloo;—from Mr. Laing, in these the finest were Madame Campan, Belle Marie, Iphsilante, Cynthie, Celestine, Chas. Duval, Brennus, La Reine, Enchantress, Stadtholder, Las Casas, Prince Albert, Comte de Paris, and Duchesse d'Angouleme;—from Mr. Hosier Waterer, of Knap Hill, whose finest flowers were, Amiable Queen, Lucifer, Belle de St. Cyr, La Reine, Saphyrine, Lady Alice Peel, Queen of Denmark, Lady Stewart, and Avenant;—and from Messrs. Paul and Son, who showed La Reine, Cynthie, Unique Rouge, Daubenton, Adele Provost, Reine de Francais, Felicite Parmentier, Duc de Treviso, Marie de Champslouis, Julie de Etrangers, &c. In the private growers' class, Mr. Terry, gardener to Lady Pullen of Youngsbury, Herts, received the first prize. The more striking kinds in this stand were La Grandeur, Madame Hardy, Village Maid, new; Agnodice, Madame Campan, Glorieux, Triomph de Laqueue, Couronne de President, and Belle Comtesse. The second prize was awarded to Mr. Parsons, gardener to A. George, Esq., of Eufield, who showed, amongst others, fine blooms of Hennequir, La Volupte, Chas. Duval, Queen of Denmark, Triomph de Laqueue, Comtesse de Lacepede, King of Rome, Cynthie, and Sophie de Marsilly. Mr. R. H. Betteridge, of Abingdon, obtained the third prize; we observed superb blooms of Aglae Adanson, La Ville Bruxelles, Cicero, Triomph de Rennes, Cynthie, Village Maid, new; Coulard, La Moscowa, Julie, Princesse Marie, Beauté de Billard, Glorieux, Richelieu, Triomph de Laqueue, Belle Marie, Kean, La Vesuve, Duc de Treviso, and Chas. Duval. In addition to these collections was one from Alex. Row-land, Esq., of Rosenthal, which comprised some excellent flowers, particularly Madame Oudinot, Surllet de Chokier, Louis Napoleon, King of Rome, Duc de Cassox, Comtesse de Lacepede, Cynthie, and Agnodice.

In collections of 25 blooms.

The competition is exclusively for private growers.

Mr. Pond, of Bath, was awarded the first prize. Amongst these kinds we noticed fine blooms of Glandulosa Riversea, Bizarre Marble, Duc de Treviso, King of Rome, Village Maid, new; Charles Duval, Coupe de Hebe, and Felicite. R. Crutwell, E.q., of Bath, obtained the second prize; Coupe de Hebe, Heureuse Surprise, Lady Stuart, Souchet, Madame Deprez, new, crimson; Reine de Belgique, and Comtesse de Lacepede, were the best specimens. The third prize was given to Mr. Slowe, the finest flowers in whose stand was Acidale,

Cramoise, Superieuse, Brennus, Bougere, Lady Alice Peel, William Jesse, Robin Hood, and Triumph de Laquee. In addition to these Mr. E. Beck and Mr. Bennet, showed collections.

MOSS ROSES

Were shown in stands of 12 blooms.

Messrs. Lane and Son obtained the first prize in the nurserymen's class, for *Mosseuse Partout*. Unique de Provence, Luxembourg, Josephine, Eclante, Splendens, Celina, Gracilis, French Crimson, Blush, Crested and White Bath. Messrs. Cobbett of Cobham, and Francis of Hertford, were each awarded second prizes. From the former was, Luxembourg, Presque Partout, Princess Royal, Prolifere, De Metz, Malvina, Crested White Bath, Celina, Splendens, Blush, and Unique de Provence. Mr. Francis had Celina, Unique de Provence, Panache Pleine, Vilmorin, Prolifere, Malvina, French Crimson, Mottled, White Bath, Blush, De Metz, and Damask. Mr. Hooker obtained the third prize with Scarlet, Celina, White, Blush, White Bath, Eclante, Damask, Unique, *Mosseuse Partoute*, De Metz, Panache Pleine, and Ferrugineuse du Luxembourg. In the other stands, both of nurserymen and private growers, was nothing deserving mention, different from those we have now enumerated.

CARNATIONS AND PICOTEES.

The display of these, from its being early in the season, was limited—but extremely creditable to the growers. The only stand of carnations was from Messrs. Norman, of Woolwich, containing the following sorts finely bloomed, and in good colour:—Wigg's Earl of Leicester, Norman's S. 6, Norman's S. 7, Orson's Reform, Ely's Mango, Hyron's Defiance, Hughes's Sir Joshua Reynolds, Lodge's True Briton, Dalton's Lancashire Lass, Norman's S. 8, Toon's Ringleader, Hunt's Seedling, Cartwright's Lord of the Manor, Kay's Omnium Primum, Wildman's Marshal Soult, Wood's Rosabella, Martin's Prince Albert, Simpson's Marquis of Granby, Puxley's Prince Albert, Piersou's Sir G. Carew, Willmer's Solaunder, Low's Grand Sultan, Kenning's Duke of Cumberland, and a Seedling. The Picotees are always greatly admired, from their extreme delicacy and beauty of colour; we scarcely ever saw a finer stand of flowers, than those contributed by J. Edmunds, Esq., Wandsworth, to whom a first prize was awarded. It comprised the following sorts:—Sharp's 101, Gem, Agitator, and Elegant, Barraud's Borderer and Bride, Mrs. Bevan, Wildman's Isabella, Wain's Victoria, Ely's Field Marshal, and Grace Darling, Nottingham Hero, Miss Annesley, Jamie Gordon, Lady Chesterfield, Willmer's Elizabeth, and Prince Royal 136, Matthew's Ne plus Ultra, Crask's Prince Albert, Halliday's Henrietta, Dixon's Seedling Red, Calcott's Princess Royal, Brinkler's New Purple. In the nurserymen's class, Messrs. Norman of Woolwich, sent admirably bloomed flowers, to which a first prize was also awarded. They were the following sorts:—Sharp's Cleopatra, Jamie Gordon, and Agitator, Kirtland's Miss Newcomb, Sabina, and Queen Victoria, Dickson's Trip to Cambridge, Norman's Dick Lee, Seedling's 3, 4, and 5. Willmer's Prince Royal, Robinson's Nottingham Hero, Thurtell's Norwich Rival, Norman's Beauty, and Seedling 1, Coster's Venus, Wood's Seedling, Gowing's Bride of Abydos, Crask's Prince Albert, Hogg's Mrs. Mathews, Halliday's Fair Phillis, Norman's Seedling 2, and Brinkler's Lady Chesterfield.

PINKS.

These were rather on the decline; but two good stands were exhibited, one from Mr. Norman, of Woolwich; the other, from Mr. Henbrey, of Croydon; the rest were not sufficiently good for prizes. Mr. Norman received the first prize for Kirtland's Gay Lad, Beatrice, and Dr. Daubeuay; Weedon's Queen Victoria, Fisher's Matilda, White Warden, Church's Rowena, Thurtell's Mile-end Defiance, Wallis's Unique, Headley's Duke of Northumberland, Smith's Dr. Coke, Willmer's Duchess of Kent, Hardstone's Prince Albert, Willmer's Tom Davey, Garratt's Alpha, Norman's Henry Creed, Unworth's Omega, Heath's Lord

Byron, Jelf's Mary Ann, Hodge's Cyclops and Mars, Creed's President and Clark's Matilda. Mr. Henbrey's collection was as follows:—Vandenburg's King, Davey's Britannia Rubens, Willmer's Tom Davey, Seedling, Coronation, Bragg's Duchess of Cornwall, Willmer's Duchess of Kent, Seedling, Quercus, Dr. Daubeney, Seedling, Willmer's Prince of Wales, Blackheath Hero, Henbrey's Cæsus, Cousen's Queen Victoria, Norman's Wellington, Hodge's Mars, 182, White's Warden, Dr. Coke, Hardstone's Prince Albert, Countess of Plymouth.

VERBENAS.

A prize was given for a stand of the following:—Girling's Messenger, Gladiator, Rose d'Amour, Giant, Defiance, Smith's Superba, Excelsa, Delicata, Vesta, Youell's Princess Royal, Duc de Nemours, Merry Monarch, Avalauche, Lovely Ann, Smith's Queen of England, Miss Watson, Atropurpurea, Emma, Beauty, Lilac Perfection, Duchess of Sutherland, Alexander's Enchantress, Grandis, and Poulitii. It was from Mr. George Smith of Hornsey.

SEEDLINGS.

The seedlings were not so numerous as at former meetings; several Pelargoniums, however, were exhibited. One only of the present season was selected by the judges, and received a certificate. These beautiful flowers are so much improved, that it becomes annually more difficult to raise sorts that will carry this class onward to perfection. The flower chosen by the judges was named Paragon, a rich and high-coloured purple flower, superior in all respects to Sir R. Peel, from Mr. Whomes, gardener to E. Foster, Esq., Clewer Manor, near Windsor; a promising seedling from Mr. Kinghorn, named Mary Queen of Scots, was also exhibited. Others possessed fine colour devoid of shape, and some with shape, but common in other qualities; but as this class is now progressing onward, form, colour, and substance must be combined in the same flower to become an established favourite. Certificates were also given to two seedling Calceolarias, one named Leopardii, from Mr. Beat of Reading, cream ground, with chocolate spots; and the other was from Mr. Gaines, named Althea, yellow ground very prettily spotted.

ARTICLE III.

PARTICULARS OF THE CULTURE OF THE TRIBES OF CACTUSES.

BY A DEVONSHIRE FLOWER GARDENER.

THE culture of Cactuses during summer is simple and generally known. With sufficient water, not sparing it, as generally happens, and free access of air, they will take care of themselves, with the exception of unrooted offsets, Melocacti, and some Mammillarias.

They thrive well in summer kept in the open air, without any covering, if they are allowed to have plenty of water. With this treatment there is little danger of the plants being attacked by red spider or scale. But should spider appear, I know of no better means of getting rid of it than by sprinkling the plants thickly with flowers of sulphur; and an abundant washing with clean water with a syringe helps to destroy the scale. The treatment of cactuses during winter is very different from that in summer. In their native country the dry time of year has the same effect upon those plants as winter has on ours, namely, it produces a state of rest. In this state, if they are to remain in health, and flower the following summer, they should not be removed to a cold greenhouse, for in their native country they do not arrive at maturity through cold, but by the dryness of their situation. Indeed, the experience of many years has taught me that they thrive well if they are kept in a hot-house.

When they are removed in autumn from the open air into a hot-house, do not leave off watering them immediately, because that would interrupt vegetation too suddenly; but continue to water them regularly until nearly the end of the year, only not so abundantly as before, and stop it by degrees until the end of December, when it must be discontinued altogether. From this time to the period when the plants can be again placed in the open air they need no water, not even if they should begin to dry up or to shrivel, for there is no danger of their being injured by getting into that state; but great disadvantage would arise from watering them, and many specimens might be lost. No doubt when watering is discontinued roots are apt to die off, because being less succulent than the plant itself they soon lose their moisture which cannot be replaced out of the dry earth. This, however, does not harm the plants in a dry state, but at a later period, when watering is renewed, it then may have disadvantageous consequences, for it is then found that the dead and withered roots easily decay, and this communicates itself by degrees to the centre of the plant, which then speedily perishes. It is, therefore, indispensable that the plants should be examined in order to see whether rottenness is beginning; for if this is discovered too late, there is no remedy, and the decay will extend, and destroy the plants.

There is no great difficulty in the propagation of them. However, there are many, especially among the better and rarer sorts, that are

not easily propagated. If offsets do not in a short time strike out roots, the reason is because the cut surface is woody, and many months, and even years, may elapse before they again form new roots. I have succeeded in propagating *Pilocereus senilis* (Lemaire), *Cereus Bradypus* (Lehm), and *C. senilis* (De Cand.), in the following manner, by offsets: viz., I filled a pot with earth, and put it into a larger one, so that the edge of the outer pot stood nearly an inch above the inner one. The large pot, having the hole at the bottom stopped up, was filled with water until it was level with the earth in the inner pot; in this earth the offsets were planted; the whole was then covered with a piece of glass, and exposed to the rays of the sun. It is necessary to look after it frequently, in order to renew the water, if it should evaporate too much. In this way offsets of these made roots very soon. This treatment can also be applied with favourable consequences to the offsets of other kinds, whose cut surface is much withered. It is necessary to keep the offsets continually damp; and in order to accomplish this they should be put into pots from eight to ten inches in diameter; and after every watering, which should be repeated as often as necessary, the pot should be covered with a piece of glass. The more common kinds propagate easily of themselves, and do not require much trouble or attention.

ARTICLE IV.

ON A SIMPLE TRELLIS FOR CLIMBING PLANTS.

BY K. OF LANCASHIRE.

As many of your amateur subscribers must be similarly circumstanced with myself, in having only a small greenhouse, a page in your Cabinet will, perhaps, not be unprofitably occupied by a description of a simple yet useful trellis for climbing plants, the pattern of which is of my own designing. Having used it for some years, I can speak confidentially of its advantages.* It is cheap, (three feet high cost but nine-pence, each) and can be made by any one of common ingenuity.

* It consists of two pieces of strong wire seven feet six inches long, bent over at the summit, crosswise, so as to form, at equal distances, four principal supports, around which I coil suitable sized wire, so as to form spaces between the wires, of a diamond shape. Such a trellis would be three feet high, and allow six inches or more for the lower parts of the principal supports to be inserted in the soil inside the pot.

When placed in the flower-pot, the plant does not project over the side, so as to occupy more space, but forms a pretty and compact pillar, presenting an equally ornamental surface on every side upon which it is viewed. If the plant attain sufficient size to require additional trellis-work, another trellis can be readily piled upon the first, and secured to it by slender wire. Upon a trellis of this sort I have trained a beautiful *Kennedya*, five feet high, and one mass of bloom and foliage; *Clematis*, *Sieboldii*, and *Azurea grandiflora*, are other beautifully adapted climbers, and I need scarcely enumerate *Tropæolum*, *Petunia*, *Rosa*, &c., &c. I have a *Polygala oppositifolia*, and Scarlet *Phlox Drummondii*, which by frequent stopping and close training, present a far different appearance to their usual leggy and spindled form.

Whilst the plants are young, or to secure a stray branch in the right direction, I have made use of small rings of leaden wire, which may be applied or removed at the will of the cultivator. A piece of slender leaden wire (such as is now sold for gardening purposes in every country town), is coiled spirally round a small stick; and the point of an old pen-knife carried through the wire from end to end. When the wire is slipped down the stick, it will of course be found divided into a number of small neat rings, which may be readily opened and again closed to secure any stray branch to the trellis. They will of course last for years, since they may be used over and over again. I likewise make use of the rings to secure the calyxes of pinks and carnations from bursting irregularly, which I find they do, as well, or better, than strips of matting, &c.

ARTICLE V.

ON THE CULTURE OF CINERARIAS.

BY THE FOREMAN OF A LONDON NURSERY.

PLANTS that will bloom through the entire of winter, and especially in dwelling-rooms, are always highly esteemed; and of this class none is more entitled to it than the *Cineraria* in its now numerous varieties, which comprise almost every colour and shade of their very lovely flowers. In the establishment under my charge, we have eighty varieties, and, by due management, I have a profuse bloom throughout the year; especially, however, they bloom vigorous from

October to June. The mode of management with the Cinerarias now being so much better known than formerly, they can be bloomed so much superior in proportion.

The following method of cultivation is what I pursue, and my plants in bloom and growth are very much superior to any other I have seen. I obtain a mass of bloom, and the flowers of a large size; and generally have heads of them two feet and a half across, some even more. The compost I use is equal portions of rich turfy loam, rotten cow-dung manure, vegetable mould, and sandy peat, with a scattering of bits of charcoal in it. I always have a free drainage of broken pot, and over it some unbroken pieces of turf or peat.

About the middle of April I take off a sufficiency of suckers, with as many fibrous roots as possible, when potted, in smallish pots, varied by the size of the sucker, but usually about four or five inches across. I place them in a hot-bed frame, in gentle heat; shading them from mid-day sun, and occasionally syringe them overhead, till I see them established. Air is admitted in due proportion as they become more and more rooted. When the pots have got filled with roots, I re-pot them into six or seven-inches pots, keeping the balls entire, and I have them placed in a cool frame, giving them plenty of air during the day-time, but shading overhead till the end of May. From that time I expose them to the open air, day and night; in which situation I retain them during summer. As the pots get filled with roots I again re-pot, in a corresponding larger pot. Soft water, obtained principally from a tank, which is supplied from what is collected from the rain falling upon the roofs of the houses, is regularly and freely given to the roots, never allowing the plants to flag. And early in the morning, and towards evening, I have them sprinkled over head with pure water from a bason till the middle of September.

The former mentioned water is strongly impregnated with soot, and it appears to me very materially to promote their vigour. As flower-stems are produced I thin away some, so as to retain just sufficient for a vigorous bloom, and properly tie up such as are to flower. If any plant pushes shoots too early for my intended blooming season, I pinch off the top, and, thus retarded, other shoots proceed. By the early part of October I take the plants into the greenhouse, or show-house; they are duly attended to, soon come

into bloom, and from that period to May they continue to bloom. In order to obtain a bloom to come in later than these, I pot off suckers proportionately later, pinch away the flower-shoots at an early stage, and thus retard the blooming season; so that, from April to October, a profusion of them is obtained.

The green-fly is an enemy to the Cineraria; at first appearance, immerse them overhead in strong tobacco-water, or in a frame closed up fumigate them.

In order to obtain suckers, if such are not produced by the usual treated plants, pinch off all flower-stems as soon as they appear; this will induce the production desired. Seedlings are easily obtained. Sow the seed in spring, or not later than the end of June, in pots, placed in heat; harden the plants regularly; pot off, in small pots, as soon as they are well rooted, and they will become strong before winter, and will bloom the following summer; from them, selections being made, plants can be obtained to be treated in future as desired.

The most esteemed Cinerarias are such as possess large blooms, filling up the circumference by having broad flat petals, and without a notch at the end of a petal. The more decided the colour in its richness and distinctness the better; and the more striking the contrast in colours, the more ornamental and handsome. I will furnish a descriptive list for insertion in the next Number of the CABINET. Plants can now be procured at a very cheap rate.

ARTICLE VI.

ON THE CULTURE OF LUCULIA GRATISSIMA.

BY A FLOWER GARDENER AT DEERHURST LODGE.

I HAVE read over with interest the remarks in the CABINET which have been made on the *Luculia gratissima* from time to time, wherein it is so deservedly spoken of as deserving a place wherever it can be grown. I do not recollect it being mentioned as a plant of the easiest culture, but rather difficult, and can only be bloomed when the plant becomes of a large size; such as is described is in the collection of Mrs. Lawrence, of Ealing Park; being eight feet high, and having large spreading branches; producing one mass of fine heads of its lovely rose-coloured highly-fragrant flowers. I possess a very

large plant, which I grow in a pit in my plant-stove. In March, 1844, the plant had increased so rapidly that I was under the necessity of shortening the branches; having done so, I cut the ends of the shoots off; each about five inches long; and inserted them tight in pots, filled firmly with sand and loam, equal parts. I had them placed in a hot-bed frame, and nearly every one was well rooted in a month. I then potted them off singly into small pots, put them in the frame for another ten days, to induce them to strike fresh roots, &c.; at the expiration of which they were removed into the plant-stove; selecting a part not the hottest: they continued to grow in these pots, in a rich, rough, sandy loam, and turfy peat, till the end of August, when I planted them in 36-sized pots. I was much gratified to find that every plant produced one large head of flowers, as does the common Hydrangea. Being so well pleased with the production, I resolved to adopt the same method this season, and cut off the ends of a dozen shoots; those which appeared the best ripened ones, having plump buds. I treated them as before mentioned, and now I have a most beautiful bloom; each plant being from one foot to two feet high; some of the heads measuring nearly a foot in diameter. I give them once a week a good soaking of manure water at the roots, after I first see the heads of flowers are formed. A rough compost and free drainage are indispensable.

Just before the blossoms begin to open, I remove some of the plants into the greenhouse, where they bloom admirably, and continue through the winter. My greenhouse is kept dry; so that the blossoms do not damp off, as otherwise I find they would. The plant blooms very successfully in a sitting-room, and sheds a delightful fragrance therein. The plant is in all respects as easy to manage as the Hydrangea above named. Every stove, conservatory, and greenhouse, should possess it.

ARTICLE VII.

OBSERVATIONS ON THE BENTHAMIA FRAGIFERA, (CORNUS CAPITATA OF SOME PERSONS).

BY A CORNISH MAN.

IN the CABINET for March, 1834, a coloured figure of the fine fruit of this beautiful hardy evergreen plant is inserted, and the fol-

lowing particulars relative to it are given ; as numerous readers of the work may not have seen the remarks, I beg their insertion at the present. "*Benthamia fragifera*.—We are at a loss for words calculated to give expression to our admiration of this most truly splendid evergreen shrub. Seeds of it were sent by Sir Anthony Buller, during his residing in the East Indies, to his relative, J. H. Tremayne, Esq., Heligan, in Cornwall, in whose garden the plant was raised by the very worthy gardener, Mr. Roberts, who has had the honour and pleasure of raising, flowering, and fruiting, for the first time in Europe, this unrivalled hardy shrub. The fruit in the figure is from the finest on the branch sent us. The flowers are terminal, and surrounded by an involucre two inches across, of four yellowish parts resembling petals. The real flowers are of a whitish green, small. The profusion of both parts, in the heads of flowers, render them very showy. The flowers are succeeded by a profusion of splendid fruit, which, from their weight, are somewhat pendulous ; the appearance during autumn and winter must form a most delightful object. The flesh is rather insipid, and slightly bitter to the taste, but somewhat agreeable. It is of a yellow colour inside. The plant was raised in 1825, and has been planted out in the open air ; it has not required even the slightest protection during winter. It is growing in a strong soil. The bush is now seventeen feet high, and spreads proportionably. It is readily increased by seeds, layers, or cuttings, struck under a hand-glass, using a loamy soil." My residence being about thirty-six miles from Heligan, I had an opportunity of seeing the shrub in beauteous condition. I then obtained a fine plant, which is now nearly as high as the original plant, but of course not so strong. It bears fruit profusely every season. The situation it grows in has an open south aspect, sheltered on the other three by a thick yew fence, belted by a plantation, buildings, &c. The grounds are upon the south slope of a hill, dry, warm. It was planted in the open air at first, in a rich loam, upon a dry substratum, and from that time to the present has not had the least additional protection, nor has it been in the least injured by winter, frosts, &c. On one occasion the temperature was down at 14° Fahrenheit, and several other times exceedingly severe. Some persons have doubted whether it could be grown successfully in the open air generally in this country. I have seen it flourish in Devon-

shire, Wiltshire, Sussex, and Yorkshire, and I am nearly confident, if the situation be somewhat high, dry, and sheltered from cutting winds, that it will grow well in any part of England, and most certainly ought to be in every shrubbery where it can be grown. Plants of it can now be procured at a trifling cost.

I have not visited Heligan since 1834, but a friend of mine saw the original plant last summer, and informs me that it is about eight yards high, spreading proportionately; and the trunk is two feet in girth near the ground, and carries up a gradual fine main trunk.

ARTICLE VIII.

ON GROWING THE CALLA RICHARDIA (FORMERLY *C. ÆTHIOPICA*) IN THE OPEN AIR.

BY A LADY AMATEUR GARDENER, NEAR BELFORD, IN NORTHUMBERLAND.

My last communication on the planting out of Geraniums, Verbenas, &c., was so kindly received, that I am encouraged to hazard a few words on the *Calla Æthiopica*, or, as it is now styled, the *Calla Richardia*.

It is not, I believe, very generally known, that this beautiful plant will flourish in the open air. I have, however, tried the experiment with several during the past season in my own flower garden, and with complete success.

About the beginning of June, after they had done flowering in the greenhouse, I turned them out of their pots into the open ground, in clumps of four or five, so that one or two at least of the group might be constantly in bloom.

The cold winds with which we were at that time visited rather cut them, but fresh leaves soon began to push, and they blossomed as freely and stood much longer than they had ever done in the greenhouse; and another year, should it be required, a few Fir branches will effectually protect them when they are first put out.

It should be borne in mind that the *Calla Richardia* is a water plant, as its English name, "Lily of the Nile," demonstrates, it ought, therefore, at all times to be well supplied with water, and doubly so should the season prove a dry one.

As an encouragement to timid florists, who may imagine that the *Calla Richardia* requires a very fine aspect, I beg to say that my

flower garden is situated on the eastern coast of Northumberland, and slopes from the sun, instead of to it; yet notwithstanding these disadvantages, my plants were not taken in before the end of October, and they might have remained even longer with perfect safety.

[We shall be obliged by further communications.—CONDUCTOR.]

ARTICLE IX.

ON GUANO.

[We have not previously introduced much into our Magazine on the use of Guano, in its application to flowers; a great deal has been wrote upon it in other publications, and some very opposite statements made. There are horticulturists in theory who applaud almost everything new, and those who reposed confidence in their statements, and embodied it in practice, have, in numerous instances, incurred an expensive loss. It has been our course to wait and ascertain practically, before we either commend or condemn. The following particulars are from persons who have tried the use of Guano for some time, and to a considerable extent; we did so with some pot plants last summer, and found its application produce the best effects on Fuchsias and Pelargoniums.—CONDUCTOR.]

On the application of Guano to flowers, whether in the open ground or in pots, the following particulars are instructive:—

Mr. T. E. Teschemacher addressing the Horticultural Society of Massachusetts, stated—

“In the following experiments, I will first observe, that all those plants which were treated with Guano, were potted in a mixture, consisting of plain earth without any manure, sand, and a little leaf-mould, and peat, with which the Guano was mixed; that those plants which are compared with them, have been grown in the richest compost, and that both have had the same attention, and been grown otherwise under the same circumstances. *Fuchsia fulgens*: one year seedling, potted 17th of June, when two and a-half inches high, with one tea-spoonful of Guano; re-potted 9th of August, then twelve inches high, with another spoonful of Guano, is now a foot and a-half high. The contrast between this and the two-year old plant is very striking, both as to luxuriance of growth and colour of the foliage, the plant with Guano being vastly superior. I think also

that the colour of the flowers is improved ; it is well known among gardeners that it is rather difficult to grow this plant well. Pelargoniums : two seedlings grown with Guano, and one of the same sowing without ; on the 17th of June, the two former were potted with one tea-spoonful of Guano, and re-potted on the 9th August, with another tea-spoonful ; here also the difference in favour of Guano is very great. China roses : two cuttings, potted 17th of June, each with one tea-spoonful of Guano ; one was then seven inches high, the other four and a half. They are now thirty-four and twenty-eight inches high respectively, with large healthy foliage and stems ; these have not received a second application of Guano. *Celosia cristata*, or Cock's-comb : one seedling, with one tea-spoonful and one of the same sowing without ; the size of the stem, foliage, and head of that with Guano is more than double that of the other, and the difference in the colour of the leaves is remarkable. *Salvia patens*, with one tea-spoonful of Guano—the effect here has been to lengthen the joints, and the flower appears smaller than usual. *Acacia Farnesiana* : a seedling, showing the size of the foliage and length of the joints previous to the application of a tea-spoonful of Guano, and the remarkable growth of both afterwards. *A. Camellia*, with two tea-spoonfuls : this specimen, which was quite small and unhealthy before the addition of Guano, as may be seen by the lower leaves, exhibits in a most marked manner, by its beautiful large deep green leaves and healthy bud the action of this manure. On a *Camellia* grown with a large proportion of fine wood charcoal, the foliage and buds are extremely fine and luxuriant, and of a healthy green colour, but not at all equal to that treated with Guano. One *Balsam*, two tea-spoonfuls ; re-potted 9th of August with two more, to which a little lime was added. This is an ugly specimen, which confirms an observation in the "Gardener's Chronicle," that *Balsams* manured with Guano produced smaller flowers. I have watched it carefully, and found that not a single flower missed bearing its seed-vessel, and that every seed-vessel I have opened contains from fourteen to twenty perfect seeds. From what I have seen of Guano, it is clear that its action is rapid and powerful on the stem and foliage, increasing their size and deepening their green colour ; of this fact there can be no doubt. I think it probable that it diminishes the size of the flower in some cases, and that it improves the seed both in

quantity and quality ; of this, however, more experiments are required to prove the certainty. When those plants were re-potted, which received a second application, the roots were very numerous, and appeared in the most vigorous health—thick, succulent, pure white, the tips with that hairy appearance so well known to cultivators as a sign of strong growth. In Peru, it is customary, when using Guano to raise pepper, to manure three times ; first, on the appearance of roots, then on the appearance of the leaves ; and, lastly, on the formation of the fruit. I think the experiment of its action on all fruits, particularly the larger fruit trees, as apples, pears, peaches, &c., will be extremely interesting, as well as on the vine, which is well known to be excessively greedy for rich food, particularly for bone manure, the chief ingredient of which, phosphate of lime, Guano contains in considerable quantity.”

Mr. Teschemacher then states that Guano contains, in large proportions, the ingredients necessary for the growth of plants in general, and for the maturation of seeds.

(*To be continued.*)

ARTICLE X.

ON BLOOMING THE THUNBERGIA CHRYSOPS.

BY A PRACTICAL FLOWER GARDENER.

As there has been some difficulty in flowering the *Thunbergia chrysops*, perhaps the following may be useful to those who may not have succeeded in flowering it.

Last May I procured a small plant, and after it had filled the pot with roots, I potted it into a six-inches pot, in a mixture of loam and leaf mould (equal parts) ; the plant grew and flourished beautifully, but no signs of flowering. I commenced in October to stop every shoot at the third or fourth joint, taking care not to allow them to get more than one joint above where I stopped them, and now, to my great delight, my plant is almost covered with bloom, and shows indications of continuing so for some time to come.

I may state that it is trained in a pyramidal form, and having taken care to keep a sufficient quantity of young shoots close down to the top of the pot ; it is a very beautiful specimen.

PART II.

MISCELLANY

OF

NOTES AND CORRESPONDENCE.

New or Rare Plants.

ADENOCALYMNA COMOSUM. HOP FLOWERED. (Bot. Mag. 4210.) Bigno-
niaceæ. Didynamia Angiospermia. (Synonym, *Bignonia comosa*.) A native of
Brazil and Guiana. It is a tall climber, and trained neatly in the hothouse,
makes a brilliant appearance with its very numerous racemes of large rich yellow
trumpet-shaped flowers. Each blossom across the mouth is about two inches.
It is very likely to flourish in a warm greenhouse or conservatory, and well
deserves to be in every one. It is in the collection at Kew Gardens.

ABELIA RUPESTRIS. ROCK ABELIA, (Bot. Reg. 8.) Caprifoliaceæ. Pen-
tandria Monogynia. A native of China, found by Mr. Fortune, amongst rocks
on Chamoo Hills, and sent to the Horticultural Society. It is a small spreading
bush, producing its numerous flowers in whorls, as many of the Honeysuckles.
The corolla is about an inch long, pure white, and the calyx rose coloured. It
flourishes in the greenhouse, but as it grows in China, in situations where the
Hydrangea does, it is very likely to endure the climate of this country, trained
against a good aspect wall.

DENDROBIUM DALHOUSIEANUM. LADY DALHOUSIE'S. (Bot. Reg. 10.) Orchi-
daceæ. Gynandria Monandria. From India, but what part thereof not known.
It is in the Chatsworth collection. The flowers are produced on stems three to
four feet high. They blossom in an horizontal raceme. Each flower is about
four inches across, white, with beautiful pink edges, and on each side of the tip
has a large rich crimson-red spot. It is a very noble and beautiful species,
deserving to be in every collection. It has bloomed at Chatsworth, and with
Messrs. Loddiges's.

ERICA CAVENDISHIANA. THE DUKE OF DEVONSHIRE'S. (Pax. Mag. Bot.)
Ericaceæ. Octandria Monogynia. *Erica depressa* had been impregnated by
the pollen of *E. Patersonia*, at Messrs. Rollisson's, of Tooting, and one of the
produce was the present variety. It is one of the handsomest, and is so much
noticed as to be exhibited in almost every collection at the London shows. The
rich yellow flowers produced in vast profusion, each an inch long, give a beau-
tiful appearance. The shrub, too, is a neat erect grower, and easily kept as a
handsome pyramidal bush. It deserves to be in every collection. It may be
had of most of the general nurseries.

FRANCISCA HYDRANGÆFORMIS. HYDRANGÆA LIKE. (Bot. Mag. 4209.)
Scrophulariææ. Didynamia Angiospermia. It was discovered by Mr. Gardner,
on the Organ Mountains, in India. It is a robust looking shrub, about four feet
high, growing in its native country in moist places, in the forests. The leaves
are six to eight inches long, and about three broad. The flowers are produced
in a close raceme or cyme, of a rich blue-purple, becoming nearly white with
age. Each blossom is about an inch and a half across. It does best grown in
the stove.

GLOXINIA PALLIDIFLORA. PALE FLOWERED. (Bot. Mag. 4213.) Gesneriaceæ.
Didynamia Gymnospermia. It was sent from Santa Martha to the Royal

Gardens at Kew. It is somewhat in the form of the old and beautiful *Gloxinia maculata*, the flowers a trifle less, similar in shape, and a paler colour. It is a very pretty flowering species.

HIBISCUS JERROLDIANUS. MR. JERROLD'S. (Pax. Mag. Bot.) Malvaceæ. Mouadelpia Polyandria. Dr. Lippold sent seeds of it from Brazil. It is herbaceous, and planted in the conservatory at Chatsworth; grows from four to nine feet high, with numerous shoots, which produce a profusion of large, rich, splendid crimson flowers, through summer and autumn. It requires a hothouse, or very warm part of a conservatory. It is increased by division of the roots. Each flower is about five inches across, single, but brilliant in colour.

MORMODES CARTONI. MR. CARTON'S. (Bot. Mag. 4214.) Orchidaceæ. Gynandria Monandria. From Santa Martha, by Mr. Purdie to the Royal Gardens at Kew. The flowers are produced in an erect scape six inches long, they are yellow, with red streaks. Each blossom is about an inch and a half across; very pretty.

PLATYCODON GRANDIFLORUM. GREAT FLOWERED. (Pax. Mag. Bot.) Campanulacæ. Peniandria Monogynia. Sent to the Horticultural Society by Mr. Fortune, from China. It has bloomed at Brooklands Park, Blackheath, in Kent, under the skilful attention of Mr. Ayres. It has been considered by Dr. Lindley to be the same as the old *Campanula grandiflora*, but many consider it much different. The flowers are produced solitary, on longish stalks, terminal. Each blossom is about two and half inches across, deep blue, with a dark circle near the centre. It was grown in the hothouse at Brooklands. It strikes readily from cuttings. During the early part of its growth, the plant showed no sign of branching, but the lead being stopped, it soon branched and blossomed. It is very handsome, and probably as hardy as *C. pyramidalis*.

PÆONIA WITTMANNIANA. THE YELLOW PÆONY. (Bot. Reg. 9.) Ranunculacæ. Polyandria Pentagynia. Probably from Taurian Caucasus, it was however received by the Horticultural Society, from the Nikita Garden, in the Crimea. It is quite hardy, blooms in May. The flowers are single, about four inches across, a beautiful yellow, with stamens and pistillum, tinged with red. It is a remarkable acquisition. Twenty-five guineas was lately demanded for a plant at one of the large continental nurseries.

RUELLIA MACROPHYLLA. LARGE-LEAVED. (Bot. Reg. 7.) Acanthaceæ. Didynamia Angiospermia. From Santa Martha. It has bloomed in the fine collection at Stour Gardens, in the hothouse, growing freely, and blooming beautifully. The flowers are produced in branching panicles, and are a rich carmine-scarlet colour. They are about the size of the old, very handsome, *R. formosa*. The leaves are six inches long, and near four broad. It is a fine species, readily increasing by cuttings. Like all *Ruellias*, it does best in a moist atmosphere, and it is essential to successful culture, very frequently to syringe them, so in this instance, or the red spider will voraciously attack it. It is most successfully grown in the Duke of Northumberland's collection, and it deserves a place wherever practicable.

SINNINGIA VELUTINA. VELVETY. (Bot. Mag. 4212.) Gesneriaceæ. Didynamia Angiospermia. From Brazil, it has bloomed at Kew, in the stove. The stem about three inches high, and about half an inch thick. Leaves large; flowers solitary, tube two inches long, the limb spreading, so as to be over the mouth an inch and a half across, a greenish-yellow colour.

STACHYTARPHETA ARISTATA. BASTARD-VERVAIN. (Bot. Mag. 4211.) Verbenacæ. Diandria Monogynia. From South America. We saw it in beautiful bloom last autumn, in the hothouse at Kew. It is half shrubby, branching, producing numerous long, terminal spikes of very rich deep blackish-purple flowers. It is a beautifully striking plant, and well deserves to be in every collection.

DESCRIPTIVE CATALOGUE OF NEW CAMELLIAS (*continued from page 44*)

- Feastii**, very large, imbricate formed petals, and superb shape; white spotted, and striped with rose.
- Felicita**, delicate rose; very handsome.
- Frosti**, imbricate, deep red, shaded with purple. A very abundant bloomer, and one of the most superb.
- General Washington**, imbricate, white, blotched and striped with beautiful rose; very beautiful.
- Globe Crimson**, fine rich crimson.
- Gloria delie Isole Borromee**, imbricate, the centre beautiful rose, spotted with red, and edged with white; very fine.
- Gloria del Verbano**, imbricate, red, with spotted and striped with white; very fine.
- Governativa**, very large and very double, imbricate, deep carmine; handsome.
- Grand Duchessa d'Ktruria**, poony formed, glossy white, striped with rose; very beautiful.
- Imbricata magna**, very double beautiful rose.
- Jubilee (Low's)**, very large, fine imbricate form, white, with tinge of flesh colour, veined and striped with rose. A fine centre of cream colour, or pale yellow.
- Jupiter**, fine imbricate form, salmon colour, with a white streak up the centre of each petal.
- Lainatensis**, pure white, fine imbricate form; very double and handsome.
- Leopoldina d'Italie**, very large and pure white, spotted with rose, and striped with red; very handsome.
- Lowii**, fine imbricated form, and deep carmine; very handsome.
- Madonna**, fine imbricated form, very large, pure white, with a carmine centre; very superb.
- Maneghini**, fine imbricate, very double, deep carmine, with white spots in the centre.
- Maria Eliza**, red and white, in irregular portions; very handsome.
- Maria Teresa**, fine ranunculus formed, white tinged with flesh, and marked with delicate carmine; very superb.
- Napoleone d'Italia**, very large, rich red, with large patches of white; a very beautiful flower.
- Neoboracensis**, very large and beautiful, deep bright red, with white stripes up the centre; handsome.

THE DEODAR, OR INDIAN CEDAR (*Cedrus Deodara*).—This tree is one of the lofliest and grandest of the Conifers. In England it is as yet merely a graceful object; so that whether it will eventually assume the dignity belonging to its kindred of the Himalaya is a matter purely of conjecture. Its being perfectly hardy, like the Cedar of Lebanon, has secured it a place in every British collection of Pines; though it has to be regretted that so many of the specimens foisted upon the unwary are merely cuttings grafted upon the common Larch, which, as is well known, is a comparatively low-growing tree, and is besides a deciduous one. The noble nature of the Deodar, therefore, when allied with this object, is scarcely to be expected; and, from the specimens we have seen so treated, it is already apparent that the scion outgrows the stock, and that the demand upon the latter is more than it is prepared to respond to. To remedy this, as far as possible, the best way is to dig out the soil by the side of the tree, and to lay it down so that the part above the stock may take hold and hereafter grow upon its own roots.

The cones of this tree resemble those of the Cedar of Lebanon, and are ripe in the months of November and December, when they fall off like the Silver Fir cones. They may be crushed into pieces even with the hand, and the seeds are then easily picked out; the good ones are plump, whilst those which are useless are flat and shrivelled. During the month of May a light friable piece of ground should be selected (and in the climate of England it will be all the better to be shaded), and, after being dug and raked, the seeds should be sown in beds, in the same way as Larch seeds are sown, *viz.*, by covering them to the depth of two-thirds of an inch. The plants will appear in June, and in those beds they

may be allowed to remain for two years, keeping them free from weeds; they should then be transplanted into lines, and treated in every respect the same as the common Larch tree. The system of keeping them in houses is just as absurd as growing the common Scotch Pine in heat, or any other plant which is equally hardy.

According to all accounts, the wood of this tree is very durable and easily worked; but as it claims attention at present chiefly as a landscape ornament, planters would do well to take advantage of this graceful object, and grow it around their residences and on the bolder parts of their parks. The soil it delights in most is a sandy loam, and the situation a northern exposure. Under those circumstances it is already rearing its beautiful form on several hills throughout the north of Scotland.

ON THE MANAGEMENT OF IMPORTED SEEDS.—Upon the arrival of a box of seeds, my mode of proceeding is this:—supposing them to arrive in the beginning or middle of summer, the different sorts should be sown in the soil best suited to the plants to be grown, although perhaps a light loam, with a mixture of leaf-mould, will answer for most of them while in the seed-pan. The seed should then be sown of the proper depth, which will in most instances be regulated by the size of the seeds, the larger nuts being sown one or two inches deep, while the smaller ones should be sown on the top of the mould, and then a mere sprinkling of mould be added, and afterwards a small sprinkling of white sand be put on the top. The object of this addition is to prevent the plants, on their first appearance, damping off, which all tender plants, but especially herbaceous ones, are apt to do. If the season be far advanced (for instance, the autumn), there is little inducement for pushing forward the germination or growth of the seeds, and the pans may be placed on the stage of the greenhouse for the winter. My great object in sowing them at what may be considered an unfavourable season is more with a view to prevent the loss of vitality, by keeping them in an intermediate state of dampness and dryness, than by keeping them in their packages all the winter.

If, however, it be either in spring or the earlier part of summer, or indeed not very late in the season, I put the seed-pans in a hotbed or other place where they may get bottom heat; and I conceive that an error takes place in this respect, by supposing that much bottom heat will injure the heads. This I do not think is the case; many seeds require a very considerable bottom heat to make them germinate, especially if they are weakly, and perhaps imperfectly ripened; the chief danger will be after the plants begin to make their appearance. While in this state too much heat will of course destroy the plants; they must be kept tolerably damp if in heat; and the heat, if very great, must be moderated by raising the glasses and shading the plants, which will be treated much in the way that our common flower seeds are treated; that is, they must be gradually hardened, and shifted into separate pots, the size of which will be regulated by the kind and size of the future plant, and which cannot be entered into minutely. The soil in the new pots may be made more to resemble that which they will probably require when they are larger plants. In general, with herbaceous plants, which are more likely to damp off, a little white or common sand will be placed at top to absorb the superfluous moisture, and the pots should be placed in a drier situation than is necessary with woody plants. The plants may very soon be placed in the temperature best suited for them, according to their native climate, either in the stove, the conservatory, or greenhouse, or the open air; observing, in general, that any change of temperature must not be made too suddenly; but, as the gardeners say, the plants must be hardened or prepared for it. When the plant is intended for the stove, or conservatory, or greenhouse, but little preparation will be found necessary; but when it is to go to the open border it can be prepared by being removed to a cool frame, as it is called; that is, a frame where there is no artificial heat produced by dung or fire, and the glasses will be removed or raised in favourable weather. In summer the pots may be very soon placed out, rather in a shady place; and in the course of every ten days they may be fully exposed; observing, however, that they must be watered occasionally in the evenings, when the weather is dry.—*A Practical Plant Grower.*

IPOMÆA LEARII.—An old subscriber to the FLORICULTURAL CABINET would be grateful for directions for blooming the *Ipomœa Learii*. She has had a plant in a warm greenhouse for several years in a large pot; it thrives and throws out long branches, but scarcely ever flowers.

Quite late in the autumn sometimes two or three blossoms expand, but never more. What soil suits it? Does it require more heat than a greenhouse? Should it be cut in every winter, or should the branches be allowed full growth? Would it do better with more or less space for the roots.

Bromley.

[Very far the most superior plant we ever saw in bloom was at Mr. Knight's nursery, King's Road, Chelsea. In July, 1840 we saw this splendid plant in most profuse bloom, having about 500 expanded blooms. It was growing in a low plant stove, which was kept somewhat hotter than a greenhouse. It was grown in a bed at the corner of the stove, in a rich turfy loam and peat, having several inches of broken pots, &c. forming a drainage. The branches were trained at several inches apart, to a wire trellis which extended over the two sides of a double roofed house. The plant was in vigorous growth. The shoots are pruned in each winter, and regularly thinned, so as each wire has but one to support.—CONDUCTOR.]

ON ACACIA ARMATA, AND ON THE USE OF GUANO FOR FLORISTS' FLOWERS.—I should feel much obliged if you, or some of your esteemed correspondents, would give me some information on the propagation and cultivation of *Acacia armata*; and likewise if Guano may be profitably applied to florists' plants, and how?

Lynn.

T. S.

[All kinds of Acacias require to be grown in a compost of equal portions of rich sandy loam, peat, and leaf-mould, and have a free drainage. They must be placed in the greenhouse, in a light and airy situation. They bear cutting in; and in order to have the plant bushy, such attention will effect the desired purpose. This treatment is specially necessary with some of the tall slender-growing species. Most of them, especially *A. armata*, produce seeds; and if soaked before sowing, and afterwards placed in a hot-bed frame, &c., there, too, kept moist, not wet, they will come up, as it is termed, in ten days or a fortnight. A piece of coloured glass placed over the pot, it is said, materially promotes the seeds vegetating, &c. Cuttings obtained from young shoots, when the lower portion is become somewhat firm, cut clean off at their origin, then dressing off the leaves about half the length by means of scissors or a sharp knife, and inserting them firmly in white sand, watering, and, after drying a little, covering them with a bell glass, and place in a hot-bed frame, with subsequent due attention; they readily strike root. If some of our florist friends have applied the guano, we shall be obliged if they will favour us with the results, in order to meet our correspondent's request.]

ON RHODANTHE MANGLESII.—On visiting one of the London nurseries lately I was astonished to see numerous pots of *Rhodanthe Manglesii* in vigorous and profuse bloom. I remember too, last September, seeing fine bushy groups of them growing in the open border. I asked for information, how they were thus grown, but I could not ascertain. I should be glad of any information how to grow it thus fine, as the specimens I saw were six times larger than any I ever grew.

AN AMATEUR.

[Sow at twice; first in February, and raise in moist heat, in loam and peat finely sifted over the seeds, and never allowed to be dry, but not to be kept wet; pot off singly as soon as can be safely done into small, well-drained pots, but not to have sitted soil: after this, encourage them in a gentle heat and gradually inure them to the greenhouse, keeping them near to the glass. Re-pot when requiring it, in manner and soil as before named; pinch off all first flowers to cause shoots; such treated plants will bloom fine till autumn. Kept in the greenhouse, or turned out at the end of May entire, into the open bed, in a

warm and sheltered situation, will bloom to the end of the season. To have plants to bloom in spring and early summer, sow seed the end of August, plant in small pots, and keep them from frost in the greenhouse, in a dry situation, or in a cool frame during winter, and repot them in February following, pinching off the first blooms, as before observed, to cause the production of lateral shoots. We have grown plants in this way half a yard high, and quite bushy.

— CONDUCTOR.]

ON THE CHRISTMAS ROSE.—I am desirous to have next winter a bed of the Christmas Rose, but the same situation to be occupied by some other flower during summer. Will the plants do to be taken up, and be kept dry till the end of summer, and then be planted with a certainty of blooming? If so, at what period should they be planted? A list of a few kinds, too, will additionally oblige
S. S.

[When it is desirous to remove them from the bed, take them with as entire balls as possible, and replant them in good soil and a suitable situation; water them well as soon as planted. At the end of the summer season remove them to the winter situation with as much care as possible, water, &c., and they will bloom satisfactorily. Or grow them in large pots during summer, attend to them properly, and then turn them out into the bed, or plunge the pots overhead, and thus save the trouble of repotting, &c.]

Helleborus atro-rubens, purple; H. dumetorum, green; foetidus, green; lividus, purple; niger, pink; odorus, green; purpurascens, purple and green; vernalis, white; viridus, green; orientalis, blush; cupreus, copper colour; pallidus, white and green.]

Floral Operations for March.

AMARYLLISES, and other liliaceous bulbous plants which have been kept dormant, may now be re-potted, and put into an increased temperature.

ANNUALS, HARDY, such as Clarkias, Nemophilas, Larkspurs, &c.—If the soil be moderately dry, some of the most hardy kinds, to bloom early in the summer, may be sown in warm parts of the country, or situations well protected, but in cold places not until the end of the month; for if the seeds of many sorts begin to vegetate, and frost operate upon them, they are often destroyed. The best method of sowing the small seeds in patches is to have a quantity of finely sifted soil; spread a portion where desired; after scattering the seed, sprinkle a little more soil over them, and then press it closely upon the seeds, which will assist them in vegetating properly.

ANNUALS, TENDER, such as Cockscombs, Balsams, Stocks, &c.—Such as have been sown, and may be up, should have all possible air given to prevent their being drawn up weakly. In watering those in pots they must not be watered over the tops, or many of the sorts will be rotted by it. The best method is to flood over the surface of each pot, always using water that is new-milk warm. Those annuals sown in frames must be watered (when requisite) with a very fine syringe, or pan-rose to sprinkle with; but the best plan is to take advantage of gentle rains. For any seeds yet requiring to be sown, use fine soil pressed to the seeds; and, when convenient, place the pots (if used) in moist heat till the plants are up. Cockscombs, Amaranthus, Balsam, Browallia, Brachycoma, Thunbergias, Maurandias, &c., if large enough to pot, should be done in sixty-sized pots.

AURICULAS.—Those requiring top-dressing should be done immediately, by taking off about two inches deep of the top-soil, replacing it with some very rich; more than one-half of it should be rotten cow-dung two years old, and the rest loam and sand. Immediately after this dressing, let the soil be well settled by a free watering. By the end of the month the unexpanded blossoms will be nearly full grown; no water must be allowed to fall on them, or the blossoms would be liable to suffer injury by it. All possible air may be admitted to the plants during the day, only screen from cutting frosty winds.

CAMPANULA PYRAMIDALIS—to have fine pot specimens, should be potted, if not before done, and encouraged to grow.

CARNATIONS—at the end of the month, the last year's layers kept in pots or beds during the winter should be planted off into large pots 12 inches wide at the top, 6 at the bottom, and 10 deep. In each pot three plants may be placed triangularly, not planting deeper than to fix them securely. The following compost is most suitable:—Two barrows full of fresh yellow loam, three of well-rotted horse-dung, and half a barrowful of river-sand, well mixed; plant in it *without sifting*, but breaking very well with the spade, and have a free drainage of rough turf, &c.; place the plants in a sheltered situation out of doors.

CHREPERS—and twining greenhouse or hardy plants, should be pruned and regulated before they begin to grow.

CALCEOLARIA SEED—should be sown early in the month, having the finest sifted soil for the surface.

CHRYSANTHEMUMS—sow seed of, and raise in moist heat. Mind the suckers of old plants are not drawn up; admit duly of air.

COMMELINA TUBERS and **Tigridia** bulbs should now be planted.

CUTTINGS of *Salvias*, *Fuchsias*, *Heliotropes*, *Geraniums*, *Celsias*, *Alonsoas*, *Lotuses*, *Senecios*, &c., where it is desired to plant such out in beds, should be struck in moist heat as early as possible. Young shoots, cut off clean, strike readily. (See kinds of plants suitable, in vol. i., p. 38; and for additional kinds, subsequent vols.)

DARLIAS—if not already put into excitement, should be done as early as possible. Seeds should also be sown, placing them in a hot-bed frame till up. Cuttings be taken off and struck in heat.

ACHIMENES, *Gesneria*, *Gloxinia*, and *Tropæolum* bulbs, &c., that have been kept dry during winter, should now be potted, and gently brought forward in heat.

HERBACEOUS perennials, biennials, &c., should now be divided, if required.

PELAGONIUMS.—Cuttings now put in, struck in a hot-bed frame, and potted off as soon as they have taken root, will bloom during autumn.

POLYANTHUSES—should now be top-dressed, as directed for *Auriculas*, only the soil need not be so rich. Seed may now be sown; the best method is to raise it in heat, harden gradually, and transplant when large enough.

RANUNCULUSES and **ANEMONES**—should now be planted, taking care no fresh applied dung is in the soil, nor should the ground to plant in be lightened up more than two inches deep. The soil of the bed should be half a yard deep at the least. The best roots for flowering are such as have the crowns high and firm, with regular placed claws. Another bed, planted a fortnight later, brings them into bloom, so as to assist a florist to select for a show.

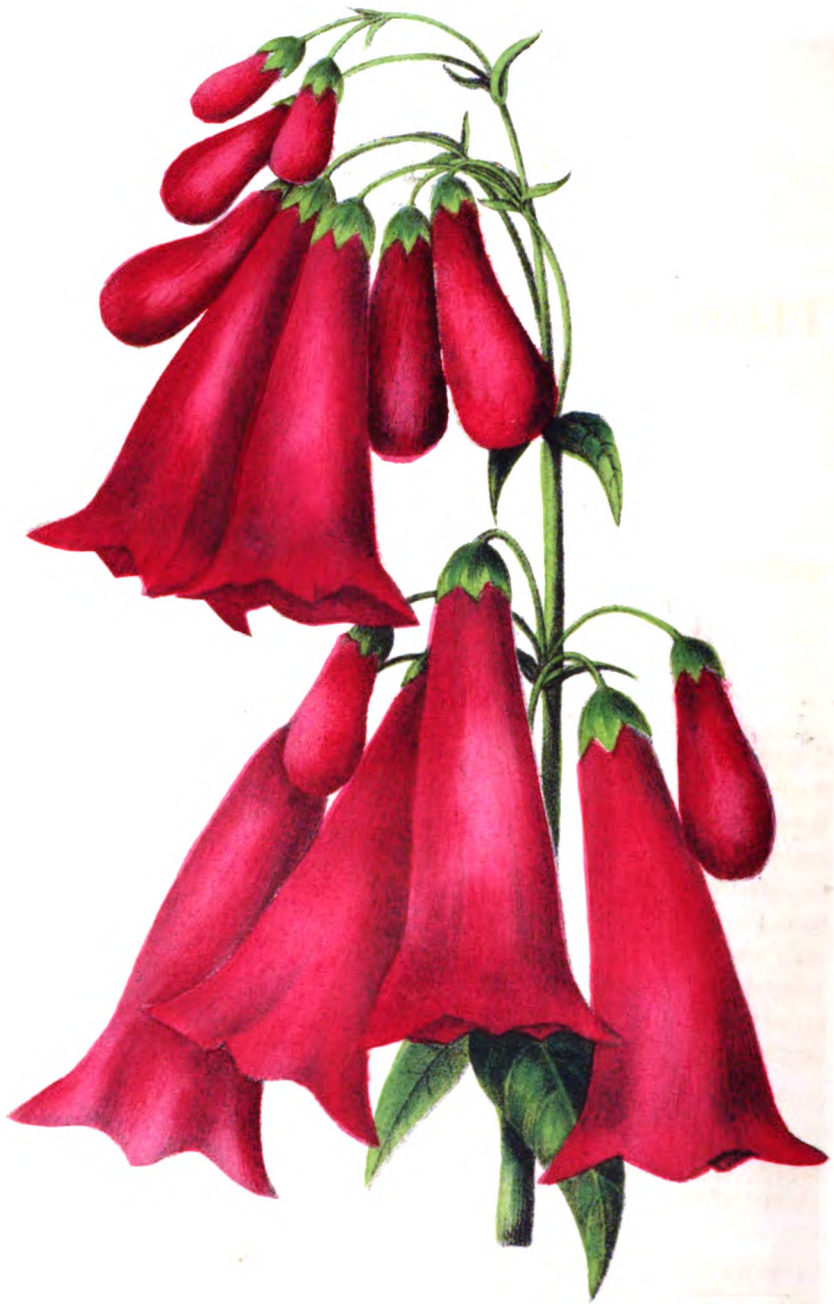
ROSE TREES—not yet pruned, if allowed to remain untouched till the shoots of the present coming season be about an inch long, and be then shortened by cutting back all the old wood to below where the new shoots had pushed, the dormant buds will then be excited, and roses will be produced some weeks later than if pruned at a much earlier season. Plants in pots now put into heat will come into bloom in May.

Rose Trees, *Lilacs*, *Pinks*, *Hyacinths*, *Narcissuses*, *Honeysuckles*, *Primroses*, *Double Furze*, *Dwarf Almonds*, *Rhodoras*, *Persian Irises*, *Sweet Violets*, *Cinarrarias*, *Azaleas*, *Hepaticas*, *Lily of the Valley*, *Jasmines*, &c., should still be brought in for forcing.

TUBEROSES—should be planted, one root in a small pot, using very rich sandy soil; the pots should be placed in moist heat till the plants are up a few inches; then they may be planted into larger pots, and taken into a stove, and finally into a greenhouse.

TULIPS.—At this season, such as happen to be affected with canker will appear sickly; the roots should be examined, and the damaged part be cut clean out. If left exposed to sun and air, the parts will soon dry and heal. Avoid frosty air getting to the wound by exposure.

SEEDS—of greenhouse and similar plants may now successfully be sown, raised in moist temperature.



PENTSTEMON GIGANTEA ELEGANS.

Floriculturat Cabinet.

THE
FLORICULTURAL CABINET,

APRIL 1st, 1846.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I. EMBELLISHMENTS.

PENTSTEMON GIGANTEA ELEGANS.

WE received the drawing of this very splendid flower from Messrs. Benton and Co., Nurserymen, of Monument-lane, Edgbaston, near Birmingham. The plant grows very vigorously, rising from four to five feet high, and blooming profusely. When Messrs. Benton and Co. advertised it for sale, last November, the original plant had more than one hundred spikes of flowers. The foliage too, they add, is very handsome. The plant is quite hardy, and merits a place in every flower garden, where it would be one of the most showy and ornamental flowers. It is easy of culture, grows freely, and readily propagated, so as to be perpetuated without difficulty.

ARTICLE II.

PREFATORY OBSERVATIONS ON THE CULTURE AND PROPAGATION OF WHAT ARE USUALLY TERMED FLOWERING PLANTS.

BY J. E. M.

A TASTE for the cultivation of flowers is now being so extensively diffused, that I think it would not be without its use to endeavour, through the medium of the CABINET, to draw the attention of young amateurs to an observance of some of the more prominent laws on which are founded the successful practice of plant cultivation.

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It is a well known, though much neglected, fact, that all plants must have, shorter or longer, a period of entire rest and repose ; were the amateur to keep this fact constantly before him he would have much fewer losses to regret, and a far healthier collection than is too generally the case. That this rest, or repose, is necessary, we have only to point to all nature around, and ask what it is that imparts to winter its dull and deathlike appearance? We answer, nothing but this universal sleep of nature—this cessation from the vigour and activity of spring and summer. Now, in this instance, as in all others of a like nature, if the cultivator will have success, he must copy nature, for he may rest assured that she does nothing in vain ; and in proportion to the faithfulness in which she is followed will the measure of success be. It must ever prove a vain and abortive course to force on the growth of plants when they ought to be dormant. In this state of hybernation they are collecting a store of nourishment which, when the proper season arrives, will enable them to perform all the various functions for which they are eminently adapted. Having attained the truth of this natural principle of vegetable repose, it can be turned to good account in the artificial way in which plants, for the most part, must be kept in our plant structures. We can assist, hasten, retard, or complete the work, as circumstances may dictate, and seeing that this is the most favourable condition for plants sustaining unhurt the rigour and severity of winter, the cultivator will at once perceive the importance of observing this, and allowing his plants to come into this condition before the strength of winter overtake them in a growing and succulent condition ; and, moreover, they will require to be treated while in this condition almost as if they were dead ; they require no stimulants whatever, for if heat and water were to be administered at this season, a spring time is created in the house while there is little sunlight, and a cold dull winter abounds without. Through this perversion of an universal law, plants are not allowed the necessary rest, but are forced to dwindle on, for they cannot be said to grow, and are robbed of all the material necessary to promote vigour ; hence, every expectation is blasted, every hope frustrated, through ignorance of a principle which may be seen in full operation, by all who choose to use their senses. Nothing than this is more common among amateur cultivators ; they are anxious to anticipate, while they commit a fatal

error ; they are anxious to speed, while they are doing all they can to impede.

However, all plants do not require the same length, or perhaps the same season of repose ; but the law is general, and the exceptions must be corrected in practice. A good collection may contain plants from all the quarters of the globe: some may have been obtained from the recesses of the forest, where sunlight never shone on its retreat ; others from the mountain side, where a pure air and clear light was ever around it : all this points out to the intelligent cultivator the necessity of making himself intimately acquainted with all that pertains to his plants individually ; the country they come from, their widest range of distribution in that country, all the various elementary influences to which they are there subjected, the soil in which they attain their greatest luxuriance, both in flower and foliage ; in fact, every fact connected with their native habitats becomes very useful in one way or other. Where this knowledge is attained cultivation becomes something more than the work of chance—it eminently ranks as one of the fine arts ; in fact, it is only when thus followed out, that an intelligent mind derives from it that lofty degree of pleasure that it is so well fitted to yield, when the result of diligent study comes up to the standard of expectation, and success can be traced not to chance, but to skill and forethought.

Our advice to every amateur who can afford it, is to purchase some standard work on the physiology of plants, and make himself thorough master of it in all its details. It is not a dry and uninteresting theme, but one richly fraught with pleasure, and, moreover, he will be constantly seeing, in attending on his collection, illustrations of his studies. He will as certainly see cause producing effect in this as in any other art. He will learn to give impulse to the efforts of nature instead of obstructing her obvious relations ; and this is the most common fault among amateur cultivators, they oftener kill through excessive attention than neglect ; the means are different but the end is the same, death follows either.

He will also learn many useful lessons by keeping his eyes open when he has an opportunity of being in the country ; every mountain, wood, and glade, are ever ready to offer some illustration of the great laws by which nature is governed. He will often see instances of plants having come under the influence of some accidental circum-

stance that has produced a new aspect. This may turn out important information, in fact information on which is based a great many varieties of cultivation; if a richness of flowering has been the result, it may be so in other cases; if luxuriance of foliage has followed, the same cause may produce a like effect; if gracefulness of outline, it will do so perhaps again. It will be for him to note these causes, to store up these facts, and make use of them as occasion may require. He may imitate, modify, or avoid, as best suits the end in view; no information of this sort, or indeed of any sort, is useless, it will come to his aid sooner or later; for the man possessing a general acquaintance with the internal structure of plants, and the various relations which the different organs sustain to each other, combined with an extensive knowledge of the numberless external effects and transformations produced by causes under his control, has an immense advantage over a person who cultivates his plants from mere verbal directions, or does as he sees, or has seen others do; he knows that in certain seasons such and such treatment is necessary, but he is ignorant *why* he ought to do so. Now plant cultivation is modified by so many circumstances, many of them beyond control, that to know that this treatment or the other is required is not all; he must know *when* and *why* it is necessary. If this knowledge from experience and observation be wanting nothing whatever can adequately supply its place. The best calendar of operations will not make a good gardener; their great use is merely to refresh the memory, for even were they as full and correct as it is possible to make them, the farther they travel from the climate to which they are adapted their value decreases, for the directions for one portion of the country does not apply without modification to all parts; for this reason, we look upon a work such as the CABINET, as rendering the most important service to amateurs, as any improvements are given as they are discovered, and that too at little expense. However, no work can supersede personal study and observation in the lover of plants; and we firmly assert, that if in this delightful pursuit nothing is done to thwart nature's laws, but all his exertions tend towards a free development of them, if they are judiciously assisted and impelled, the amateur, even with his artificial structures and confined root room, will have the most ample satisfaction and reward for his labour.

We have written this as a sort of preface to a few papers, illus-

trative of some of those leading principles on which plant cultivation and propagation ought to proceed. They are addressed specially to those amateurs, and they are increasing by thousands, who have not the means of purchasing extensive works on the subject, and who only require to have the true means of success explained to go on exultingly.

ARTICLE III.

REMARKS ON THE PANSY.

BY MR. WILLIAM JOHNSTON, BALLYKILBEG HOUSE.

FEW flowers are more deserving of cultivation than the Pansy, whether we take into consideration its beauty, and the great variety of its colours, the extreme facility with which it is propagated, or the cheapness of fine sorts. In the first place, as to its beauty, and the variety of its colours, scarcely any flower can compete with it; the Tulip, "the king of flowers," can boast of red through all its shades, purple, and brown on white, and yellow grounds; the Pelargonium rises from the lightest shade of pink to scarlet and purple, some are white too; the Ranunculus varies from pink to purple and brown, in selfs, and edges and mottles on white and yellow; and the Rose, "the queen of flowers," has pink, red, white, yellow, and purple varieties; but the Pansy, the lovely spring, summer, and autumn-flowering Pansy, has white, yellow, blue, purple, purplish-crimson, and all the possible tinges and combinations of these colours among its gems. We do not wish to detract from the flowers mentioned above, far from it, for we love them, love them all; but we wish, in the present article, to direct attention more to the Pansy. If it is less cultivated than it once was, why is it so? it is not that the flowers are not so fine as they once were, for new gems, real gems, come out every year, though, of course, trash too, as to form sometimes. None, however, need buy without seeing; and, if the person intending to purchase is too far from an exhibition to see blooms there, the most of nurserymen would furnish them by post, if they got compensation for the postage.

This article is written for the special benefit of young amateurs, and we hope it may direct the attention of some such to the cultivation of this flower. Again, it is so easily propagated that one may

have quite a stock of a fine sort in a year; while some of the other flowers we have noticed would require many years to obtain a good supply of them. Then as to the cheapness of the Pansy is another recommendation—a fine tulip, pelargonium, or rose, being very dear on its first introduction to the floral world; while the Pansy is moderate in price, even on its first appearance. If the amateur plant but one bed in the year, autumn is the best time; but if a succession is desired the Pansy may be planted at all seasons. In arranging the bed it may be well to attend to the position of the flowers, not to have those in proximity which resemble one another; for instance, a blue and white one should be beside a yellow and purple one, and so on. A foot each way is about the proper distance for plants, if the bed is removed, or rather a fresh one planted every year, as ought to be the case. The raising of seedlings is another great source of delightful recreation to the amateur; the seed should be sown in boxes in autumn, and the plants be transplanted into beds in spring. As the seedlings bloom all the inferior ones should be destroyed, and those only preserved which are essentially different from the varieties in cultivation. Of course the seed should only be sown of the finest sorts; and we would recommend the laying in a good stock of fine sorts first, and of them sowing seed; not buying seed, and expecting from it to have the finest sorts. Now we will conclude, first remarking that we hope we have not offended the tulip, pelargonium, rose, or ranunculus, which was very far from our intention, and we wish all who cultivate them every pleasure derivable from them; but we wish to recommend to notice our little favourite, the Pansy, and may all who commence its culture as we have done, as a young amateur, derive the same pleasure from it.

ARTICLE IV.

REMARKS ON THE DOUBLE-FLOWERING WHITE AND PURPLE ROCKETS.

BY LOUISA.

IN a former volume of the CABINET I read some hints relative to the culture of that very lovely flower garden ornament, the fragrant double-flowering Rocket. It has been a pet of mine for many years, but previous to reading the hints alluded to, I had with much diffi-

culty just been able to keep a plant or two from one year to another, but by adopting the following sensible plan I have obtained an abundant supply, and with ease kept them, and had a vigorous bloom. No flower garden ought to be without them, their neat habit, beauty, and particular fragrance, alike recommend them.

“After reading all the known directions, and obtaining the best information from every possible source, my efforts to obtain strong and healthy plants of the Rocket were ineffectual ; I, however, after many fruitless attempts, happened to stumble on a plan of my own, that soon completely satisfied my ardent desires to have this favourite in perfection, and it is simply this : let as many plants as can be obtained the first season, be planted in a free and rich soil, in any open compartment of the garden ; they must not be allowed to bloom, but have every stem pinched off as it appears ; this will cause the production of numerous side-shoots, which must be taken off, as they form roots of their own, which may be ascertained by occasional inspection, and transplanted, six inches asunder, into a bed or border that has been previously made very rich by a liberal supply of old dung, and well watered till properly established. All will go on well then if the foliage is kept free from the ravages of that *sluggish* pest so well known to all cultivators, and which eats or gnaws indiscriminately almost every herb and flower of the garden, and particularly this, which is only truly valuable when grown exceedingly perfect and robust, and all who have seen it so, I think, must at once admit it to be a most splendid and desirable object of culture. For my own part, I have grown it to two feet high, one half of which has been an unbroken mass of the purest white bloom, to observe which in this matured state I must confess that I can feel less pride certainly, but quite an equal degree of pleasure, as when bending o’er the pencilled beauties of a Catafalque, the well-formed truss of a Booth’s Freedom, or the still dearer and sweeter gem that springs from the bosom of a choice *Ranuuculus*.”

ARTICLE V.

REMARKS ON COMPOST FOR POT PLANTS.

BY A PRACTITIONER.

LOAM, peat, and sand, seem to be the three simples of nature, if I may so call them, most requisite for our purpose ; to which, we occa-

sionally add as mollifiers, vegetable mould and well rotted dung ; from the judicious mixture and preparation of which, composts may be made to suit plants introduced from any quarter of the globe : first of loam, which is a loose friable kind of earth, the constituent particles of which crumble and separate easily in the hand ; it is of various textures, the strongest approaching to clay, and so down in several shades, until the lightest becomes nearly similar to strong sandy peat. It is found of different colours, viz., black, yellow, red, &c. &c. ; sometimes, also, it partakes of a saponaceous quality approaching to a marle ; this when predominant is not recommendable for general use ; yet there are some articles for which it may be used with considerable success.

Yellow or red seems to be the natural colour of maiden loam, as either will change to black as they become more or less mixed with other extraneous substances, such as dung, &c. Therefore, to have it pure, which is very material, one should prefer either of these, if they can be conveniently procured. The places to look for this kind of earth, is generally in fields that have not been broken for a long series of years ; also sheep downs, or commons most frequently running in dry banks perhaps throughout the whole ; its strata is of various thicknesses, sometimes being little more than that which forms the turf or upper sward, and at other times lying from one or two, to three or four feet under the surface. That is generally the best which is of a moderate depth, being more within the ameliorating powers of the sun and atmosphere ; the other lying deeper, being known to abound with crude unqualified matter very unfavourable to the growth of tender plants, unless exposed in the compost yard for a year or two to the weather, whereby, it will become fit for all strong growing woody kinds, or fruit trees in general.

Loam, being found answerable to the purpose for which it is designed, it should be immediately carted home and heaped in a clean part of the compost yard for a few months, so that the turf, and fibres of the grass, may have sufficient time to decay, and the whole become more qualified for use through the action of the season : when it has lain thus for some time together, it will be found to be in a very good state for working.

This sort of soil is particularly adapted for striking cuttings in general, on account of its firm close texture, and the twofold quality

of retaining moisture longer than either peat or sand, and at the same time, its own natural dissolubility, which admits the young fibres of the cuttings to push through it freely, as soon as formed, to that which they more immediately like to grow and flourish in, a stratum of which is generally put in the bottom of the pot.

From its strength it seems more adapted to arborescent plants in general, which have powerful roots, that are seldom able to support themselves in lighter soils, more especially in dry seasons; while from its purity and sweetness, it may be said to give additional flavour to the most delicate fruits.

The word Peat, is generally understood to mean common bog earth; however, that which may literally be termed *bog*, is by no means proper for our purpose, on account of its wet coagulating nature, and tendency thereby to rot the roots of the plants; at least, if peat is to be taken from those situations, the very surface only should be chosen, as that is found to contain a greater portion of the fine, drying, opening kind of sand, so necessary to this species of soil.

The places where I would recommend to look for the proper peat, are those dry healthy commons, where it seems to form a medium between bog earth and sand, it is not unfrequently found forming a mere skin, over a bed of pure sand, or gravel. The turf, or sod, cut about four or six inches deep, is always the best for use, as it is in general the lightest, and abounds with sand, as already mentioned, which is, I think, invariably found to be the finest near the surface in such cases. Spots where the wild heath grows luxuriantly should be diligently selected, as producing the best peat for general use; but when it is considered that of the plants mostly cultivated in this kind of soil, some grow in swamps near rivers, others in barren sandy wastes, and more in all their various intermediate stations, as mountains, low lands, &c. &c., especially heaths from the varied surface of Southern Africa; it will surely be obvious, that a supply of every variety of soil should be always at hand, and that the peat answering for one species will not be so congenial as another brought from a very different situation and soil.

It should be cast into a heap in the compost yard for twelve or fourteen months before used, a practice which ought to be observed with composts in general.

It is to be used only for such plants as are known to grow natu-

rally in peat, or those which are known to thrive best in a very light sandy soil: also to be mixed occasionally with loam, for such as delight in an intermediate compost.

Most plants grow remarkably free in peat during the summer season, if kept carefully watered, particularly those which come under the denomination of half herbaceous or biennial like plants; yet even these are often liable to perish in winter, on account of the extreme lightness of the soil, and the cold necessarily produced by frequent watering.

Shrubby, hard wooded, and fine fibrous rooted plants in general, thrive very well in this and loam, mixed in about equal proportions; but I think it by no means suitable to fruits. It is seldom used by itself except for heaths, Botany Bay plants, and the general productions of Northern America, to all of which it seems particularly adapted.

Sand is rarely used simply, except for striking cuttings of the two first of the above mentioned plants; viz., heaths and Botany Bays; for which it is peculiarly suitable; their fine hair-like fibres not having strength to vegetate in stronger soils. An inch or two in depth on the surface is quite sufficient, as it is intended merely to strike the cutting in, the lower part of the pot being filled with peat, into which the young fibres will soon penetrate, and draw therefrom the principal part of their nourishment as from their parent soil: it should be kept moderately moist when used in this manner, otherwise, from its natural drying quality, it would soon parch up and destroy whatever cuttings may have been put therein.

The soil of the interior parts of Southern Africa being for the greater part excessively sandy, a considerable portion of it should be used in the composts intended for the productions of that country, both of woody, herbaceous, and bulbous species.

Pit sand should be invariably preferred for this purpose, it being of a more lively vegetating nature than river or sea sand, and if we may judge by colour the whitest that can be procured; as I have always observed it to be the finest, and have, from repeated trials, proved that the finer the sand the surer a good crop of cuttings.

It requires no kind of preparatory process, more than shifting, to divest it of those small pebbles, &c., which are usually found amongst

it, and to be kept pure and unmixed with extraneous substances until wanted for use.

By vegetable mould, at least the kind best suited to our purpose, is meant that which accumulates, or in a manner grows, if I may use the expression, in woods, particularly those of long standing, by the annual fall of leaves, &c., and their consequent decay; the vicissitudes of a few revolving seasons reduces them to a perfect mould, which is afterwards known by the above appellation. It is of a very loose light nature, and comparatively rich, but far behind that produced by the mixture of animal excrement. Yet it is doubtless of an ameliorating nature, and highly recommendable for such plants as delight in a moderate and well digested manure.

In its simple state it is hardly fit for anything except annuals, as its extreme lightness, like the peat, renders it unable to support arborescent plants with any degree of credit; however, when mixed with loam, or any other soil of a more firm texture than itself, it is particularly useful for West India plants, geraniums, and annuals in general.

The best manner of procuring it is to have several large pits dug in the most convenient part of the woods, into which may be annually raked all the leaves in the vicinity, together with the general surface of the ground produced by them in preceding years, which will materially accelerate their decomposition, so that in a few months they become a perfect mould and fit for use.

Of animal manure, that procured from old hot-beds is, I think, most suitable for composts in this department. It likewise should not be used for plants until rotted to a perfect mould; to promote which, it should be well mixed with a small portion of loam in the compost yard, whereby they will become better incorporated, and more fit for use; it is necessary, however, not to add too much loam to it in this process, as it is so much easier to add afterwards than to take away, according as circumstances may require.

This, mixed with a proper quantity of loam, is in general the best compost for such plants as have soft fleshy roots, also for soft wooded, half shrubby, and herbaceous kinds of plants, annuals, biennials, &c. &c., but is never used simply by itself, and very rarely, if at all, mixed with peat or sand.

The very great variety in the nature of plants, taken *en masse*,

renders it utterly impossible to specify within the limits of this article the soil proper for each particular species; however, I think it may be advanced as a rule not subject to many objections that the whole of each genus are generally fond of the same compost. I shall draw up a table of genera, of which any of the species are known to require the aid of the greenhouse or stove; showing that peculiar soil most suitable to each particular genus; deduced from observations on the extensive collections I have had under my own particular care, combined with those which I have had an opportunity of making on others, as well in the vicinity of London as around Dublin.

The necessity of this combination is evident from the difficulty of finding the whole of the genera here enumerated in any single collection in the United Kingdom.

ARTICLE VI.

ON GUANO.

(Continued from page 65.)

“THE nectariferous juices, or, as they are commonly called, the honey in flowers, are usually separated or secreted by glandular bodies called nectaries, and this honey has by many been supposed indispensable in the fecundation of the seed; but there are also glands on the leaves and leaf-stalks (petioles) of many plants, which perform the same office of secreting honey; here, of course, it cannot be of use for this purpose. Such glands exist on the petioles or leaf-stalks of most of the acacia tribe; on the tips of three or four of the lower serratures on the leaves of *Grewia*, on various parts of the leaves or stems of the *Balsam*, on *Passiflora*, and many other plants. These glands only secrete honey during the youth and growth of the leaf; it is then only that their operation and beautiful structure can be properly observed. When the leaf has attained its full growth and perfection, the active part of these glands dries up, the time for observing their powers is past, and the leaf then proceeds in its own important functions of elaborating the sap. It has been lately surmised, and it appears to me with every probability of truth, that this honey is an excretion of the superabundant and useless part of the juices thrown off, after the leaf or flower has selected all that is

necessary, precisely analogous to the excretions of the animal frame. I will attempt very briefly to show, that this view, if correct, is of some importance, both to agriculture and to horticulture. Mr. A. A. Hayes, of Boxbury, in a beautiful, simple, and, I believe, original experiment, before the Chemical Society of Boston, proved the existence of phosphoric acid (probably combined in several seeds), by immersing sections of them in weak solutions of sulphate or acetate of copper; in whatever part of the seed phosphoric acid existed, on that part was deposited a precipitate of phosphate of copper; this was particularly evident in the seeds of India corn. A certain quantity of phosphoric acid, or phosphates, is therefore necessary to the existence of these seeds; and that part of the plant (probably the flower) destined to perform the functions of preparing the juices for these seeds, must go on exerting its utmost powers in selecting and rejecting, until the requisite quantity of phosphates and other ingredients for the seed are obtained. Now the phosphates in most soils exist in extremely minute quantities; therefore, those plants and flowers whose seeds require them, must extract large portions of food from the soil before they can select the amount of phosphate necessary for the perfections of their seed; and probably, only as many seeds arrive at maturity as the plant can procure phosphates to complete; the remainder, embryos of which are always formed in abundance, are abortive—that is, never come to perfection. The same line of reasoning, of course, applies to the other necessary ingredients of seeds. If, therefore, we present to a plant food containing an abundant supply of these ingredients, it seems reasonable to suppose, that we shall produce more seeds, or rather that more of the embryo seeds will be perfected. Now, the chemical analysis of Guano, shows that it contains, in abundance, most of the necessary ingredients of plants and seeds, the nitrogen of its ammonia being absolutely requisite for the cellular, vascular, and other parts of the stem and leaves, and its phosphoric acid, as well as its nitrogen, for the seeds; and if future experience should confirm what I have thus stated as an opinion, that the flowers of plants manured with Guano become smaller, it may be accounted for on the assumption, that as there are presented to the plant these ingredients in abundance, particularly those necessary for the seed, the flower and its glands, whose office it is to prepare the latter, have less work to perform, less food to analyze, less

to select, and less to reject; hence, there is no necessity to have them of so large a size as where much exertion of these functions is required. The seed will also be larger and in greater quantity.

“ We shall forbear to enter on the chemical analysis of Guano; it is more our province to show its effects, and to inform our readers how it may be most efficiently employed in horticulture. We have in progress various experiments to assist in proving its value; and, as far as these have gone, they have in general been most satisfactory. We have already proved that it may be used too freely, and that injury may be thereby produced. In a liquid state (four ounces to a gallon of water), applied twice a-week for three weeks, to beds of strawberries, it has occasioned an amazing growth of foliage and blossoms, but its influence on the crop of fruit remains to be seen. On the other hand, a bed of seedling Alpine strawberry plants, which had been up about a month, was thinly sprinkled with unmixed Guano in powder, and it destroyed every plant where it was applied. The half of a bed of Onions, which were six inches high, was sprinkled over a month ago with pure Guano, at the rate of two ounces to every square yard, being upwards of five cwt. to the acre; the season has been rainy, and the Onions treated with Guano are double the size of those not so treated. Potatoes, which were six inches high, had Guano sprinkled along the rows, amongst their stems, at the rate of an ounce and a half to every yard; and these are now (five weeks subsequently) far superior to those in parts of the rows purposely left without Guano. Nine parts of light soil were mixed with one of Guano, and half a spadeful of the compost was put into each of the holes regularly made to receive it, in a prepared bed of light soil; in the midst of the compost in each hole a plant of Brussels sprouts was put, and then well watered. This was done a month ago, and at the present time more than half the plants have dwindled and died. Geraniums were watered at intervals of a week, five times only in the whole, with Guano water, four ounces to the gallon of water; their leaves began to curl, and, although the use of the liquid Guano had been discontinued two months, it is unlikely that the plants will recover till they are potted in fresh soil. Plants of various sorts, in pots, watered only with Guano water, half an ounce to a gallon, have flourished astonishingly—none have failed. These are lessons which cannot be mistaken.”—*Hovey's Magazine*.

ARTICLE VII.

OBSERVATIONS UPON ANNUALS TO BLOOM EARLY IN SPRING OR SUMMER.

BY M. E. P., OF WILTS.

THE best period for sowing annuals that are intended for spring-flowering is the month of August, or early in September, as those instances of success which have occurred to us have for the most part been from self-sown seeds, which have doubtless been scattered nearly at that time. The seeds should be very lightly covered, or only worked into the soil with a rake, and not be sown too thickly, because, when the young plants have to be much thinned, the remaining ones will be weak, and inevitably damaged in some degree. On the other hand, they must not be sown very sparingly, as it is desirable that the plants be near enough to each other to allow of some dying in the winter, and also to form a covering to the soil, which shall assist in protecting the roots. Unless sown in pots (which is a troublesome and unsatisfactory process at this season), and kept in frames through the severest weather, no autumn-sown annual should ever be transplanted, for they never recover sufficiently that vigour, and that firm establishment in the earth, which are essential to their preservation, if in any way transferred from the spot where they germinate. They may be thinned to two or three inches apart, leaving the strongest and healthiest, and best-rooted plants; and if it should appear, as winter advances, that their roots are so near the surface as to render them liable to injury from winds or other circumstances, a mulching of soil can be carefully laid over the bed. In the spring, all that will be necessary will be to train the branches of the living specimens over those places where any may happen to have perished, and the display of blossoms will be most brilliant and durable.

ARTICLE VIII.

ON POTTING, AND SOIL SUITED TO GROW THE FUCHSIA VERY SUCCESSFULLY.

BY G. G.

HAVING, in February, prepared a suitable quantity of well aerated lumpy loam, fibrous loam, and peat, with a proportion of charcoal

in lumps, and a smaller quantity of silver sand, also some hard lumps of decomposed manure, made so by drying, so that it will not easily coagulate into a mass; but if a sufficient supply of clear manure water can be commanded the above manure is not needed. Use for the stronger and more robust plants nearly all loam and charcoal, and a greater proportion of peat and sand for those of weaker growth, but in all cases let the soil be open and lumpy, and in order to prevent the soil from being too fine let it be passed through a fine sieve so as to take away the finest of the soil. Have clean pots, shake off a large portion of the old compost, place the roots in regular course in the pot, then fill up with the compost, and shake, or carefully press, the soil to the roots. The plants being placed in the greenhouse, let them be syringed overhead so as to soften the buds, which aids them in breaking easily. Do not water much at the root till the fibrous ones begin to strike into the fresh soil, and then in proportion as the plants grow. Manure water occasionally applied is always beneficial to them, and the best kind is a sprinkling over the surface of the ball, of superphosphate of lime, washed down by the usual mode of watering the plant. By due attention to thinning the shoots to a regular supply, and securing them, &c., plants will be produced of first rate merit.

PART II.

MISCELLANY

OF

NOTES AND CORRESPONDENCE.

New or Rare Plants.

GYNOCHEUS LODDIGESII. MR. LODDIGES. (Bot. Mag. 4215.) Orchidaceæ. *Gynandria Monandria.* Introduced from Surinam by Messrs. Loddiges, and has bloomed in the Royal Gardens at Kew. The raceme of flowers is terminal, long and drooping; flowers five or six, large; each being five inches across. Sepals and petals greenish-brown; the sepals blotched with brown. Lip, flesh-coloured, spotted with red. Very interesting and pretty.

ALLOPLECTUS DICHROUS. TWO-COLOURED. (Bot. Mag. 4216.) Gesneriaceæ. *Didynamia Angiospermia.* T. G. Lorraine, Esq., introduced it into this country from Brazil. It requires to be grown in the stove. It has the appearance of a

Baselia; shrubby below, and herbaceous above. The flowers are tubular, yellow, an inch long, covered with yellow hairs. Calyx a rich purple-red colour, which produces a striking contrast with the yellow flower.

GESNERIA HONDENSIS. Gesneriaceæ. Didynamia Angiospermia. (Bot. Mag. 4217.) Discovered in New Grenada, and sent to the Royal Gardens of Kew. The flower-stem is a foot high, bearing numerous flowers. Each blossom about an inch long, orange-red and yellow, covered with red hairs.

FUGOSIA HETEROPHYLLA. VARIOUS-LEAVED. (Bot. Mag. 4218.) Malvaceæ. Monadelphia Polyandria. A shrubby plant, sent from St. Martha, by Mr. Purdie, to the Royal Gardens of Kew. The appearance of the flowers is like those of *Turneria ulmifolia*, yellow, with five spots at the centre forming an eye, producing a pleasing contrast. The plant blooms freely, and is very pretty.

CATASETUM CALLOSUM; var. *GRANDIFLORUM*. TUMOUR-LIPPED. Orchidæ. Gynandria Monandria. From Columbia, and has bloomed in the collection at Syon Gardens. The flower-scape a foot long. Sepals and petals of a greenish-purple. Lip dark green and red purple. Very singular in shape, and pretty.

KOPSIA FRUTICOSA. SHRUBBY. (Bot. Mag. 4220.) Apocynaceæ. Pentandria Monogynia (synonym *Cerbera fruticosa*). From Pegu. An elegant hot-house shrub. The flowers are like those of *Vinea rosea*; nearly double the size, and fragrant. Very pretty and ornamental; produced in corymbose heads.

LANCASTERIA PARVIFLORA. SMALL-FLOWERED. (Bot. Reg. 12.) Acanthaceæ. Didynamia Angiospermia. From the west coast of Africa. A pretty winter-flowering plant for the hothouse, and a charming companion to the old well-known beautiful *Kranthemum pulchellum*, with its rich blue flowers. Our present plant is profuse in blooming; the flowers tubular, slender, an inch long; the five-parted limb nearly half an inch across, rich yellow at first, and changing paler. They are produced in clusters at the joints of the branches very numerous. It is in the collection of Mr. Glendinning, of Turnham Green.

RUELLIA LILACINA. LILAC-FLOWERED. (Bot. Reg. 13.) Acanthaceæ. Didynamia Angiospermia (synonym *R. longiflora*). It is a very charming shrubby species, blooming very profusely in paniced spikes. Each blossom has a tube about an inch and a half long, and the five-parted funnel-shaped limb is about an inch and a half across; a beautiful rosy-lilac colour.

CUPHEA STRIGILLOSA. COARSE-HAIRED. (Bot. Reg. 14.) Lythraceæ. Dodecandria Monogynia. From Mexico, and is in the Horticultural Society's collection at Chiswick. It is a greenhouse shrub, growing and blooming freely. Each flower is near an inch long, orange, green, and scarlet in colour, and appear like small flowers of the *Tropæolum tricolorum*. It is a neat and pretty plant, blooming for several months successively.

DENDROBIUM ADUNCUM. HOOKED DENDROBE. (Bot. Reg. 15.) Orchidæ. Gynandria Monandria. From Calcutta, and has bloomed with Messrs. Loddiges. The flowers are produced in a pendulous raceme, several together, up short laterals. Each blossom is an inch across, a beautiful transparent rosy-pink colour.

PTEROSTIGMA GRANDIFLORA. LARGE-FLOWERED. (Bot. Reg. 16.) Schrophulariaceæ. Didynamia Angiospermia. This new plant has been sent by Mr. Fortune from Hong Kong to the London Horticultural Society's garden. It appears to be a greenhouse herbaceous plant, growing erect, two feet high. The flower is tubular, much like the common snapdragon, about an inch and a half long, of a rich purple blue. It is a very pretty flowering plant.

MULGEDIUM MACRORHIZON. LARGE-ROOTED. (Bot. Reg. 17.) Asteraceæ. Syngenesia Polygamia. Seeds of this very pretty Succory were sent by Dr. Boyle, from Cashmere or Thibet, to the London Horticultural Society. It is a trailing perennial plant, well suited for a rock-work; blooming, so as to form a large carpet of lively blue, for a long time during the later summer and autumn months.

FRANCISEA ACUMINATA. ACUMINATE-LEAVED. (Pax. Mag. Bot.) Schrophulariaceæ. Didynamia Angiospermia. From Brazil; much like *F. Hopeana*, but blooms more freely, in terminal corymbs; the flowers are a bluish-violet. It has bloomed with Messrs. Hendersons, Edgware Road, London.

LEIANTHUS LONGIFOLIUS. LONG-LEAVED. (Pax. Mag. Bot.) Gentianaceæ. Pentandria Monogynia (synonym *Tachia longifolia*). It is found in woods in Jamaica. It is an evergreen shrub, flowering freely, in terminal pedicles, of a dozen blooms in each head. A separate flower is near two inches long, a lively yellow colour. It is grown in several of the public nurseries around London.

DESCRIPTIVE CATALOGUE OF NEW CAMELLIAS (continued from page 68).

- Orsolina**, delicate pink, very large, double and beautiful.
- Palagi**, very delicate, white, with rose tinge, spotted and streaked with rich rose and purple. It is of *Pæony* formed class.
- Palatinus hungaricus**, very large and full, double; a rich rose, sprinkled over with shades of white and rose. Of first-rate character.
- Parmentiera**, imbricate form, deep rose, and the extreme parts of the petals are transparent. Very superb.
- Pensylvanica d'Amerique**, imbricate, and of the first-rate character.
- Pisani**, imbricate, very large, white, spotted and streaked with rosy carmine.
- Pomponia aurea**, a globular form, buff colour, very beautiful.
- Porta**, it is very like the old white in shape; a pure white like it too; but striped and spotted with rich red. Very pretty.
- Powhattan**, globular form, a rich carmine.
- Prince of Wales**, first-rate form, very large, and full double. The petals are like those of *Reticulata*; a rosy satin, delicate.
- Princesse Baciocchi**, superb, imbricate form; the first four rows of petals are a beautiful rich carmine velvet, the others are nearly white.
- Princesse Maria**, bright rosy salmon, with a very distinct pure white streak.
- Purpurea nova**, beautiful purple; very double.
- Queen of England**, fine imbricate form; a very delicate and beautiful rose colour, with a white stripe up the middle of each petal. Very pretty.
- Queen of Great Britain**, a beautiful satin-rose colour, fine form; much admired.
- Ralemona d'Italie**, fine form; the veins of the petals are quite transparent. The petals are a deep rich rose at the extremities, but the centre of the flower is a delicate pale rose. Very beautiful.
- Rapallino**, very large imbricate form, a deep carmine, spotted with white; very handsome.
- Reine des Fleurs**, beautiful imbricate form, deep carmine, edged with white; very pretty.
- Rising Sun**, rich brilliant red, very large, and of the most beautiful imbricate form. One of the finest grown.
- Salicifolia**, a beautiful brilliant red, a globe-shaped flower; very fine.
- Sarniensis vera**, superb imbricate form, and a beautiful rich carmine colour.
- Skirving's Seedling**, or *Alba Illustrata*, beautiful white, and superb imbricate form.
- Sherwoodi d'Amerique**, beautiful cherry colour, imbricate form; very handsome.
- Sovereign (Low's)**, very large, and full double, superb imbricate form, white, with a few patches of carmine; a very superb variety.
- Spiralis**, form of the old double white, a very delicate cream colour, striped with white.
- Squamosa**, beautiful red, with a pure white edge; very large flower, and a fine imbricate form; handsome.

[To be continued.]

ON HEATING APPARATUS BY MEANS OF HOT WATER, &c.—In a recent number of the *Gardeners' Chronicle*, Mr. Lindley has made some useful remarks on a subject of much importance to gardeners relative to the apparatus of heating plant houses, &c., by means of hot water. We extract the following. "The most serious objection that has been made to hot water as a heating medium, is its tendency to incrust the interior of the apparatus with carbonate of lime, thus producing explosions, or rendering the fire inefficient. We have now before us an instance of the kind where a boiler became lined, in a few months, with a crust nearly half an inch thick, and as hard as freestone; and there is no doubt that such deposits are accumulating in all hot water boilers and tanks, with more or less rapidity, according to the impurity of the water employed. Indeed, every one who has a hot-water apparatus in action must, unless he constantly uses rain water, expect to be obliged some day to pull it down for the purpose of having it cleaned.

"This inconvenience is more serious than is commonly supposed, and having been found universal in steam boilers, has attracted the attention of Dr. Ritterbrandt, who lately brought the subject before the Society of Arts, suggesting an effectual cure.

"In order to obviate the difficulties just spoken of, Dr. Ritterbrandt proposes to use the salts of ammonia, it being known that if to a soluble salt of lime be added a solution of carbonate of ammonia, precipitation takes place, and the acid which held in solution the lime unites with the ammonia, while the carbonic acid of the carbonate of ammonia combines and falls down with the lime; but, upon the water being heated, the precipitated carbonate of lime combines with the salt of ammonia, is redissolved, and the carbonate of ammonia is formed and escapes with the vapours of the boiling water. Feeling convinced that this peculiar reaction took place, viz., that carbonate of lime, precipitated from a salt of lime by carbonate of ammonia, would be again dissolved by the application of heat, it only remained to be proved how far the principle was capable of decomposing the carbonate of lime already existing in calcareous water, and the results exceeded the most sanguine expectations. However highly charged with lime water may be, the process answers, and the solution is in all cases perfect.

"Mr. Gooch, of the Southampton Railway, stated that when the subject first came under his consideration, there were two points which he was desirous of having made clear to him. The first was—that the ammonia did actually prevent the deposit; and the second, that the application of the muriate when applied to cleanse boilers did not produce any injurious effect upon the metal. Upon both of these points he expressed himself perfectly satisfied, and stated that he had adopted the plan with all the engines under his superintendence. The quantity of ammonia used on the Southampton Railway is at the rate of one pound for every 1500 or 2000 gallons of water. The cost of the ammonia is about 3d. per pound. Mr. Goodiff had also seen experiments made on the engines of steam vessels, one of which, *George the Fourth*, had its boiler completely incrustated; but after the experiment had been carried on for six weeks, the boilers became clean. It had also been tried in a small stationary high-pressure engine, of eight horse power, working with salt water, and the same results followed.

"The lesson which gardeners should learn from this important practical communication is, that if they wish to keep a hot-water apparatus in working order, without running the risk of the interior becoming 'furred' up, they will invariably add one ounce of sal ammoniac (or muriate of ammonia) to every ninety gallons of water with which their apparatus is filled."

CAMPANULA PYRAMIDALIS.—It being the season of the year to promote the growth of this splendid flowering old plant, I just direct the attention of your readers to try it, by having some in pots, promoting their growth in a close frame—a coolish one, till they can be grown there, then remove to a greenhouse till the plants are about to show the flower, then let a portion of them be kept in the light of a north-aspected window, and the flowers then instead of being blue,

become of a milk-and-water colour, having a most delicate hue, then remove them into a shady part of a greenhouse, or sitting-room, and in contrast with the other plants which were kept fully exposed in the greenhouse to the full sun and light, and which of course bloom the natural colour of a rich blue, they produce a very pleasing contrast. The pure white variety is equally grown to beautiful specimens. The three together are well deserving attention; procured very cheap, cultivated easily, (see articles in CABINET), and blooming its fragrant flowers for a long season, alike recommend a trial wherever practicable.

FLORA.

ON FUCHSIAS.—In compliance with the request of several of your correspondents, who desire a few practical hints on the management of this beautiful tribe of summer flowers, I beg to offer the following remarks, which I consider will be suitable to the admirers of this flower, whether their object be public competition or the mere decoration of the greenhouse and flower garden.

Presuming that the old plants are still in a dormant state, the first thing to be done with them will be to shorten the side shoots a little, and to place them in a temperature of from 50° to 60°, in order to induce them to make young shoots, from which a stock of plants may be obtained. In selecting the cuttings choose those of a short robust habit—such as generally protrude from the old stem; insert them in light sandy soil, and place the pot in a shady corner of a cucumber frame. In a fortnight the cuttings will be sufficiently rooted to pot off; using a compost consisting of equal parts of turfy loam, peat, and leaf-mould, with a liberal sprinkling of sand and a little charcoal. Return them to the frame, but as soon as they are established in the fresh soil remove them to a more airy situation, with a moist atmosphere of from 50° to 65°, and endeavour to keep them in a vigorous growing state, for so sure as they receive a check when young so certain is it that they will never make first-rate specimens. When a sufficient supply of cuttings has been obtained the old plants may be cut down to within a few inches of the pot, and if they are watered occasionally with a little clear weak manure-water they will throw up strong shoots from the bottom. As soon as these shoots are three or four inches in length take the plants to the potting shed, and having prepared some of the before-mentioned compost, shake them all out, reduce the roots, and repot into the smallest sized pots that the roots can be conveniently got into. At the same time, the number of shoots may be reduced to four, six, or eight, according to the specimen it is desired to produce, as a strong growing variety, with six, eight, or more shoots, will make a specimen four feet in height and six feet in diameter, and when fully grown will require an 18-inch pot. After this potting, the plants should receive the assistance of a little bottom heat, and should be kept in a close moist atmosphere, with shade in bright weather, until they are established in their new pots, which will be in about a fortnight from the time of potting.

We will now suppose it to be the middle of February, at which time the young plants should be well established in 3 or 5-inch pots, and the old ones ready to receive their second shift. At this time the plants should be stout, thrifty fellows, with clean bright transparent stems and foliage, and young lively roots protruding all over the surface of the soil; and if in this state, they may, by proper treatment, be grown to any size. A good single-stem specimen of *Exoniensis*, when well grown, should be six feet in height, with branches drooping in regular succession from the pot upwards, and it should be a perfect mass of foliage and flowers; and other kinds, according to their habit of growth, ought to be equally perfect. To return, however, to the plants, we must now prepare for the second shift, and for this purpose a compost consisting of two parts turfy loam, one part sandy peat, one part half-decomposed leaf-mould, with a handful of small charcoal, and a liberal supply of coarse sand, must be thrown together and thoroughly incorporated, taking care to break it as little as possible. At each subsequent shifting of the plants, excepting the last, the same compost must be used, but at the final potting it will be as well to substitute equal portions of strong loam, and three-years-old cow dung, for the one part of peat before used; as this will make the compost of a more adhesive character, the plants will consequently not require so much water during the hot weather.

In shifting the plants, take care to drain the pots properly, by using five or six oyster shells, and some rough charcoal, placing some of the roughest of the compost over the drainage. Remove the plants at each shift into pots at least three sizes larger, for though it may not at all times be convenient to adopt the one-shift system, I believe there are now no good cultivators who think of practising the old small-shift system. It is impossible to say how frequently the plants will require shifting, but if they are growing vigorously, they will never go more than six weeks from the time they are first potted until they show bloom, without requiring a larger pot. The best situation for the plants during the first part of their growth will be a low hot-water pit, where they can be kept near the glass, giving them plenty of air both night and day, and abundance of atmospheric moisture, but taking care to shade them thinly during bright sunshine, as the foliage is very liable to burn. As the plants progress in growth and get too tall for the pit, remove them to a house kept at a temperature of from 55° to 65° or 70°; place them near the glass, give plenty of air and moisture, occasionally moistening the paths, walls, and stages with clean manure water, and dew the plants over both morning and evening with clean tepid water.

If these directions are attended to and carried out, there need be no fear of the red spider attacking the plants; but should that pest make its appearance, lay the plant down on its side and syringe with clean soot-water until every insect is washed clean away. Throughout the whole season it will be advisable to water the plants twice or thrice a week with manure-water, formed by mixing one bushel of sheep's dung, one peck of soot, half a peck of guano, and half a peck of lime; put the soot and manures together and mix them into a puddle with boiling water, and then throw in 50 or 60 gallons of soft water and the lime; stir the water frequently, and, after it is quite clear, add two gallons of clean water to every gallon of the manure used, and apply it in a tepid state. It is astonishing what vigour this water imparts to the plants; indeed all other things being suitable, they seem to revel in it with that luxuriance that makes them really delightful to look upon.—*Gardeners' Chronicle*.

LONDON HORTICULTURAL SOCIETY, March 17.—Of Orchids, Messrs. Veitch and Son, of Exeter, sent one of the many varieties of *Gongora maculata* from South America, and two *Cypripediums* from Java; one a very dark purple, and the other a paler variety; both referable to *C. barbatum*. From Mr. Rae, gardener to J. J. Blandy, Esq., were two fine specimens of the old *Phaius grandifolius*, one of *Dendrobium Pierardi*, and another of *Lycaste Skinneri*. The beauty of these was, however, considerably destroyed by the travelling; a Banksian medal was awarded. Of other plants, Messrs. Henderson, of Pine-apple-place, sent *Acacia diffusa*, a small *Boronia triphylla*, producing numerous little rose-coloured star-like flowers; *Trillium erectum*, a hardy North American herbaceous plant, with dingy chocolate blossoms; and a beautiful collection of *Hyacinths*, for which a certificate was awarded. From Mr. Green, gardener to Sir E. Antrobus, Bart., were three seedling *Azaleas*, all of them good; but one named *alba magniflora*, having large white blooms, in which was a shade of pink, especially so; promising to be a considerable improvement on the kinds now in cultivation; a certificate was awarded it. A pale rose-coloured seedling *Camellia* came from Messrs. Lane and Son, of Great Berkhamstead. The plant had only one bloom on it, which, however, served to show that it possessed considerable merit in point of form; the petals laying nicely over one another, in the way of imbricata. It was named *Beauté Suprême*, and was awarded a certificate. Several fine specimens of Cape Heaths were produced from the garden of C. J. Dimdale, Esq. These were *vernix rubra*, an early sort, covered with round orange blossoms; a large plant of *transparens*, *nitida picta*, *Willmorei*, and *lacticolor*; the latter covered with small white flowers; a Banksian medal was awarded for them. Finally, several cut specimens of half-hardy plants were produced from the open walls of the gardens at Curraghmore, the seat of the Marquis of Waterford, with the view of illustrating what kind of climate they have in Ireland, in the county of Waterford. Some of the specimens were from a south-east aspect, and the plants from which they were cut were stated

to be of the following dimensions:—*Edwardsia microphylla*, in full bloom, covering 250 square feet, the stem, a foot from the ground, measuring 13 inches round; *E. grandiflora*, showing flower, covering 210 square feet, the stem measuring 15 inches round; *Acacia verticillata*, in full flower, covering 400 square feet, the stem measuring 21 inches round; *Clianthus puniceus*, stated to have been in flower for these three months past, covering 200 square feet; *Pittosporum tobira*, covering 130 square feet, has been in flower all winter; *Eucalyptus robusta*, covering 100 square feet; *Solanum crispum*, covering 300 square feet, has been in flower a month ago, as has also been *Ribes speciosum*, covering 200 square feet of wall; *Magnolia conspicua*, covering 160 square feet, has 100 open flowers on it; *Fuchsia gracilis* is showing flower, and *F. microphylla* was stated to have been in flower all winter. On a south aspect the following plants, portions of which were sent, had stood two winters unprotected; the following were not in flower:—*Mimosa prostrata*, White Indian Azalea, an Aster, *Grevillea armata*, and *Metrosideros floribunda*. The following three were in flower, viz., *Grevillea rosmarinifolia*, a small red Camellia, and *Coronilla glauca*. The following were mentioned to have stood last winter unprotected:—*Leonotis leonurus*, *Eutaxia myrtifolia*, *Veronica speciosa*, *Nerium Oleander*, *Abutilon striatum*, *Goodia lotifolia*, a *Teucrium fruticosum*, and *Acacia armata*; the three last were in blossom. These were all somewhat damaged by travelling, but they nevertheless bore conclusive evidence of the unusual mildness of the climate of Waterford. From the same gardens also came fruit of *Physalis edulis*, or Cape Gooseberry, which has considerable resemblance to the winter Cherry, but paler, and less attractive to the eye; and a branch, with a half-ripe fruit on it, of the Loquat of the Chinese (*Mespilus Japonica*), which, when ripe, somewhat resembles a small Apricot. This evergreen tree will survive our winters in the open air, in sheltered situations; but it will not fruit, except under glass, in a tolerably high temperature. Of Models, Mr. Hurwood, of Ipswich, Suffolk, sent a small Vinery, and different forms of windows, for the purpose of showing how his patent apparatus for opening and closing lights worked. The principal feature in this contrivance is the application of an endless screw working on a rack, and turned by a winch inside the house; by which means all pulleys, weights, and cords, are dispensed with. The lights are quite free from all risk of breakage by wind; for they are kept quite fast in any position to which they may be moved. The moving power, with a little variation, may be applied so as either to lift the lights perpendicularly, or to make them slide on an incline; as in the case of the roof sashes of the Vinery, in which two lights move at once. From the Garden of the Society were the larger variety of *Oncidium sphacelatum*, *Epidendrum aurantiacum*, remarkable for its peculiarly bright orange blossoms; the rare *Chysis bractescens*, *Franciscea Hopeana*, a fine bush of *Acacia Riceana*, *Rhododendron arboreum*, the showy *Pimelea spectabilis*, a blue *Cineraria*, the pretty little hardy *Primula denticulata*, which was shown at last meeting, and two *Tropæolums*; *tricolorum* and *brachyceras*; exhibiting the appearance of a bush. This loose and natural habit, which certainly has a much better appearance than when they are trained stiffly to a trellis, is effected by placing the top of a young Larch-tree, with the lateral twigs attached, close to the bulbs before they spring, and leading the young shoot to the stake, round which it continues to twine until the whole support is closely covered with foliage and flowers, presenting an exceedingly graceful appearance, and entirely dispensing with the trouble of training and tying.

ON EXHIBITING HEARTSEASE, &c.—Will you oblige me, if you can, by answering the following questions? or, perhaps, some of your numerous correspondents will. First, in what manner should the Heartsease be shown? on cards, or how otherwise? I have been a grower for some time, but never having shown, am ignorant on that subject; but being in possession of a very good collection of seedlings and others, I propose to try this season. I shall, therefore, feel obliged for some information on dressing them for show. Also, can you tell me anything of the regulations of the Boxley Heartsease Society, which I have seen noticed in previous Numbers? And, lastly, the best preventative for that

troublesome pest, the pea-bug or woodlouse, as I could scarcely get a bloom perfect last season?

AN AMATEUR GROWER AND YOUNG SUBSCRIBER.

[Sloping stands, constructed of wood, zinc, tin, or pasteboard, we have seen used. They have generally been painted green, some few blue, and in few cases been white. The best we have seen used, to give the most correct and distinct view of the flowers, was one that had the surface of the frame papered with a square of such coloured paper under the individual flower that would give it the most distinct appearance. The best stands are provided with tubes underneath to hold water, into which the stalk being inserted, the flowers are kept fresh. The floral societies usually specify in what form the flowers of each class are to be exhibited, so that what may be deemed tight in one place would be allowable in another. Mr. Kirby, the secretary of the Boxley Heartsease Society, if applied to, will supply the information. Place some flat pieces of board or slate in the spaces between the plants, and wrap up some bits of boiled potatoes in dry hay; upon this lay another board or slate, and the insects will feed upon the potatoes. They may be thus attracted and destroyed quickly; and by a little successive attention an entire riddance may be effected.]

ON THE POMEGRANATE.—A subscriber complains he cannot bloom the Pomegranate against a west aspect wall. It blooms and fruits well treated as follows. A dry substratum; if not so naturally, it must be formed by pieces of stone, brickbats, &c. A light but rich loam. In pruning, leave the new shoots (twiggy ones) as numerous as is requisite; as it is from them the bloom is produced. It must be trained against a south aspect wall, and if sheltered from wind on east or west all the better.

SENEX.

CINERARIAS.—A correspondent has suggested the propriety of offering medals of higher value than are now given for Calceolarias at the floral exhibitions, on the grounds of their great beauty, and still further capability of improvement. I have no intention of detracting from the merits of the Calceolaria in recommending the Cineraria as equally worthy of favourable consideration by those who arrange the schedule of prizes. Few plants are more useful in a garden than the Cineraria, for it might be had in bloom, if desired, during the greatest part of the year; and, when in bloom, there are few plants more showy. Would it not, then, be advisable another year to offer medals (even if of small value) for the best six Cinerarias of distinct and good varieties?

[We think so too.]

Floral Operations for April.

AMARYLLISES, and other lilaceous bulbous plants which have been kept dormant, may now be re-potted, and put into an increased temperature.

ANNUALS, HARDY, such as Clarkias, Nemophilas, Larkspurs, &c., if the soil be moderately dry, may be sown. The best method of sowing the small seeds in patches is to have a quantity of finely sifted soil; spread a portion where desired; after scattering the seed, sprinkle a little more soil over them, and then press it closely upon the seeds, which will assist them in vegetating properly.

ANNUALS, TENDER, such as Cockscombs, Balsams, Stocks, &c.—Such as have been sown, and may be up, should have all possible air given to prevent their being drawn up weakly. In watering those in pots they must not be watered over the tops, or many of the sorts will be rotted by it. The best method is to flood over the surface of each pot, always using water that is new-milk warm. Those annuals sown in frames must be watered (when requisite) with a very fine syringe, or pan-rose to sprinkle with; but the best plan is to take advantage of gentle rains. For any seeds yet requiring to be sown, use fine soil pressed to the seeds; and, when convenient, place the pots (if used) in moist heat till the plants are up. Cockscombs, Amaranthus, Balsam, Browallia, Brachycoma,

Thunbergias, Maurandias, &c., if large enough to pot, should be done in sixty-sized pots.

AURICULAS.—Those requiring top-dressing should be done immediately, by taking off about two inches deep of the top-soil, replacing it with some very rich; more than one-half of it should be rotten cow-dung two years old, and the rest loam and sand. Immediately after this dressing, let the soil be well settled by a free watering. By the end of the month the unexpanded blossoms will be nearly full grown; no water must be allowed to fall on them, or the blossoms would be liable to suffer injury by it. All possible air may be admitted to the plants during the day, only screen from cutting frosty winds.

CAMPANULA PYRAMIDALIS—to have fine pot specimens, should be potted, if not before done, and encouraged to grow.

CARNATIONS.—The last year's layers kept in pots or beds during the winter should be planted off into large pots 12 inches wide at the top, 6 at the bottom, and 10 deep. In each pot three plants may be placed triangularly, not planting deeper than to fix them securely. The following compost is most suitable:—Two barrows full of fresh yellow loam, three of well-rotted horse-dung, and half a barrowful of river-sand, well mixed; plant in it *without sifting*, but breaking very well with the spade, and have a free drainage of rough turf, &c.; place the plants in a sheltered situation out of doors.

CREPERS—and twining greenhouse or hardy plants, should be pruned and regulated before they begin to grow.

CALCEOLARIA SEED—should be sown, having the finest sifted soil for the surface.

CHRYSANTHEMUMS—sow seed of, and raise in moist heat. Pot off singly the suckers of old plants for blooming.

CUTTINGS of Salvias, Fuchsias, Heliotropes, Geraniums, Celcias, Alonsoas, Lotuses, Senecios, &c., where it is desired to plant such out in beds, should be struck in moist heat as early as possible. Young shoots, cut off clean, strike readily. (See kinds of plants suitable, in vol. i., p. 38; and for additional kinds, subsequent vols.)

DAHLIAS.—Any struck root should be potted into small pots. Seeds should be sown, placing them in a hot-bed frame till up. Cuttings be taken off and struck in heat.

ACHIMENES, Gesneria, Gloxinia, and Tropæolum bulbs, &c., that have been kept dry during winter, should now be potted, and gently brought forward in heat.

HERBACEOUS perennials, biennials, &c., may still be divided, if required.

PELARGONIUMS.—Cuttings now put in, struck in a hot-bed frame, and potted off as soon as they have taken root, will bloom during autumn. Attention to thinning, tying, &c., of blooming plants, &c., see articles of in previous numbers.

POLYANTHUSES—should be top-dressed, as directed for Auriculas, if not done before. Seed may now be sown; the best method is to raise it in heat, harden gradually, and transplant when large enough.

RANUNCULUSES and **ANEMONES**—for late bloom, may still be planted, taking care no fresh applied dung is in the soil, nor should the ground to plant in be lightened up more than two inches deep. The soil of the bed should be half a yard deep at the least. Press the soil firm about the plants. See articles in former numbers.

ROSE TREES—allowed to remain untouched till the shoots of the present season an inch long, and shortened by cutting back all the old wood to below where the new shoots had pushed, the dormant buds will then be excited, and roses will be produced some weeks later than if pruned at a much earlier season. Plants in pots now put into heat will come into bloom in May.

TUBEROSES—should be planted, one root in a small pot, using very rich sandy soil; the pots should be placed in moist heat till the plants are up a few inches; then they may be planted into larger pots, and taken into a stove, and finally into a greenhouse.

TULIPS.—Protect from strong winds, by tying up, or screening the bed.

SEEDS—of greenhouse and similar plants may now successfully be sown, raised in moist temperature.



M^{rs} IVERY'S SEEDLING CINERARIAS.

Floricultural Cabinet.

THE
FLORICULTURAL CABINET,

MAY 1st, 1846.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I. EMBELLISHMENTS.

MR. IVERY'S SEEDLING CINERARIAS.

1. PERFECTION. 2. VICTORIA SUPERB. 3. CONQUESSOR.

THE *Cineraria* is fast becoming a popular flower, its gay and lively appearance at an early period of the season rendering it peculiarly useful for purposes of general decoration in the greenhouse; to the great improvement, however, which has recently been effected upon its original rude and starry-shaped flowers, remarkable only for their large daisy-like disk or eye, surrounded by a few narrow petals, may we attribute its present elevation.

The three seedling varieties, raised by Mr. Ivery of Peckham, and represented in our plate, afford ample proof of the improvement we speak of; there yet, however, remains much to be done, especially in the habit of the plant, which ought to be compact and *dwarf*. This is a point that must first be insisted on, because without uniformity in the plant, all its beauty is destroyed. Other good properties are, the trusses of bloom being large, close, and even on the surface, the individual flowers standing together so that their edges just touch each other, however numerous they may be, and finally, as the most beautiful of all forms in a flower that faces us, each separate bloom should form as complete a circle as possible, its centre or disk be proportionate to its size, that is, in all cases not more than one-third the diameter of the whole, and if somewhat less, perhaps, the better, as this portion of the flower is certainly the least interesting of any. We hope soon

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to see *double-flowered* kinds, which will be pleasingly admitted to obviate the last-named consideration.

A very excellent plan to adopt in the cultivation of this plant is to turn out the old plants (after undergoing a thorough cleansing process) into a raised bed, in the month of June. The bed should be composed of one-half leaf-soil, or other vegetable matter, with sharp sand; and if soiled up pretty close to the stem, abundance of fine young plants will be ready for pots by the early part of August: they should then be taken up, shaken entirely apart, and the plants singled out for general potting. The soil should be equal parts leaf-mould, peat, old cow-dung, charcoal, or wood-ashes, strong loam, and sharp sand; remembering in all these matters to drain the pots completely.

Nothing is then necessary but to place them all behind a wall, on the north side, immediately they are potted, and to sprinkle them well. About the middle of September they will require their final shifting into larger pots, using the same kind of soil in a rougher state. The plants may then be placed in a cold pit, near the glass, as they like abundance of light; they should be watered moderately, and removed to the greenhouse when required for bloom.

The following twelve varieties are amongst the best in present cultivation, and may now be procured at reasonable prices at most of the nurseries.

Attraction (Henderson)	Nobilis (Ivery)
Beauty of Cyston (Ivery)	Nosegay (Ivery)
————— Wenham (Ivery)	Princess Royal (Piper)
Criterion (Ivery)	Regulator (Henderson)
Eclipse (Henderson)	Wee Pet (Ivery)
Emperor of Russia (Ivery)	

ARTICLE II.

A FEW OBSERVATIONS ON THE PHYSIOLOGY OF PLANTS.

BY M.

IN the vegetable creation consist the principal ornaments of the earth, and from them are derived the chief support for man and beast. To the traveller in warm countries the trees afford a grateful and necessary shade, and in cold climates they give shelter and protection. To the medical man plants yield properties of the utmost importance in alle-

viating many of the diseases of life. To the botanist, their admirable arrangement and affinity of principles or qualities afford interesting and useful information ; and to the horticulturist the structure of plants, and every circumstance affecting their growth, claims his especial regard. But at the same time that its importance is admitted, it must be acknowledged to be surrounded with difficulties, for it involves the question of the peculiar functions of living beings, a question which, notwithstanding the numerous valuable discoveries that different philosophers, from age to age, have made concerning it, still, in a great measure, remains unanswered. Chemistry, it is true, has of late done much to elucidate the nature of vegetable growth, but we are still ignorant of the peculiar controlling effects of vitality of chemical action ; nor, on the other hand, are we better informed as to the precise manner in which light, heat, and electricity, influence vital action, and consequently the growth of plants. A knowledge of these points would enable the horticulturist to carry on his operations with almost uniformly successful results, but in the absence of such knowledge, he must at present be content to pursue the course which experience, and the amount of science already made available, shall point out ; and it is gratifying to be aware of the fact, that though we have not a full knowledge of all the circumstances affecting the growth of plants, we do know enough to admit of valuable practical application. While, therefore, we reduce our science to practice, let us endeavour to extend its bounds, adhering to no theory which is not based on substantial facts, at the same time remembering that, with the advance of science, theories which to-day appeared well founded have shortly given way to others, which, upon the discovery of some fact previously unknown, have, in their turn, shared the fate of their predecessors. Admitting, as I freely do, the value of theories, without which science would lose the greater part of its value, I would simply caution your readers against their abuse : to have recourse to theories is very beneficial, yet to be entirely guided by them, in matters where our knowledge is not precise and certain, is voluntarily to give up all hope of advancement in the path of knowledge.

The material conditions necessary to healthy vegetation are a suitable soil, sufficiency of water, and atmospheric air. Plants being properly placed, with regard to these circumstances, and duly acted on by light, heat, and electricity, are observed to vegetate vigorously. The soil

serves to afford to the root of the plant mechanical support, it acts as a medium for the conveyance of moisture, and is the source of certain fixed elements, which are found essential to the perfection of vegetable growth. The presence of water is absolutely necessary, for without it, plants neither grow nor live; a definite quantity seems important; this quantity, however, is less than is generally supposed. The atmosphere is the source whence plants derive their chief supply of food, which exists there in different forms. Thus, aqueous vapour occurs in the air in very large quantities, and descending in the form of rain, mist, &c., supplies the plant with moisture; dew, also, another form in which water is deposited from the air, exerts a powerful effect on vegetation; how far the water held in solution in the air is directly appropriated by plants, has not been satisfactorily determined. The carbonic acid of the air is the chief source of the carbon of plants; their azote or nitrogen, also, is principally obtained from the air, where it exists in different states, namely, in the form of ammonia, nitric acid, &c., and also in the uncombined states. Other substances, also, which affect vegetation, are found in the air, as common salt, particularly near the sea; and as it is highly probable that all the solid elements of the earth exist in very small quantities in the air in a state of vapour, it is possible that some of them may exert an influence on vegetation with which we are totally unacquainted. The influence of light, heat, and electricity, upon the vitality of plants is well known to be indispensable for their healthful growth; it is also probable that the action of such on the soil and on manures is highly important, though the question of their peculiar mode of action is involved in much doubt and obscurity. Some of the effects of light on vegetation are well known; for instance, it is the cause of colour in plants; those grown in the dark being blanched or colourless. The effect of light over the vital or chemical actions taking place within the substance of plants, is strikingly shown by the fact that, when exposed to its influence, they exhale from their leaves, &c., oxygen gas, whereas in the dark they exhale carbonic acid gas. The scientific views at present entertained about the growth of plants, are by no means of that settled character which would induce the horticulturist to rely on them as true guides in practice; indeed, it may be observed, that different, and even opposite views, are now held upon some of the first principles of vegetable physiology, and this by men of the greatest

eminence in science. Our best course, then, under existing circumstances, will be, as we before observed, to make the best use of the knowledge already existing, at the same time that we diligently use every means to extend its bounds, by experiment and close observation.

ARTICLE III.

ON THE SOIL, AND FORMATION OF A BED SUITED FOR THE SUCCESSFUL CULTURE OF THE PANSY.

BY C. C. OF SOMERSET.

HAVING observed in the last CABINET an article on the Pansy, by your respected correspondent, Mr. Johnston, of Ballykilbeg House, and as he intends it for the benefit of young amateurs, and has not told them the best way to make the beds to receive the plants on which the successful culture of this beautiful flower depends, I have forwarded these few hints for insertion in the CABINET.

If the soil of the garden rest on chalk, stone, or gravel, no drainage will be required; but if it be clay, or any other retentive soil, a good drainage must be resorted to. In the first place, the soil must be taken out of the bed to the depth of two feet, and place some rather large stones or brickbats to the depth of six inches, and on that some small stones or lime rubbish to the depth of five inches more, and put a layer of turf one inch thick with the sward downwards, to prevent the soil from getting down amongst the stones, and then fill up the remaining twelve inches with soil prepared in the following manner. Take some soil of a sandy nature, and mix with it one-fourth part of cow-dung and one-fourth part of leaf mould; mix it well together, and let it remain in a heap at least a month before use, turning it two or three times before using. The soil should be put in the bed in a moderately dry state, which would be a benefit greater than many could imagine, and should be left a week before planting. As to sorts, I should advise the young amateur not to plant any but large, well-formed, clear, and distinct-coloured sorts, for one bad-formed flower spoils the otherwise beautiful appearance of a whole bed, nor must he ever expect to raise a first-rate seedling except he discard all such trash from his collection. I should recommend a little moss, or some pebbles, to be placed over the surface of the bed during the

spring and summer months, which will prevent heavy rains from dashing the soil about the blooms, which, if not prevented, would spoil them, and will also retain a great deal of moisture in the soil. A watering of manure water in dry weather during spring and summer would benefit them a great deal, and they would amply repay for the extra labour bestowed.

ARTICLE IV.

ON THE DOUBLE-FLOWERING PRIMROSE.

BY ISABELLA C.

THERE is a sentiment in flowers; there are flowers we cannot look upon, or even hear named, without recurring to something that has an interest in our hearts; such is the case with the Primrose of our youth, the Cowslip, the Daisy, the May Flower, &c. The Primrose has very extensively occupied the poet's genius, and they have paid extra honours to this sweet spring flower, which unites in itself such delicacy of form, colour, and fragrance. Amongst the many I select the following specimens:—

“ What next? a tuft of evening primroses,
O'er which the mind may hover till it dozes;
O'er which it well might take a pleasant sleep,
But that 'tis ever startled by the leap
Of buds into ripe flowers.”

KEATS.

“ The Primrose, when with six leaves gotten grace,
Maids as a true-love in their bosoms place.”

W. BROWNE.

The following lines give a pleasant picture of a kind of idly-musing tranquillity:—

“ As some wayfaring man passing a wood
Goes jogging on, and in his minde not hatb,
But how the Primrose finely strew the path,
Or sweetest violets lay downe their heads,
At some tree's roots on mossie featherbeds.”

W. BROWNE.

Wordsworth alludes to the early passing away of the Primrose :—

“ Primroses, the spring may love them,
Summer knows but little of them.”

Ben Jonson calls it “ The spring’s own spouse.”

Herrick addresses some lines to Primroses filled with morning dew :—

“ Why do ye weep, sweet babes ? can tears
Speak grief in you,
Who were but born
Just as the modest morn
Teemed her refreshing dew ?
Alas ! you have not known that shower
That mars a flower ;
Nor felt the unkind
Breath of a blasting wind ;
Nor are ye worn with years ;
Or warped, as we,
Who think it strange to see
Such pretty flowers, like to orphans young,
To speak by tears before ye have a tongue.
Speak, whimpering younglings, and make known
The reason why
Ye droop and weep ;
Is it for want of sleep,
Or childish lullaby ?
Or that ye have not seen as yet
The violet ?”

The poems of Clare are as thickly strewn with Primroses as the woods themselves ; the two following passages are from the *Village Minstrel* :—

“ Oh, who can speak his joys when spring’s young morn
From wood and pasture opened on his view ;
When tender green buds blush upon the thorn,
And the first primrose dips its leaves in dew !
“ And while he plucked the primrose in its pride,
He pondered o’er its bloom ’tween joy and pain ;
And a rude sonnet in its praise he tried,
Where nature’s simple way the aid of art supplied.”

In another poem, after describing the village children rambling over the fields in search of flowers, he continues :—

“ I did the same in April time,
 And spoilt the daisy’s earliest prime ;
 Robbed every Primrose-root I met,
 And oft-times got the root to set ;
 And joyful home each nosegay bore,
 And felt—as I shall feel no more.”

This very lovely little flower ranks high in my estimation, and the following kinds form my present collection :—Double crimson, white, purple, straw colour, rose, deep yellow, pink, buff, lilac, and red. Each being very double and most distinct. I am fully assured if the entire of them were seen when in bloom in my flower garden, as presented to view from the breakfast-room, in a sunny spring morning, they would not fail to please every lover of flowers.

I grow them in pots, as it admits of affording them more readily the necessary protection in winter, and because the delicacy and beauty of their flowers renders it desirable that they may be placed in a position where these qualities may be duly appreciated and admired. I plunge the pots, covering them with soil, in the various positions in my flower-beds, so as to give the finest effect in contrast of colours. The most particular points in their culture are, first, the soil in which they are planted ; and secondly, the situation afforded them during the summer ; the soil in which they appear to thrive most permanently should be composed of equal parts of sandy turfy loam, and well reduced leaf mould, to which a portion of sharp sand may advantageously be added. This should be prepared some time before it is required, and frequently turned over and well blended together : the situation which they absolutely require in summer is a cool border, where they may receive the morning sun before it becomes powerful, but be protected from it during the hottest part of the day ; in such a situation they should be planted out in spring, as soon as they have done flowering, in the prepared soil already recommended. Water during dry weather should be copiously administered in the evening, or after the heat of the sun is somewhat declined, continuing it as circumstances may appear desirable, until the summer growth of the plants is evidently matured. About the latter end of September

they should be carefully taken up, and potted into wide shallow pots, of sufficient size not to cramp the roots, using the compost already recommended: the only further care they require is, to place them in a cold frame, where they will be just protected from frost, keeping them comparatively dry, and carefully watching that snails and slugs do not eat off the flower buds as they advance. It is scarcely necessary to say that light should, as much as possible, be admitted, never keeping the frame covered in the day, except during very severe frosts, and taking care to allow a free circulation of air in mild weather.

I have a quantity of pots, whilst the plants are in bloom, in my sitting room, where they flourish beautifully, and give a sweet cheerfulness to it.

ARTICLE V.

ON THE CULTURE OF THE BLETIA TANKERVILLIA.

BY MR. J. CHAPMAN, UNDER GARDENER, RUFFORD GARDENS IN NOTTINGHAMSHIRE.

THINKING the following remarks on the culture of *Bletia Tankervillia* might be serviceable to the readers of the *CABINET*, and tend in some degree to stimulate the cultivation of such a noble flowering plant, I forward them for your observation, and should you deem them worthy inserting in your valuable practical publication they are at your service. As soon as the plants have done blooming, remove them to a cool part of the stove, and let them remain a fortnight or three weeks, giving them very little water; you will then perceive the plants making numerous young shoots, all the old flowering shoots should now be cut quite down, and water totally withheld until the wounds made by cutting down are quite healed. The plants should now be potted in the following compost: two-thirds good turfy loam, one-third leaf earth, with a small portion of sharp sand added. The whole must be chopped together (not sifted), and used in a rough state, giving a good drainage, care being taken not to over-pot them, as over-potting would cause a too vigorous growth, and disappointment would be the result, by the plants not showing bloom the following season. It will now be advantageous to remove the plants to a warmer part of the house until they get well rooted in the fresh soil. They will then require a plentiful supply of water

throughout the growing season. As winter advances withhold water by degrees, and finally give no more, and not oftener than is necessary, to keep the plants from flagging, until you perceive the flower spikes showing, they will then require a plentiful supply to bring the bloom to perfection.

Should any cultivator of these noble plants adhere to the above directions, I have not the slightest doubt but the highest expectations will be realized by a splendid display of fine spikes of their pretty purple and buff coloured flowers. The silvery appearance of the under side of the petals forming a contrast strikingly beautiful.

As a proof of the efficacy of the treatment described, it perhaps may not be amiss to mention the success that I have met with from a plant so treated. It bloomed eleven fine spikes, and continued in bloom a month or five weeks, and at times there were upwards of forty flowers expanded at once.

ARTICLE VI.

THE FLORIST REFORMER.

BY MR. JOHN SLATER, FLORIST, CHEETHAM HILL, NEAR MANCHESTER.

The Auricula.

THE Auricula has suffered the least by *aliases* of any florist's flower; and the only instance I believe on record, is that of Oliver's Lovely Ann being sold out by a Middleton florist as a seedling, under the name of Kenyon's Juno. Little need be said in favour of the Auricula as a florist's flower, as it is an established favourite with all, from its blooming so early in the spring, as well as from the fragrance its bloom imparts. I have classed the Auricula in three divisions: the first for an amateur commencing; the second as a further addition to his collection; and the last as embracing all, with very few exceptions, that may be considered worthy a place in any collection.

For an Amateur's first Collection.

GREEN EDGED.

Rider's Waterloo.
Pollitt's Standard of England.
— Highland Laddie.
Ollier's Lady Ann Wilbraham.
Oliver's Lovely Ann, (shown also
in the grey edged class.)

GREY EDGED.

Grimes' Privateer.
Kenyon's Ringleader.
Warris' Union.
Sykes' Complete.
Thompson's Revenge.

WHITE EDGED.

Taylor's Glory.
Leigh's Bright Venus.
Taylor's Favourite.
Kenyon's Chancellor.
Leigh's Pillar of Beauty.

SELFS.

Grimes' Flora's Flag.
Berry's Lord Primate.
Whittaker's True Blue.

ALPINES.

Emmerson's Favourite.
Fieldhouse's Fair Rosamond.

Second addition.

GREEN EDGED.

Booth's Freedom.
Leigh's Colonel Taylor.
Yates' Morris Green Hero.
Page's Champion
Ashton's Prince of Wales.
Clough's Do-little.
Barlow's King.
Litton's Emperor.
Howard's Nelson.
Pearson's Badajoz.
Pollitt's Ruler of England.
Buckley's Jolly Tar.
Faulkner's Ne Plus Ultra.

WHITE EDGED.

Wood's Delight.
Ashworth's Rule All.
———— Regular.
Taylor's Incomparable.
Poplewell's Conqueror.
Potts' Regulator.
Ashton's Bonny Lass.
Cheetham's Countess of Wilton.

GREY EDGED.

Fletcher's Mary Ann.
———— Ne Plus Ultra.
Waterhouse's Conqueror of Europe.
Thompson's Bang-up.
Taylor's Plough Boy.
Pearson's Liberty.
Howard's Sweepstakes, (shown also in green edged class.)

SELFS.

Redmayn's Metropolitan.
Netherwood's Othello.
Berry's Lord Lee.
Clegg's Blue Bonnet.
Kenyon's Freedom.
Kay's Despite.
Garton's Stadtholder (yellow.)

ALPINES.

King of the Alps.
Queen Victoria.
Conspicua.
Rising Sun.
Fair Helen.
Kettleby's True Blue.

Third addition.

GREEN EDGED.

Hepworth's Robin Hood.
Moore's Jubilee.
Lightbody's Star of Bethlehem.
Stretch's Alexander.

SELFS.

Oddie's Rest.
Goldfinch.
Faulkner's Hannibal.
Bradshaw's Tidy.
Hepton's Squire Mundy.

WHITE EDGED.

Lily of the Valley.
Wild's Bright Phœbus.
Leigh's Earl Grosvenor.

GREY EDGED.

Atcherley's Alpine Shepherdess.
Metcalf's Lancashire Hero.
Ashworth's Newton Hero.
Simpson's Lord of Hallamshire.
Kent's Queen Victoria.

The amateur's first collection is such as are not high priced, yet good ; and the second addition contains all the first-rate varieties in cultivation, with very few exceptions.

ARTICLE VII.

ON GUANO.

BY AN AMATEUR FLORIST.

DURING the last summer, autumn, and winter, I had many experiments with the application of guano, a large bag of which I procured, and which has served me thus far, and I find it operates most beneficially on all kinds of greenhouse plants, by a proper attention in its application. To the delicate growing plants I find a smaller proportion is required than in the soft-wooded, quick-growing class. No exact quantity suited to each genus can be given. The plan I adopt is to give sparingly in the first application, and increase the quantity till I perceive its effects exhibit an improvement, and then keep to it. I give a small portion once a-week, scattering it upon the surface of the soil, and it sinks into the ball of earth gradually. Heaths, Epacrises, Tropæolums, Leschenaultias, Kennedyas, Pimeleas, and similar plants, assume a darker green, and more vigorous in growth than I ever saw before. Hyacinths are much improved, and Chrysanthemums are improved by it more than any other plant I have applied it to. Using it with care, and having other due attention, every person will soon perceive its beneficial effects. I find it better to apply the guano by scattering over the surface of the ball, than dissolving it in water, and applying it so ; in the former its beneficial properties are gradually transmitted, but in the water much of it passes away rapidly.

Horley, March 25, 1846.

ARTICLE VIII.

REMARKS ON THE GUERNSEY LILY.

BY CLERICUS.

THE Guernsey Lily being a great favourite of mine, and blooming at the end of summer and autumn, renders it worth the attention of all lovers of flowers. These inducements prompt me to send a few particulars relative to it.

The Guernsey Lily—called in France, *le lis de Japon*—which has been removed by some botanists from the genus *Amaryllis*, and called *Nerine*, is extremely handsome: it is a native of Japan, but has long been naturalized at Guernsey, from which place it is named. There are from eight to twelve flowers on one plant; the circumference of each flower about seven inches. When in full beauty, it has the appearance of a fine gold tissue wrought on a rose-coloured ground; and when it begins to fade, it is pink. If beheld in full sunshine, it seems studded with diamonds; but by candle-light, looks rather as if it were spangled with fine gold-dust. When the flower begins to wither, the petals assume a deep crimson colour. The flowers begin to appear towards the end of August, and the head is usually three weeks gradually expanding. This plant is said to have been taken to Guernsey by a vessel wrecked there on its return from Japan. There, and at Jersey, it thrives as well as in its native country; and, from both those islands, the roots are annually dispersed over Europe.

These roots, or rather bulbs, are generally brought over in June or July: they should then be planted in pots of light earth, and refreshed with water two or three times a week, but very gently. Too much wet, especially before they come up, would rot the bulbs.

About the middle of September, such of the bulbs as are strong enough to flower will begin to show the bud of the flower-stem, which is commonly of a red-colour: they should then be placed where they may have the benefit of the sun, and be defended from strong winds; but by no means must they be placed close to a wall, or under glasses, which would draw them up weak, and render them less beautiful. If the weather be dry, they should still be refreshed with water every second, or if very hot, every day; but if there be much rain, they must be sheltered from it.

When the flowers begin to open, they should be placed under cover to preserve them from rain; but must be allowed plenty of fresh air, or the colours will lose their brilliancy and soon decay. If rightly managed, they will continue in beauty a full month; and, though they afford no perfume, their beauty alone entitles them to a first rank among the children of Flora.

After the flowers have decayed, the leaves will continue growing all the winter; they must be defended from frost, but should have as

much free air as possible in mild weather: when it is both mild and dry, they may stand abroad in the middle of the day. The roots should not be removed oftener than every fourth year, towards the end of June, or early in July; they should then be replanted in fresh earth, and the offsets planted in separate pots. These young plants will produce flowers the third year.

The bulbs of this Lily do not flower every succeeding year, as most bulbs do; but if they contain two buds in the centre, as is often the case, they will flower twice in three years; after which the same root will not flower again for several years, but only the offsets from it.

ARTICLE IX.

REMARKS ON THE FLOWERING STOCKS.

BY A LADY.

IT now being the season for commencing raising some kinds of these lovely flower garden ornaments, I send a few remarks thereon for present insertion.

First, the kind commonly called the Queen's Stock-gilliflower—in French, *giroflée des jardins* [Garden Stock]—varies in colour from a pale to a deep red, and is sometimes variegated; but the bright red is most esteemed. As this branches very much, one seed only must be sown in a pot: this should be done in May; water should be given every evening; and, during the heat of the day, the pots should be shaded, to prevent the earth from drying too fast. They must be protected from frost during the winter, either by removing them into the house, or covering them with oak-leaves. The poorer the soil in which they are planted the better they will bear the cold. The following May they will flower, which they often continue to do all the summer, and probably many of the flowers will come out double. In autumn, after they have blown, they usually perish; but when they are in a very poor soil, or are growing among rubbish, they will often last two or three years.

The Brompton—in French, *giroflée à tige*—and the White Stock are varieties of this kind; the latter will sometimes live three or four years. This species is a native of the coast of Spain, Greece, Italy, Candia, and the isles adjacent.

The Stock-gilliflower has been long established in the English gardens, and is indeed a native of the cliffs by the sea-side. The old English name of Gilliflower, which is now almost lost in the prefix, Stock, is corrupted from the French *giroflier*. Chaucer writes it Gylofre, but, by associating it with the nutmeg and other spices, appears to mean the Clove-tree, which is, in fact, the proper signification of that word.

Turner calls it Gelover and Gelyfloure; Gerarde and Parkinson, Gilloflower. Thus, having wandered from its original orthography, it was corrupted into July-flower. Pinks and Carnations have also the title of Gilliflower from smelling like the clove, for which the French name is *girofle*. For distinction, therefore, they were called Clove-gilliflowers, and these Stock-gilliflowers. Gerarde adds the names Castle-gilliflower, and Guernsey-violet.

The Annual, or Ten-weeks' Stock—French, *le quarantain*; *le violet d'été* [summer violet]: Italian, *leucoio estivo* [summer stock]—grows about two feet high: there are many varieties, white, red, purple, and striped; and double and single varieties of each of these colours. It grows naturally on the coast in the South of Europe. By means of a hot-bed they may be raised earlier, but without that help the best season for sowing them is in March and April, and indeed in May also; if they are taken in when the weather becomes severe, they will continue to flower; those planted in May will last to the very end of winter, in the house. A middle-sized pot will contain three or four. To this class there is the valuable additions of the German varieties, requiring similar treatment.

The broad-leaved Shrubby-stock is a native of the island of Madeira; it blossoms from March to May: when the flowers first open, they are white, sometimes inclining to yellow; in a few days they become purple; hence this species has been termed *mutabilis*, or changeable. This is of quick growth, and may be increased by cuttings, taken as soon as the plant has done flowering: they should be housed in the winter.

Some persons increase the Queen's-stock in the same manner, planting the cuttings in March or April in pots three or four inches wide; in the middle of May they remove them into pots five or six inches diameter, and in July or August into full-sized ones, that is, eight or ten inches; but though these cuttings will generally root, they do not make such handsome plants as those raised from seed: it

is not, therefore, worth while to practise this method unless to preserve some fine double flowers. These flowers love the sun; but care must be taken to supply in the evening the moisture which has been exhausted during the day. It will be observed, too, as an invariable rule, always to place a plant in the shade when newly potted, and to let it remain there till rooted.

There are other species of Stock, but these are the most desirable. There is a *Cheiranthus* called the *C. Quadrangulus*, a native of Siberia, which was introduced into the Paris garden by Jean Jacques Rousseau. The flowers are sulphur-coloured and sweet. It is propagated by seeds, and thrives in the open air, but does not last many years.

Garcilasso speaks of them as worn in the hair :

“ Loosely flow her golden locks ;
If she stays them 'tis with jasmynes,
Chains them, 'tis with pinks and stocks.”

In this country, ladies seldom adorn themselves with natural flowers, and yet we have many that would bloom through an evening very well. The introduction of such a fashion might be an important advantage to the fair sex : should the rooms be very warm, and likely to injure the beauty of their floral ornaments, and cause them to droop prematurely, they would be compelled, like Cinderella in her fairy dress, to retire at a seasonable hour, before such a catastrophe should take place ; which would be of no small benefit to their health and beauty. In the East, ladies commonly wear natural flowers. Thunberg speaks upon the subject with a gallantry quite enthusiastic :

“ The ladies in Batavia,” says he, “ wear neither caps nor hats ; but tie up their hair (which is only anointed with oil, and has no powder in it) in a large knot on the crown of their heads, and adorn it with jewels, and wreaths of odoriferous flowers. In the evenings, when the ladies pay visits to each other, they are decorated in a particular manner about the head with a wreath of flowers, of the *Nyctanthes Sambac*, run upon a thread. These flowers are brought every day fresh to town for sale. The smell of them is inconceivably delightful, like that of orange and lemon flowers : the whole house is filled with the fragrant scent, enhancing, if possible, the charms of the ladies' company, and of the society of the fair sex.”

PART II.

MISCELLANY

OF

NOTES AND CORRESPONDENCE.

New or Rare Plants.

ANONA PALUSTRIS. WATER OR ALLIGATOR APPLE TREE. (Bot. Mag. 4226.) Anonaceæ. Polyandria Monogynia. This plant was long since introduced into this country from the West Indies, but is still very rare. It is an evergreen tree, growing in its native country five yards high. The flowers are produced singly, each blossom about an inch across, petals thick and fleshy, pale greenish-yellow, with a red blotch within. The fruit is the size of a largish apricot, a yellowish-brown outside, and deep orange within. A plant has recently fruited in the hothouse in the gardens of Mrs. Sherborne, of Hurst House, near Prescott, in Lancashire.

ARISTOLOCHIA GIGANTEA. GIGANTIC-FLOWERED. (Bot. Mag. 4221.) Aristolochiæ. Gynandria Hexandria. It is a native of Brazil, and has bloomed in the hothouse collection of Messrs. Lucombe, Pince, and Co., of Exeter Nursery. It is an extensive climber. The Perianth (flower) is about ten inches long. The tube is bent like a syphon of a creamy-white tinged with green; it then expands into a large shell-like limb; the outside cream-coloured, netted with veins, the inside nearly white, and the beautiful net-work of purple veins renders it very interesting.

BOUWARDIA LONGIFLORA. LONG-FLOWERED. (Bot. Mag. 4223.) Rubiaceæ. Tetrandria Monogynia. A native of Mexico, which has been received into the gardens of the Earl of Derby, Knowsley Park, near Prescott. It is a branching shrub, flowering abundantly. The flowers are produced in terminal corymbose heads, each corymb having from ten to twelve blossoms. The flowers are very fragrant, pure white. Each blossom has a slender tube near two inches long, and the four top-spreading petals are an inch across. It is a most charming species, well deserving to be grown in every greenhouse; and if it be as hardy as the former species, will make a valuable plant for the open air, in the flower garden, during summer.

ERANTHEMUM ALBIFLORUM. WHITE-FLOWERED. (Bot. Mag. 4225.) Acanthaceæ. Diandria Monogynia. Messrs. Lucombe, Pince, and Co., of Exeter Nursery, obtained seeds of this very pretty flowering species from Bahia. Its foliage is large and handsome, and it bears long branching spikes of pure white blossoms. The plant is shrubby, and grows about two and a half feet high. It requires to be grown in the hothouse, or a very warm greenhouse. This pretty white-flowered species will contrast beautifully with the fine rich blue of that deservedly-esteemed species *E. pulchellum*. Each blossom is about three quarters of an inch across.

GESNERA GERARDIANA. A native of South America, obtained by the Very Rev. the Dean of Manchester; it has bloomed with Messrs. Rollisson's, and R. G. Lorraine, Esq., of Wallington Lodge, near Carshalton. It very much resembles the *G. sebrina*. The terminal spikes of flowers are large. Each flower is about two inches long, scarlet above and yellow below, beautifully dotted with red.

INDIGOVERA DECORA. THE COMELY. (Bot. Reg. 22.) Fabaceæ. Diadelphia Decandria. A dark green handsome bushy shrub, sent from the nursery

gardens at Shanghai, by Mr. Fortune, to the London Horticultural Society. The flowers grow from the axils of the leaves in horizontal racemes, they are of a light rose-colour and very handsome. It is supposed to be hardy, but its scarcity at present has prevented a trial; it flourishes freely in the greenhouse.

SACCOLABIUM AMPULLACEUM. FLASK-FORMED. (Pax. Mag. Bot.) Orchidaceæ. Gynandria Monandria. (Synonymæ *Aerides ampullacea*.) A native of the forests of Sylhet, and brought by Mr. Gibson to the collection at Chatsworth. The flowers are borne on shortish erect spikes, and are of a beautiful bright rose colour.

SARCOCHILUS CALCEOLUS. THE SLIPPED FLESHLIP. Orchidaceæ. Gynandria Monandria. A native of Manilla, obtained by Messrs. Loddiges's. The flowers are white, the lip having a dash of yellow. Each flower is about two inches and a half across.

SCHUBERTIA GRAVIOLENS. STRONG-SCENTED. (Bot. Reg. 21.) Asclepiadaceæ. Pentandria Digynia. A native of Brazil, the Countess of Wilton having procured it from thence. When *Stephanotis floribunda* made its appearance, it was generally considered the finest twining plant introduced into this country. The present new plant is equal to it. The flowers are produced in large umbellous heads, similar to the *Stephanotis*. The blossoms are larger, white, and very fragrant, and are borne in profusion. The plant blooms for several months successively. It may be obtained at the London nurseries.

SILENE SCHAFTA. THE SCHAFTA. (Bot. Reg. 20.) Caryophyllaceæ. Decandria Trigynia. A native of Russia; a hardy perennial herbaceous plant, producing numerous spreading branches, terminated by several bright rose and purple flowers, each being about an inch across. The stems rise about six inches high, very suitable for bedding, or rock work.

TRICHOSANTHUS COLUBRINA. THE SERPENT CUCUMBER. There has long been in this country what is termed the Snake Cucumber, but the present is only, we understand, in the collection at Sir J. H. Williams, Bart., of Bodelwyddan, near St. Asaph. The seeds were sent there from Puerto Caballo, in Equatorial America. It resembles a cucumber in growth. The flowers are white, beautifully cut into delicate threads. The fruits which hang down from the rafter trellis to which vines were trained in the Bodelwyddan Gardens resemble serpents, are six feet long, and when unripe are singularly striped with green and white, which changes as it ripens to a brilliant orange.

EPACRIS HYACINTHIFLORA. This very pretty variety has been raised in the nursery of Messrs. Henderson, Edgware-road, London. The form of the flowers very much resemble those of the Hyacinth. They are of a lilac-rose colour, large and waxy. It is a very neat and beautiful variety.

APHELANDRIA. A new species has been in bloom at Messrs. Rollisson's for several months. It is a vigorous plant, and bears very long terminal spikes of bright crimson flowers. It is a very beautiful and showy species.

LOBELIA ERINUS COMPACTA ALBA. This is a very neat variety of the dwarf-spreading *Lobelia*; it grows more erect than *L. erinus*, the flowers are larger, and a pure white. It is very suitable for masses in beds, or to form edging, and contrasts prettily with the blue kinds. It may be had at most nurseries.

RUELLIA MACROPHYLLA. LARGE-LEAVED RUELLIA. Stove Perennial. This fine herbaceous plant is a native of Santa Martha, according to Vahl. It bears large branching forked panicles, loaded with flowers of glowing scarlet, and nearly three inches long. In that state it was exhibited at a meeting of the Horticultural Society in October last, by Mr. Carton, gardener to his Grace the Duke of Northumberland. It should be an instruction to all persons sending home South American seeds not to forget the fine species of *Acanthads* with which that part of the world abounds; for although many are but weeds, yet others are quite as striking for their beauty as this and the *Justicias*, *Aphelandras*, &c. already in cultivation. They were formerly here in many instances, but requiring a moist warm atmosphere at a time when gardeners did not know how to obtain heat without dryness, they soon became sickly and died. Among

the reputed species of this very genus, we see in our herbarium the *Ruellia trivialis*, *grandiflora* and *longiflora* of Salzmann, all from the woods of Bahia, every one of which is a finer species than even this. Nor are the East India species inferior, as is attested by the numerous kinds of *Goldfussia*, *Strobilanthes*, *Dipteracanthus*, &c., with which botanists are familiar only, however, in their dried gardens. As they are easily propagated and grown, all these would be real acquisitions, and might easily be had. This species requires to be kept in a stove, and being a plant of free growth, will succeed in almost any sort of soil: During summer an ample supply of water should be given to its root, and syringed over head once or twice a day. After flowering it should be cut back to secure a supply of young shoots from the bottom, for flowering the following season. This may be done advantageously once or twice, but for such free-growing plants it is best to renew them every three years. In winter when syringing would be injurious, it will be necessary to keep up a humid atmosphere, as this plant is very liable to be attacked by red spider. It is easily multiplied by cuttings of young wood under ordinary treatment.—*Bot. Reg.*

SEDUM KAMTCHATICUM. Hardy Perennial. A handsome herbaceous plant, with yellow flowers like those of *Sedum Aizoon*, which it much resembles in habit. The leaves are red edged, and the stem has also a strong stain of that colour. It requires a light soil and dry situation. It flowers from June to August, and proves to be a fine showy plant for rock-work, where it blooms freely and remains long in succession.—*Journ. Hort. Soc.*

RHYNCHOSPERMUM JASMINOIDES. JASMIN-LIKE. A greenhouse climber. A slender climbing evergreen shrub, rooting along its branches, wherever it touches a damp surface, like ivy. The flowers are white, deliciously sweet-scented, and produced in small irregular corymbs on the ends of peduncles considerably larger than the leaves. Their calyx consists of five narrow smooth convex sepals, rolled backwards, and much shorter than the tube of the corolla, with a very shallow-toothed glandular ring surrounding the base of the latter. The corolla is about three quarters of an inch long, pure white, salver-shaped, contracted in the middle of the tube, with a partially spreading border, whose five divisions are wedge-shaped, truncate, and twisted obliquely.—*Journ. Hort. Soc.*

CALYSTEGIA PUBESCENS. DOWNY BINDWEED. Hardy Perennial, (Bindweeds.) North of China.—This curious plant approaches very nearly to the *C. sepium* or larger Bindweed of our English hedges, from which it differs in having firmer and smaller leaves, much narrower bracts, and a fine pubescence spread over every part. It is the first plant of its order that has been mentioned as producing double flowers. They are about as large as those of a double anemone, but the petals are arranged with the irregularity of the rose; they are of a pale very delicate pink, and remain expanded for some days. The calyx is quite unchanged. The exterior petals are very much lacerated and irregular in form; those next the centre are narrow, drawn together into a kind of cone; the next central are completely concealed by those without them, and diminish till they are mere scales, analogous to those which may be found in the first buds which burst in the spring. Not a trace can be found of stamens or pistil. It is probably quite hardy if planted in a dry situation. It requires a rich loamy soil and is easily increased by the roots. The roots very much resemble those of the common bindweed (*Calystegia sepium*). It flowers freely in July and August. It is a very handsome climbing plant, with large double flowers, which are produced freely.—*Journ. Hort. Soc.*

ABELIA FLORIBUNDA. Caprifoliaceæ. Greenhouse (or half hardy) shrub; rosy pink.

AZALEA OVATA. Ericaceæ. Hardy (or half hardy) shrub; two vars., one white, the other pink, both spotted.—*Journ. Hort. Soc.*

AZALEA OBTUSA. Ericaceæ. Greenhouse (or half hardy) shrub; deep red.—*Journ. Hort. Soc.*

AZALEA SQUAMATA. Ericaceæ. Greenhouse (or half hardy) shrub; rose colour.—*Journ. Hort. Soc.*

AZALEA INDICA, ALBA MAGNIFLORA. Ericaceæ. Greenhouse shrub (hybrid); white faintly streaked.

AZALEA INDICA, VIOLACEA ELEGANS. Ericaceæ. Greenhouse shrub (hybrid); bright purple.

COCHLEARIA ACAULIS. Cruciferæ. Hardy annual; white, changing to lilac.—*Journ. Hort. Soc.*

DAPHNE FORTUNI. Thymelacæ. Greenhouse (or half hardy) shrub; pale bluish lilac.—*Journ. Hort. Soc.*

EDGORTHIA CHRYSANTHA. Thymelacæ. Greenhouse (or half hardy) shrub; golden yellow.—*Journ. Hort. Soc.*

FORTUNZA CHINENSIS. Juglandacæ. Small tree (or shrub); amentaceous.—*Journ. Hort. Soc.*

JASMINUM NUDIFLORUM. Jasminacæ. Greenhouse climber; yellow.—*Journ. Hort. Soc.*

AMARYLLIS LEONENSIS. Sierra Leone. The flowerscape bears two very large and very handsome flowers, of a beautiful delicate flesh colour, having a large dark centre to each.—*Van Houtte's Mag.*

ANTHADENIA SESAMOIDES. Bignoniacæ. A biennial plant, very similar in habit, and the flowers in form and colour, to the common Fox Glove, very fragrant, from Africa.—*Van Houtte's Mag.*

RIGIDELLA ORTHANTHA. Iridacæ. Mexico. The flowers are a rich scarlet, very handsome.—*Van Houtte's Mag.*

THE LONDON HORTICULTURAL SOCIETY.—At the meetings which have taken place this year at the Society's rooms in Regent-street, several new and rare plants have been exhibited, which we will briefly notice.

At the meeting held on February 17, Messrs. Henderson, of Edgeware-road, had a fine plant of *Phaius Wallichii*, and an *Oncidium*, allied to *Bauerii*, with seven strong spikes of flowers and three smaller ones; a *Cœlogyne*, with small white flowers; *Acacia oxycedrus*; *A. Hovea*, with lanceolate leaves and blue flowers; and a pretty little plant of the scarlet-flowered *Hoitzia Mexicana*, not often seen; a certificate was given to the *Phaius*. Mr. Parks, of Dartford Nursery, had a dull-red seedling *Correa*, and a small rose-coloured seedling *Cineraria*. Mr. Halley, of Blackheath, had a pretty seedling *Camellia*, named *Beauté Parfait*, of small size, deep rose-pink, and cupped. Mr. Ivery, of Peckham, had four seedling *Cinerarias*, of good properties, named *Brilliant*, a light rose colour; *Fairy Queen*, white, with purple centre; *Perfection*, bluish purple; and *Colossus*, purple. Mr. Redding, gardener to Mr. Marryatt, of Wimbledon, had a neat plant of *Dendrobium nobile*; a species of *Aspidistra*, a curious Aroideous plant, with flowers close to the ground; *Odontoglossum caudatum*; and a seedling *Rhododendron*, with light scarlet-red flowers, not much spotted; a certificate was given to the *Dendrobium*. Amongst the plants from the garden of the Society were *Epidendrum Stamfordianum*, a species rarely seen; *Primula denticulata*, a Nepal species, quite hardy, and producing bunches of lilac flowers; and *Selago distans*, a useful white-flowered plant for cutting, blooms abundantly.

There was also exhibited a new Hygrometer from Mr. Simmonds, of Coleman-street, London, of which trials of the most satisfactory nature were stated to have been made at Chiswick. It was found to be much superior to the instrument known as Daniell's Hygrometer. It consists of a tube about a foot long, at the upper part of which is a dial-plate, which indicates by a hand the hygrometrical state of the atmosphere—the hand pointing towards the right to indicate dryness, and to the left to indicate wetness. Advantage has been taken of the known property of wood to contract by dryness, and expand by moisture. A strip of mahogany, cut across the grain, contracts or expands according to the moisture of the atmosphere to which it is exposed, and, in so doing, moves a pulley attached to a spring by means of a silken thread, which moves the hand on the dial-plate; a certificate was awarded to it. Mr. Fry, of Blackheath,

exhibited a model of a very useful contrivance, by means of which he proposes to examine the soil of plants growing in large pots without inconvenience. His scheme is registered as the "West Kent Garden-pot."

At the meeting on March 3, amongst the new plants, was a species of *Tropæolum* with yellow flowers, from Messrs. Veitch and Son, of Exeter, who received it from their collector in Peru; a certificate of merit was awarded for it. Messrs. Loddiges, of Hackney, sent a new drooping-flowered plant, not before known in Europe, from Tropical Africa, for which a Knightian medal was awarded. It was named *Ansellia Africana*, in honour of Mr. Ansell, who when he was out with the Niger expedition found it growing on the trunk of the Oil Palm, in the island of Fernando Po. It proves to be a very handsome thing, and will be an acquisition to the orchidaceous house. Mr. Robertson, gardener to Mrs. Lawrence, sent *Schomburgkia violacea*, a beautiful South American species; a new *Odontoglossum*, with spotted white flowers; and the rare *Phalænopsis amabilis*, or white Butterfly-plant; a Knightian medal was awarded.

The meeting held on April 7 was most distinguished by the production of a new species of *Fuchsia* from Messrs. Veitch and Son, of Exeter, which it was stated was originally discovered about 200 miles from Lima in Peru by Mr. Lobb, their collector. It proves to be a curious and rather handsome kind, producing an abundance of rose-coloured tubes, each being from about four to five inches in length, and entirely destitute of petals; the large silver medal was awarded. We hope to publish a figure of it shortly.

Mr. Robertson, gardener to Mrs. Lawrence, sent a splendid plant of the Indian *Phaius Wallichii*, with seven flower-stems of about five feet in height, rising from among the widely spreading dark-green foliage; two plants of the rare and delicate *Phalænopsis amabilis*, which were stated to have been in bloom for these six weeks; two *Azaleas*, named *Decora* and *Minerva*, both good, but the latter especially so, being covered with large bright-red, well-formed blossoms; and others for which a Knightian medal was awarded. A small group of *Orchids* came from Mr. Don, gardener to F. G. Cox, Esq., consisting of *Burlingtonia rigida*, a rare species; *Cœlogyne ochracea*; the showy *Cattleya Skinneri*; and *Epidendrum selligerum*. Several groups of seedling *Cinerarias* were produced. Mr. Henderson, of St. John's Wood, sent four sorts, remarkable for their dwarf habit and large spreading heads of bloom; they were named *Royal Crimson*, *Royal Purple*, *Isabella*, and *Beauty of St. John's Wood*; a certificate was awarded. Other seedling *Cinerarias* came from Mr. Best, of Reading, and from Mr. Ivery, of Peckham, all of them exhibiting some improvement on the kinds now in cultivation. From the garden of the Society we noticed *Coburgia incarnata*, a stove bulb recently sent from Peru by Mr. Hartweg, having a strong stem of about two feet in height, surmounted by a bunch of drooping red flowers; *Maxillaria suaveolens*, somewhat resembling *M. aromatica*, and, like it, possessing an agreeable perfume. A pretty little new Himalayan *primula*, somewhat in the way of *denticulata*, and possessing a very agreeable fragrance; it was considered to be hardy, but from its only having been recently received this had not, however, been directly proved. It was named *P. involucrata*, and it was mentioned that there are several varieties of it in the gardens. We also observed a cut specimen of *Habrothamnus fasciculatus*, which fully realised all that has been said of the beauty of this noble shrub; many have failed to grow it to perfection; these failures may, however, be referable to two causes—first, to the plant not being *Habrothamnus fasciculatus* at all, but *Cestrum roseum*, or some spurious variety; and, second, to its having been grown with too much care; it will not stand much heat; a cold greenhouse, free from damp, suits it best, and from its blooming at this season, when every itinerant blossom is a desideratum, it is likely to turn out an invaluable plant for the conservative wall.

We must not omit to notice a very large *Erica favoides elegans*, measuring at least five feet in height and as much in breadth, sent by Messrs. Fairbairn, of Clapham; it was a finely grown specimen, exhibiting, in a striking degree, what can be done with such things under skilful management; a Banksian medal was awarded.

GARDENERS' ASSOCIATIONS FOR MUTUAL INSTRUCTION.—In former Numbers of this Magazine we have remarked upon these very useful societies; and it is pleasing to notice their extension throughout the country. The following details of the meeting of the Stamford Hill, Clapton, and Stoke Newington Gardeners' Association has been forwarded to us, and which, we doubt not, will be useful to our readers.

Jan. 19.—**Mr. MERRY** in the chair.—**Mr. CALVERTON**, gardener to **J. Foster, Esq.**, read a paper on the cultura of Achimenes and other plants belonging to the natural order of Gesnerads. This order Mr. C. stated to contain several genera of great interest, five of which, namely, Achimenes, Gesnera, Gloxinia, Sinningia, and Niphea, he would treat of collectively. Beautiful, says Mr. C., as are the whole of them, the Achimenes are the most attractive; their dwarf bushy habit, brilliant flowers, and the length of time they continue to bloom, render them worthy of our care in cultivating them for the greenhouse or conservatory. The species longiflora, grandiflora, pedunculata, rosea, and picta, come from Guatemala; and coccinea from Jamaica; the other four genera are natives of the West Indies and of South America. They all like a stove heat, but they may also be grown without such convenience; for most of the Achimenes, and several of the Gloxinias, will attain a high degree of perfection in a cucumber-frame. The compost I employ is light sandy loam, turfy peat, and rotten dung, in equal parts, with a little silver sand; these are mixed well together in the autumn, previously to being used, allowing the mixture to remain exposed to the action of the air till wanted, but protected from rain. These plants are all readily propagated from under-ground tubers and from leaves; where the latter are preferred, they should be inserted in sand and peat, and covered with a bell-glass, plunging the pots in a hotbed; the bell-glass should be wiped dry every day until the plants are rooted, when it should be removed altogether, and air given to encourage their growth. In order to keep up a succession of blooming plants from April till the dark months of the succeeding winter, some are started at different times in spring, commencing about the middle of January. The bulbs are taken out of the dry soil in which they have been stored, and are potted singly (choosing the strongest), in 3-inch pots, well drained and filled with the above-mentioned soil, placing a little silver sand round each bulb. Gloxinias, Gesneras, and others which grow from the same bulb every year, are placed in pots just large enough to admit of their annual growth. After receiving a little water they are placed in a hotbed or house, where the temperature ranges from 60° at night to 70° by day, and the fermenting material in which they are plunged from 75° to 80°, not higher, as either excess of heat or water at this early stage of excitement would be injurious. When the pots become filled with roots they are shifted at once into those in which they are to be flowered. The Achimenes have the best effect when grown in masses; this is done by taking four plants out of small pots, and planting them in a larger one, or in a pan, of a foot in diameter or so, in proportion to the size required, with two or three inches of potsherds in the bottom, to secure perfect drainage; the top as well as the bottom heat is now raised to about 80°, keeping up a moist atmosphere. The Achimenes are syringed frequently, and air is given at every favourable opportunity, and water when necessary; but the latter with care, as many of the fleshy-leaved kinds are easily injured by too much water. When small pots are employed, liquid manure is given twice a-week, but never before the roots have completely filled the pots; while growing they are kept as near the glass as possible, removing them when in bloom to the greenhouse, but taking care not to expose them to cold draughts; shading is sometimes necessary to preserve the flowers. For winter blooming, Achimenes picta, Niphea oblonga, Gesnera zebrina, lateritia, oblongata, and bulbosa, are employed; but, although the others are not seen in bloom in the dark months of winter, Mr. C. believed them to possess capabilities for that purpose, provided a proper course of treatment were adopted. After they have done flowering, water is partially withheld; and, when the tops have died down, the roots are removed to any place free from frost and moisture till they are wanted.—**Mr. MERRY** remarked, that he started the bulbs before he took them out of the store-pots; he then planted three in a 5-inch pot (three of

which pots he shifted into a 9-inch pot as soon as they were filled with roots); he believed that they might be flowered throughout the whole year.—Mr. KENDALL recommended pans for Achimenes. He said that the best method of propagating Gloxinia was to lay the whole leaf under sand, and from it a number of plants would be produced.—Mr. CARRFORD disapproved of much shading or syringing, as both tended to elongate the young shoots; the best specimen of Achimenes he had ever seen was grown in a pan. If pots were used the soil should be poor and porous, or the plants would expend their energy in the formation of tubers.—Mr. TANT remarked, that out of a number of very healthy plants of Achimenes grown by him, the only one that did produce tubers at all grew in nothing but sand and charcoal.—Mr. WREN had always found the different kinds of Gesnera to do best in soil rather stiffer than what he used for Achimenes. He never syringed his plants.—Mr. M'DONALD thought the bulbs of Gloxinia should not be kept in a low temperature while at rest; he had lost several, and attributed it to the temperature of the place not being above 40°, but had never lost any when placed on a shelf in the stove.—*W. Sherwood, Hon. Secretary.*

CHÆNOSTOMA POLYANTHA.—This is a greenhouse plant, of a slender, partially upright habit, attaining from 9 to 12 inches in height, and readily trained to a dwarf and compact growth. It forms a valuable addition to the flower-garden, being well adapted for beds, or for individual effect upon rock-work, producing a profusion of purplish-lilac flowers, with a yellow eye or centre, during the months of July, August, September, and October. From its extreme disposition to form premature flower-buds, a rigid adherence to the rule for obtaining a vigorous undergrowth, by shortening the extremities of its fore-shoots, is indispensable.

The cultivator will readily recognise in this plant a similarity in character to the useful *Lyperia pedunculata* and *p. alba* (*Buchnera pedunculata*). The latter, though a more robust plant, is inferior to the former, when properly "got up," in its larger and more lively-coloured flowers, and in its natural tendency to excessive fertility; so much so, that I anticipate nothing less than that an entire restriction of one or two plants from bloom will give a supply for successive seasons. In common with many others, this interesting plant is seen to disadvantage in the greenhouse during the spring months, with its prematurely scattered bloom; it is, nevertheless, one of those autumnal ornaments which contributes its share of interest when our summer friends are gone, and which, if less gay, is more constant, and, like those objects in nature whose highest qualities are only discernible in a strong light, it loves to expand its beauty beneath the bright sunshine. It is, moreover, a plant that is not to be valued singly, by comparison. It possesses a value and interest peculiarly its own,—answering well for masses in the flower-garden, where it forms a distinct and essential feature. The profusion of its flowers, the pleasing variety of its colours, and the long continuance of its bloom, fully compensate for the absence of more brilliant but less valuable properties.—*Gard. Chron.*

BROMPTON STOCKS.—Two sowings of these should be made annually; the first about the middle of May, and the second about the end of June. Sow in beds of a nice sandy loam, in an open situation, and about the end of August, if the weather is moist, or the beginning of September; transplant them into a border, placing five in a patch; at the same time pot off a store, to be kept in a frame over winter, for planting out in spring; as winters like the past invariably destroy them, except in very sheltered situations. Use 6-inch pots for the purpose, which should be filled with good loam, mixed with a little rotten dung; the more airy the situation is, and the dryer the plants are kept in dull weather, the better they will succeed. Plants that survive the winter in the borders are always finest; but those kept in pots are well worth the trouble. Seed three or four years old is better, and more likely to produce double bloom than that of one year old. If there be more single-blossomed in the patch than one, pull them up; as it is too late to raise plants to bloom the coming season, they can be procured of florists for a trifle.

C.

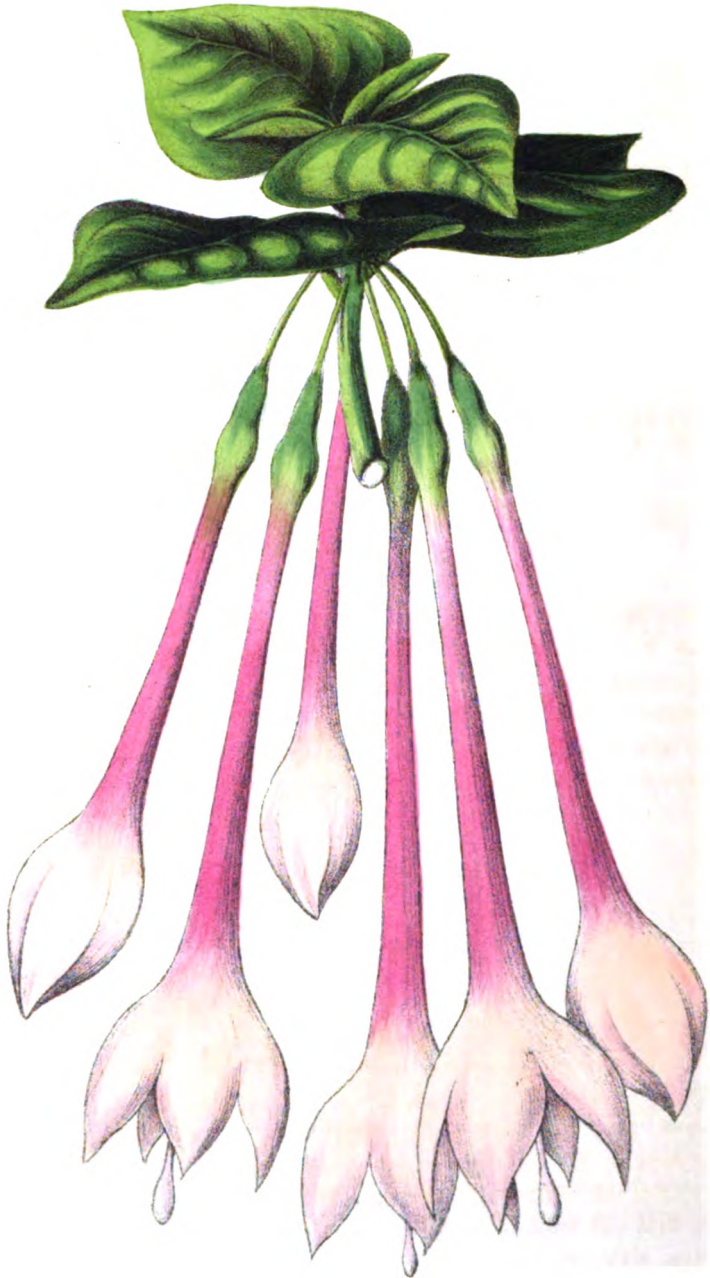
Floral Operations for May.

TENDER OR STOVE ANNUALS.—When it is desired to have some plants to bloom late in autumn, as Balsams, Cockscombs, Browallis, &c., seeds should now be sown, and the plants potted off into small sized pots, as soon as they are large enough, using a rich soil.

GREENHOUSE.—During the early part of May a few frosty nights generally occur; in consequence of which, it is advisable not to take out the general stock of plants before the middle of the month, or even, in cold situations, before the 25th. Whilst the plants, however, remain in the greenhouse let them have all the air that can be given during the day, and at nights, if no appearance of frost. Particular attention will now be required to afford an ample supply of water to free growing kinds of plants. Frequently syringe them over the tops at evening just before sun-set. If any of the plants be attacked with green fly, or any other similar insects, apply a sprinkling of tobacco water, diluted with water, by adding to one quart of the liquid five of water; in applying which to the plants, syringe them at the under as well as upper surface of the leaves: a repetition will rarely be required. This mode of destroying the insects is far preferable to fumigation, no injury being sustained by it even if applied in a pure state. The liquid can be obtained of tobacconists at 10d. or 1s. per gallon. Inarching Orange or Lemon trees may still be performed. Pelargoniums must be encouraged (see Articles upon). Ericas, strike cuttings this month, if the young shoots be firm enough. It is a good time for increasing most other plants by cuttings, striking in moist heat. Greenhouse Annuals, as Salpiglossises, Globe Amaranthuses, Balsams, &c., should be encouraged by a little warmth, and shifted into larger pots, early in the month, so that the plants may make a show, to succeed the removal of the general collection of greenhouse plants. Cuttings or suckers of Chrysanthemums should now be taken off, if not done before. Achimenes coccinea, longiflora, rosea, &c. plants should be potted singly into a light rich soil, and be forwarded in the stove, and repotted as they advance in growth, not too much at a time, but as root room appears necessary. Lobelias for the greenhouse should be similarly treated as to potting, &c. Seeds of greenhouse plants may still be sown. Repot any plants which require it, and not defer to any general potting, as is often done to the great injury of particular ones requiring it at present. Camellias now making their growth should be duly encouraged (see Articles in former volumes). Calceolarias be encouraged (see Articles in former volumes).

FLOWER GARDEN.—Continue to protect beds of Hyacinths, Tulips, &c. Carnations in pots should be encouraged by manure water, &c., in order to grow them vigorously; care in striking them will be required. By the middle of the month, half hardy annuals, as China Asters, Marigolds, &c., may be planted out in the open borders. Some of the best kinds may be potted, as done to the more tender sorts. Many kinds of greenhouse plants, as Petunias, Salpiglossises, Salvias, Fuchsias, Heliotropes, &c., should now be planted out in the open border. Dahlias that have been forwarded in pots, frames, &c., may be planted out towards the end of the month. Seedlings may be pricked out in a warm situation, having a deep, fresh, rich soil. When Stocks, Mignonette, China Asters, &c., are wished to bloom late in the year, seeds may now be sown, either under a frame or on a warm border. Slips of double Wallflowers should now be put in under a hand-glass. Seeds of biennials, as Sweet Williams, Scabious, Campions, &c., should now be sown. Tuberoses, for late flowering, should now be planted, either in pots or warm borders. Offsets of Campanula pyramidalis should be planted in rich soil, and placed in the greenhouse. Repotting must be continued till they cease to grow; by this means the plants will reach eight feet high, and be very branching. Double Rockets, pinch off leads of some plants to induce the production of laterals for future years supply.

In every previous Volume there are articles upon the Auriculas, Polyanthus, Carnations, Ranunculuses, Anemones, Tulips, Violets, Pinks, Heartsease, &c. We refer our readers to them, as affording directions and precautions valuable, especially at this early part of the season.



THE
FLORICULTURAL CABINET,

JUNE 1st, 1846.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I. EMBELLISHMENTS.

Messrs. VEITCHS' NEW FUCHSIA.

THIS new species of Fuchsia was discovered by Messrs. Veitch's collector, in Peru, about two hundred miles from Lima. It is singularly curious, but a handsome kind, producing a profusion of its rose-coloured tubes, but destitute of petals. It is a noble looking species, and well deserves a place in every collection of this very popular and beautiful flowering tribe of plants.

ARTICLE II.

OBSERVATIONS ON SOILS.

BY J. E. M.

IN the CABINET for April I said, in the few hints then thrown out to amateurs, that they were only prefatory to a few observations on some of the leading principles on which plant cultivation should be conducted. I now send you the first of these; and I may as well state here, once for all, that these short papers are not meant to satisfy inquiry, but merely to point in the direction in which we think correct information will be found, viz., in the study of nature.

Our first will treat of soils; a subject often brought before the

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amateur, yet, we humbly think, often in such a way as must baffle his skill and perseverance to compound them. Were all the various earths and manures mentioned in many horticultural works really necessary for good cultivation, we would, at once, say to amateurs of limited means, give it up; for the time and expense necessary to collect them will leave no balance of satisfaction behind. But we believe that this is by no means the case; nay, we affirm, that without one tithe of the dirty compounds often recommended, equal, if not superior articles, may be produced.

In speaking of soil, we shall first consider its mechanical construction, and, again, its nutritive qualities. One great use of the soil is to afford the roots of plants permanent fixture, and from whence they may draw supplies of nourishment for their existence. In cultivating plants great regard must be paid to the form of the roots; and this in a greater degree when they are cultivated in pots. For the sake of clearness we shall divide plants into two divisions; the one having a mass of fine fibry roots; the other having a branching root of greater substance. Now any one can perceive that, to place a plant of the former division in a close adhesive soil, it will never be able to penetrate and extend its sponglits; and it is through them that all nourishment is received into the plant; they remain a pent-up mass; and, when water reaches them, it is not to disengage and liquify their proper food. By its sluggish motion through the soil it rots, instead of feeds them. This is no theory, but a fact that may be seen and understood. No nutriment in the soil is of any avail unless the soil be of that open consistence that the roots can freely run through it without too much resistance; and, moreover, in this state it has no communication with the air to keep it fresh; this also hastens the decay of the roots. Again, place a plant of the latter division in this soil, and, from the extension of its stronger roots, it displaces and opens the soil, making way for its fibres. Plants with roots of this description have a tendency to open the soil, and make it porous; and, owing to the fewness of its fibres, it requires a soil of greater resistance to afford it sufficient fixture.

From this we infer, that plants having a mass of delicate fibry roots, as heaths, epacris, &c., must be provided with a soil of a nature sufficiently open that the roots may be at liberty to run freely through it in all directions. In this condition, air and water find a

free passage through it, and both are necessary; and for plants having strong roots, especially when large specimens are cultivated, soil having a greater consistence is requisite.

We shall now shortly notice soil in its nutritive qualities, or the food of plants. The food of plants does not consist of anything solid, such as earthy matter. Plants have not the power of absorbing anything solid whatever. Their nutriment consists almost entirely in water,—water is not a simple, but compound element,—and carbonic acid; the decay of organic matter combined with water forming carbon. Hence the fertility of soils consists only in the abundance of organic remains. We are thus led to see how vegetation, century after century, luxuriates from the effects of her own partial decay; annually strewing around her the very elements necessary to her existence and extension. This is information of the most valuable description, and comes from a source which precludes the possibility of error. From this we infer that a soil mechanically right, and abounding naturally in organic remains, will abundantly answer all ordinary purposes.

But, as we have now so many plants, so to speak, artificially improved so much beyond their natural parents that a more than ordinary supply of the natural nutriment proper to them must be provided, in order that they may be able to support and perfect their extra developments, we need only mention the rose, the dahlia, the dianthus tribe, &c. This provision we have in a comparatively simple state in cow-dung; which is only vegetable substance subjected to a more rapid change in the stomach than it does from natural decay and atmospheric influence. This, however, in a recent state is quite unfit for the roots of delicate plants, owing to the rapid evolution of its gases; for these, although necessary to the existence of the plant, are, in this case, given out in such abundance as to gorge the absorbing rootlets, and cause a disarrangement in the internal economy of the plant that is almost sure to end in death, or, at all events, defeat the object in view, which we have presumed as being flowers. Before we can safely use cow-dung in the cultivation of the more delicate rooted plants, it must have undergone a considerable degree of decomposition; and in this state it still contains a great proportion of the proper food of plants. The proportion of it to be mixed in the soil must be in proportion to the nature and state

of the plant, and the degree of improvement to which it has been advanced from its natural condition. As an instance, the rose, growing in its wild state, is often found on a thin loose soil, often where there can be little organic substance near it, and the consequence is its poor appearance; yet is there sufficient for its few flowers, with fewer petals. But plant beside it one of our most improved double roses, and allow it the same amount of proper nutriment, and it will soon dwindle back to its original. Extra developments must be provided with extra support.

Soil must not only be porous and nutritive, but also fresh. If kept in a confined place, not exposed to the influence of the weather, it has, especially if rich, a tendency to become mouldy; and in this state it exerts a most baneful effect on the roots of plants. Frost is one of the principal agents in the preparation and melioration of the soil; it expels the deleterious effluvia that frequently exists in them, especially when it is kept in large piles. We advise amateurs to let no opportunity of exposing their soils to frost pass without taking advantage of it. It gives to it an openness and freshness, which, if neglected, no other agent can perform.

From these remarks it is easy to gather, that our principal soil is that of nature's own providing. Decomposed vegetation is the fit and proper food of plants; and the quantity of that to be regulated by the nature and demands of the plant.

When plants cultivated in pots or tubs become large, and are but seldom shifted, they should be top-dressed with compost, containing a great proportion of proper food. It may be used here much grosser in its nature; as, not coming in direct contact with the roots, its virtues are washed down in moderate supplies.

We shall close these remarks with a few words on charcoal. This is a substance of immense value to plant cultivators. Independent of its value in keeping the soil open and porous, and keeping up a constant communication between the air and the roots, it has the power of rapidly absorbing any extra supply of moisture or carbonic acid that may exist in the soil; and not only prevents those elements from doing injury, but retains them until wanted by the roots. It thus acts as a reservoir for the escape of extra stimulants. We advise its use universally. It forms, for the above reasons, the best drainage for plants; but it should also be scattered in the body of the soil.

ARTICLE III.

REMARKS MADE ON THE EFFECTS OF SITUATION AND EXPOSURE ON DIFFERENT KINDS OF PLANTS DURING WINTER.

BY A NOBLEMAN'S GARDENER IN YORKSHIRE.

As by far the greater number of plants cultivated in this country are exotics, we find they are variously affected by the changeable weather of our climate, as well as by the attending circumstances of the situations they are destined to occupy. Our knowledge, acquired by experience, of the constitution of foreign plants, has supplied us with rules for our guidance in the distribution of them. If we happen to be acquainted with the native habitat of a plant, we can judge pretty accurately what place it is most likely to thrive in with us. Tropical plants, for instance, we place in the stove, or conservatory; Australian, South African, Chinese, and South European, in the greenhouse; and those from the northern parts of Asia, Europe, and America, anywhere in the open air where we may have occasion for them, or which we may think best adapted for them. This is a very natural way of proceeding; but we are not always right in its application; some tropical plants are killed by placing and keeping them in the stove; because it is not so much the latitude whence they have been brought, as it is the elevation of their habitat above the level of the sea which determines their hardiness. Many plants are debilitated by confinement in the greenhouse, and very many extra-tropical plants are lost from being placed in what is considered the warmest or most sheltered situation.

These errors are occasioned either by a want of experience respecting the constitution of the plant, or from inattention to the extreme change of temperature to which it is exposed in its new place, or from ignorance that situation and exposure change the constitution of plants to such a degree that, while one is perfectly hardy if nursed on a northern aspect, another of the same kind shall be so tender and vulnerable on a southern exposure, that it dies, or is cut down to the ground, under the slightest frost.

Want of experience concerning the constitution of a newly imported plant may be said to be an excusable want of judgement; because we have no means of knowing without experience, there

being no general rule to guide. If, indeed, we are told that it is an annual from a warm country, we may safely conclude that it will succeed in this climate during summer, as many tropical annuals do. Or, if it be a perennial herb from the same country, we may find it answer with us if it be only protected from frost. But if tropical shrubs or trees are brought to us, we cannot, from any external mark, judge whether they are liable to be killed by frost or not. If they shed their leaves in winter, it is only a sign that they are winter-resting plants, not that they are hardy; because there are several tropical plants which are deciduous, as, for instance, the silk cotton-tree (*Bombax ceiba*); and many evergreens are as hardy as those that shed their leaves.

We often fail in preserving tender plants from inattention to local circumstances. We are liable to mistake shelter for warmth. Frost and the north and east winds are most dreaded in this country. A southern exposure, whether for the abode of animals, or a station for vegetables, is always considered the most eligible, merely, perhaps, because it is the most agreeable to our own perceptions. But in respect of vegetables we often err in this matter, both in choosing sheltered situations and southern exposures.

Cold (or rather cold air) is always most intense in humid situations, because there is the most copious evaporation. Such situations, in this country, are either on the tops of clayey hills, or in the lowest valleys, where there is either a lake, river, or brook. These low grounds are nearer the main springs, and often abound with them, whence exhalations are ever rising, though imperceptible; of course such a valley must always be more chilly, and more subject to keen frost than any drier or more elevated situations. Such glens, provided they are open to the south, are chosen as the most suitable for tender exotics, merely because they are more sheltered from the northern blast. In the summer, indeed, such a locality is most favourable to the quick and strong growth of every plant. The air, being generally calm and moist, conduces to vigorous expansion; and the very coolness of a summer's day or night, as felt in such places, is most propitious to luxuriant vegetation. These circumstances, however, instead of being beneficial to tender exotics, have a directly contrary effect; the summer excitement only renders them less able to bear the frosts, which fall upon them with redoubled intensity in

winter. And instead of the slow and sturdy growth which would have happened to a plant on a dry and breezy hill, or on a northern aspect, we have an enfeebled nursling, unfit to bear the rigours of our climate from sheer mismanagement.

Many proofs of the truth of these statements may be adduced, but we presume they are unnecessary, as the facts must have been repeatedly observed by our readers in general. The fact, however, is most important, not altogether for the sake of naturalising exotic plants, but for fixing the sites for gardens and orchards, which, if misplaced at first, give cause ever after for regret.

Not only do the exhalations from a moist valley generate cold, but the cold air which descends upon the hills after sunset is said to "slide down" and settle in the lowest place. So firmly is this believed and acted on by a well-known horticultural philosopher, John Williams, Esq., of Pitmaston, near Worcester, that in all cases where a garden is made on ground sloping to the south, that gentleman invariably advises the lowest boundary to be a hedge; or, if a wall, it be raised on grated arches high enough to allow the escape of the cold fleece of air accumulated within the garden. On the same principle, whatever may be the aspect, the upper boundary wall should be high and close, to intercept the descending current and divert it round the ends.

From these circumstances, then, it is fair to conclude that low situations should never be chosen for garden sites, or as the best places for tender exotics.

There is another circumstance not yet adverted to which operates injuriously on tender plants in sunny and sheltered valleys. There, they are sooner affected by the returning warmth and solar beams of spring, and hurried into a premature growth long before frosts are over, or the summer temperature confirmed. They are awake and putting forth their tender leaves and shoots before the exposed residents of the hill are in the least acted on. The first have their sap liquefied and in motion; that of the second is clammy and at rest; the first suffer because they have to sustain four degrees of frost perhaps, when least prepared for it, while the second have only to bear two degrees, and are otherwise fortified against it.

The native plants of the frosty regions of Siberia suffer greatly from late frosts when introduced into British gardens, not from the

severity of our seasons compared with that of their own, but entirely from the changeableness of the former. In Siberia the winter sets in at once, and the surface of the ground is soon covered with snow; every vegetable becomes instantly torpid, and in this state remains in perfect safety till the return of spring, or rather summer, as there is scarcely any spring season in that northern clime—no intermission of mildness to excite, and frosts to destroy the tender plants, as is so often experienced in this country.

The changeableness of our spring weather is, in fact, the greatest bar to our possessing very many plants, which, to have at all, must be guarded in some kind of building erected for the purpose. Our want of success in attempting to naturalise some exotics, shrubs and trees, however, may have happened not so much from the constitutional delicacy of the plants themselves, as to the injudicious manner, perhaps, in which the trial has been made. Exposed situations on the north side of a hill, and on poor and dry, rather than on rich and moist soil, is certainly the most eligible station for making a trial of the constitution of a foreign plant. Here it would not be excited into too early growth by the early sun of the day or of the season, nor would the aspect induce precocious growth. Its growth would be slower, but its shoots would be firmer in texture, and consequently better able to resist the destructive effects of frozen sap.

I cannot conclude these observations without first alluding to the ideas entertained about the acclimatation of exotic plants. The notion is founded on the supposition that, as animals have a tendency to accommodate themselves to foreign climates, or to the changes of temperature of their own native place, so plants may in like manner be susceptible of physical changes which would enable them to bear great diversity of climatal temperature; but, from all experience on this point, it appears, from many tropical annuals long cultivated in Britain, that they have not perceptibly advanced in hardihood since the first day of their introduction. Such are the runner kidney-bean (which, by the bye, is a perennial); the potato and cucumber among culinary vegetables; the China aster and balsam among flowers, and the melon among fruits. All these have been perpetuated by seeds that have been produced, ever since their first introduction into this country, but without gaining any additional protective habit against frost. We may, therefore, conclude that plants generally have been

formed for the climates to which they are indigenous, and have not that mutability of structure or of sap which would render them invulnerable to frost in a colder country, or to the incessant excitement of a warmer one without deterioration.

That many plants are now seen in the open air which were formerly in the greenhouse, or even in the stove, is well known; but this has not happened in consequence of any change in the constitution of those plants, but merely from being misplaced on their first introduction, for want of experience. *Aucuba Japonica*, one of our hardiest shrubs, was once under my care in the warmest end of a conservatory!

The effect of frost on tender vegetable bodies is mitigated by thawing it off with water before the sun shines upon them. This seems to contradict what has been before stated, as to dryness being a safeguard to plants. But the cases are different; perfect dryness is a security against frost, but when plants are loaded with frozen dew, and this allowed to be dissolved by the sun, a much more intense degree of cold is generated during the solution of the icy particles by the sun, than if they were suddenly dissolved by water. It is this increased degree of cold which ruptures the delicate vessels of the plants, and of course destroys them.

Sometimes we see the stem of a tender shrub, as a heath, for instance, rent in many pieces, whilst the youngest shoots remain unhurt. This is owing to the rigidity of the first, and the elastic texture of the second; the latter yields to the distending effects of the congealed sap, and afterwards returns to a healthy state; but the unyielding character of the old wood only renders it more destructible. The foliage of the grasses indigenous to cold countries is only withered by frost, but seldom destroyed, owing to the tenacity and elasticity of its structure.

ARTICLE IV.

REMARKS ON FLOWERS.

BY RISCEMANA.

As contributions on floral matters are requested, I offer the following remarks, if deemed worthy of notice:—

I was gratified by the reminiscence of an early favourite flower, the

double primrose, caused by the article upon it in the last Number, written by Isabella, and wish for some information where the numerous sorts therein named can be procured, as in my neighbourhood any are rare. A rose-coloured primrose and a pink one must be great acquisitions to the garden; your correspondent does not inform us if they were raised by herself from seed.

In a former Number of this work, I gave some account of the beauty in Spring of separate masses of the purple and white Honesty, and have recently had the gratification of seeing my own plantations skirting the shrubbery, rendered very cheerful, before the forest trees were in leaf, by these lively flowers. I would also recommend the double yellow furze for the foreground of trees in the vicinity of a house, as the effect of numbers of them in the early spring is extremely brilliant; they are at the present time one sheet of golden blossoms: they are planted alternately with hollies, which, so rapid is their growth, they have entirely overpowered.

In greenhouses now we seldom see the *Elichrysimum* or *Guaphalium* tribe cultivated, as they used to be before it became the plan to show so many varieties of the same species, as *calceolarias*, &c. I shall regret their becoming unattainable, having hoped that the present extended intercourse with distant countries would have added to those already familiar. I once raised a fine specimen of *Astelina Eximium* from seed; it flowered freely, and I had several seedlings from it; but they were all killed by being repotted during my absence, their roots being very delicate; I have not been able to replace it, never seeing plants or seeds advertised. When we remember the permanency of these ornaments of our winter bouquets, it is more to be lamented that their cultivation is somewhat on the decline.

An idea has occurred to me, that a case somewhat similar to those called Ward's Cases might be constructed, to enable those having only a greenhouse to bring forward some stove plants; it might have a glass top and sides; hot water could furnish bottom heat, which could be regulated by a flat heater, so that an amateur might attend to it in a parlour, and thus succeed in bringing forward early those great summer ornaments of a greenhouse, the *Gloxinias*, *Achimenes*, &c. Perhaps some of your practical readers may realise this suggestion.

I have not observed any recent notice of the *Scarlet Rhododendron*;

a fine specimen greets my eye from the window, which has been in flower several weeks, and has remained in the American bed two winters without any protection; it is the greatest acquisition to the garden we have lately had; its early flowering rendering it remarkably conspicuous, and, as it were, "alone in its glory."

In the article on Fuchias, superphosphate of lime is recommended to be applied to the surface of the earth; any information as to quantity, price and where procurable, of this new enricher of the soil, would be gratefully appreciated.

ARTICLE V.

OBSERVATIONS ON THE TREATMENT OF NEWLY PLANTED DECIDUOUS PLANTS.

BY MR. J. D. PARKS, NURSERYMAN, DARTFORD NURSERY, DARTFORD IN KENT.

ON the impropriety of heading deciduous plants at the time of planting, as is the general practice with gardeners and others. This proceeds from the little knowledge they have regarding the physiology of plants.

It is the leaves which digest or convert the crude sap taken in at the roots into pure sap, for the support and growth of the plant.

Again, if the leaves be the means of attraction of sap upwards, and also if they attract electric fluid from the atmosphere, as is supposed they do, all this goes to show how improper to shorten or head them down, as electricity is a promoter of growth. By not heading, in consequence of length of wood, and that beset with buds, the plant has a considerable quantity of leaves early to perform all the different offices, to establish the plant; whereas, if headed down, it is Midsummer almost before they have any quantity of leaves for any of the before-mentioned offices.

I have at this time a pear and an apple-tree in my nursery, a conspicuous proof of what heading down is. These having been left unpruned in the same row as others headed annually, those not headed are five times the size of those which have been headed. I know a tree planted with all its head it will make five times as much root as it would headed.

Two years ago a neighbour bought Quick of me to plant a hedge. I tried to persuade the man who planted it not to head it when

planted; but old plans are so sweet they cannot be dispensed with or laid aside; notwithstanding I did prevail on him to leave about three rods uncut. The proprietor of it was so dissatisfied with it, it not looking so green as the other, that he wanted it cut down at Midsummer; I told him to have patience with it; last spring it was cut down, now it is delightful to see how many eyes it broke, also the long clear shoots; it will beat the other part which was cut down by far. A horse bit off the tops of a small portion of it at Midsummer, this is what some persons would have done as a summer clipping, but this part looks miserable in comparison with the other. Another part of it is contiguous to another hedge, this is miserable in appearance, showing what the hedge has done by robbing of light and also food.

I head no fresh-planted deciduous trees the first year of planting, except Peaches and Apricots, and these very long to what most persons do, except some near the bottom of the tree, which I head very short, to preserve the bottom with young wood.

A gardener five years ago had some Peach trees of me; when he had them in his hand he said, "Where would you head these;" I replied, "So and so;" he said it was very long, but he would head some on my plan and some on his own; last year he told me those he headed long were twice the trees the others were, he would never head short any more to establish trees.

ARTICLE VI.

ON WATER PLANTS.

BY A CULTIVATOR.

THE beautiful flowers of some of the water plants do at least equal, if not surpass, many of our most curious land plants, and especially those in the West Indies; I am persuaded many curious persons would have made plantations of them if they had known how to have done it; but though America exceeds us, yet we are not without them in England, as the water Lilies and Ranunculuses of several kinds, that are so frequently found in our rivers and ponds, and especially in Cambridgeshire where there is a great variety.

Water plants may be cultivated in gardens, although there are

neither ponds, rivers, or springs in them; and I recommend the doing of it in the method following:—

Either in garden pots glazed, without holes, or in troughs or cases of wood of oaken boards two inches thick, six feet long, and two feet wide, and two feet and an half deep; if they are for large plants that grow under water the troughs need not be so deep. The corners of these troughs should be strengthened with iron, and the inside should be well pitched, and the outside painted.

These pots or troughs should be filled one-third part with common unmixed earth for water lilies or pond weeds, or such as require depth of water for their leaves to swim in.

And for water Arums, water Plantains, and Ranunculuses, which love not so much depth of water as the former, they may be filled two-thirds with the same earth.

And so for those water plants that grow in bogs and marshes, the pots or troughs may be filled with the earth within five inches of the top.

This may be performed in April, when the water plants begin to appear, which may be planted from that time till the middle of June; and the vessels may be filled with water as soon as the plants are put into them.

It ought also to be observed, that many of the water plants are erratics, swimming about from place to place, as the wind carries them, taking no root in the earth, only striking their roots in the water; as ducks-meat, frog-bits, and water-soldiers; a small quantity of earth in the bottoms of the pots or cases will be sufficient to maintain the water in a right state for the support of these.

And, indeed, the best way to understand the right method of cultivating them in gardens will be to observe the mode of growth, and the exposure of those plants that we would civilize in our gardens. For the plain road of nature should be always followed, or at least kept in view, in order to obtain healthful plants.

In thus artificially cultivating water plants, it is my opinion that those that naturally grow in rivers should be frequently refreshed with spring water; but such as delight to grow in standing pools or ponds should be seldom interrupted with it.

It may also be observed, that water plants when they are removed are as long before they recover themselves, to renew their growth, as

land plants are. And whereas it is an usual thing to shelter land plants from the heat of the sun, after they have been transplanted, water plants must be treated quite contrary, and must be exposed to the sun after their removal.

The seeds of water plants are of two kinds; the one kind swimming on the top of the water, and the other sinking to the bottom as soon as it is shed, following the nature of their mother plants in that respect; for if the seeds of such plants which naturally swim on the top of the water should sink to the bottom, those seeds would not be in the proper station which is required for their growth; and so of consequence would perish; and so, on the other hand, the seeds of such plants which naturally grow under water, will not swim on the top of it.

It may also be observed, that in our climate no one water plant is an evergreen; but all of them are either vivacious or annual, and either lose their leaves down to their roots, or entirely perish, excepting only their seeds; for it is impossible that they should live and grow in frozen waters.

Therefore, in order to preserve their seeds, that we may be supplied with the several kinds from year to year, the plants are to be followed from the flower till they are ripe, and then they should be put into earth and water, to preserve them fit for vegetation the next spring; for that is the way that nature takes, and there is no difficulty of doing this in pots, &c.

They may be put into the pots or troughs as soon as they are gathered, and may there either sink or swim according to their nature, until the spring causes them to sprout; and they will prosper and require but a very little attendance.

I do not doubt but that the seeds of water plants will produce as many varieties as the seeds of land plants every year.

As to exotic water plants, I am of opinion that they are best to be procured and brought hither in the seeds; and whereas in America the waters are generally adorned with beautiful plants, if they were procured by some ingenious correspondent in those parts they may be put (each sort by itself) into bottles of water and earth with large mouths, and only to be covered with a linen cloth, for if they were stopped with corks the liquor would be apt to ferment; and these bottles might be put into a vessel of water, and so be brought to us;

and when we receive them they should be sown in the pots as directed before, and set into hotbeds, until the weather in England comes to answer the heat of the climate they came from.

When the seeds are gathered the person who does it should curiously observe the depth of the water they grow in, the quality of the soil under the water, the situation, and whether it is standing or running water they grow in; and, above all, the taste of the water, whether it be fresh or salt, or brackish.

When we have made a good collection of varieties of water plants they may be disposed into classes, and the several tribes ranged in their proper order, which would be of use to such as read lectures on plants; and for want of this is the occasion that water plants are so little known.

The most proper season for disposing and removing them is as soon as they are out of flower, and the leaves begin to decay, which is about the beginning of September. The stems or branches of them should then be cut off near the root, and their roots should be planted at due distances in the pots or troughs as before directed.

Those water plants which come from foreign parts must be sheltered in a greenhouse during the winter; for if they, like the exotic land plants, so far preserve their natural season of growth, that they will only sprout in the spring-time of their native countries, they will sometimes flower with us in the winter season. And while they are in the greenhouse they should frequently be refreshed with water, somewhat warmed with the heat of horse-dung or the sun, and be allowed as much air as possible.

ARTICLE VII.

ON THE CULTURE OF THE COCKSCOMB.

BY T. H. T., A NORTH BUTEAN.

BEING a constant reader of your useful CABINET for the last four years, I am induced to offer a few remarks on the culture of the Cockscumb as I have cultivated it with good success for the last two years, invariably gaining prizes wherever they were exhibited. My method of culture is, I sow my seeds in leaf mould the beginning of April, placing them in a frame, ranging from 60 to 70 degrees of heat; when about an inch high, I transplant them into 48-sized pots,

using the same mould, and replacing them in the same heat, as before, until they show flowers; I then select the plants I think likely to have the finest combs, and repot them into 12-sized pots, using a compost of one-fourth pigeon dung, to three-fourths leaf mould and decomposed frame dung, well incorporated together; I then give them a good watering with liquid manure regularly twice a-week. When full grown, I allow the heat in the bed to die away, covering the plants from the mid-day sun with mats, after which they remain in vigorous bloom for many weeks. By the above treatment my combs vary from 16 to 18 inches, by 7 inches. The sorts I grow is Brighton Prize and mixed German.

If this should be of any use to your numerous readers, I shall trouble you with some remarks on the Tulip, as I am trying some experiments on its culture.

[We shall be obliged by the promised favour.—CONDUCTOR.]

PART II.

MISCELLANY

OF

NOTES AND CORRESPONDENCE.

New or Rare Plants.

ÆGIPHILA GRANDIFLORA. LARGE YELLOW-FLOWERED. (Bot. Mag. 4230.) Verbenaceæ. Didynamia Angiospermia. In a former Number we recently noticed that Messrs. Hendersons', of Pine Apple Nursery, London, had a new and beautiful yellow-flowered *Rondeletia* in bloom. The plant had been sent to them, under that name, from Liege; it is, however, found to be a true *Ægiphila*. The plant is shrubby, growing about two feet high. It blooms very freely in the stove through the winter season, and the fine yellow many-flowered corymbose heads of tubular flowers produce a very pretty effect. The heads of flowers very much resemble those of the yellow-flowered *Bouvardia*.

BARNADESIA ROSEA. ROSE-COLOURED. (Bot. Mag. 4232.) Mutisianæ. Syngenesia Polygamia. From Peru and Brazil, and is in the Syon House collection. It blooms freely in winter on the plant-stove. It is a shrub, slender, and in its wild state trailing. The flowers are produced in a sealed head, similar to some of the *Elichrysums*; they are of a beautiful rose colour; it is a very pretty plant.

CEDRONELLA PALLIDA. THE PALE-FLOWERED. (Pax. Mag. Bot.) Lamiaceæ. Didynamia Angiospermia. From the north of Mexico. It is much like a *stachys*. Flowers tubular, in whorls; a pale rose colour. It is a greenhouse plant, and does well for beds or borders during summer. It is in the garden of the Horticultural Society.

CHOROZEMA TRIANGULARE. TRIANGULAR-LEAVED. (Pax. Mag. Bot.) Legu-

minosæ. Decandria Monogynia. A very scarce, but highly interesting and beautiful species. It is a low, neat evergreen shrubby plant, blooming profusely in early spring months. The flowers are of a lively scarlet, with yellow eye, and rich violet keel. It ought to be in every greenhouse, and may be procured cheap.

CLITORIA TERNATA MAJOR. THE GREATER. (Pax. Mag. Bot.) Leguminosæ. Diadelphica Decandria. The present very splendid flowering variety has been sent to the lady of B. Harrison, Esq., of Blackheath, Kent, from New South Wales. The flowers are much larger than the very fine original species. The very rich azure blue pea-shaped flowers, produced freely, give a striking appearance. Each blossom is about two inches across, and the rich blue surrounds a white and yellow eye. It ought to be in every warm greenhouse. It is a sub-shrubby, twining evergreen plant.

ERANTHEMUM VARIABLE. THE VARIABLE. (Pax. Mag. Bot.) A native of New Holland. It is a slender, half-shrubby plant, which blooms nearly all the spring and summer in a warm greenhouse, or moderate stove. The flowers are numerous produced in spikes; they are of a lively purple colour, each blossom about three quarters of an inch across. The rich green leaves are enlivened by silvery-coloured veins. Messrs. Knight and Perry, of Chelsea Nursery, London, possess it.

FAGOPYRUM CYMOSUM. LOOSE-FLOWERED. (Bot. Reg. 26.) Polygonacæ. Octandria Trigynia. (Synonym Polygonum "Persicaria" cymosum.) A hardy perennial, blooming from June to September. It grows about two feet high, forms a spreading bush like the other Buckwheats. Flowers white, in profusion. At the Horticultural Society's Garden.

MUSÆNDA MACROPHYLLA. LARGE-LEAVED. (Bot. Reg. 24.) Cinchonacæ. Pentandria Monogynia. From Nepal. A large spreading shrub, generally erect, but sometimes when vigorous spreads. Leaves large, flowers in terminal corymbs, many flowered, tubular, an inch long, golden yellow. It requires a hot-house treatment. In the garden of the Horticultural Society.

ONCIDIUM LACERUM. CUT-LIPPED. (Bot. Reg. 27.) Orchidacæ. Gynandria Monandria. From Panama. It has bloomed at Messrs. Loddiges's. It is of the chive-leaved section. The panicle of flowers about six or eight inches long. Each blossom near an inch across, bright yellow with a red stained labellum, and the sepals beautifully dotted with red.

OXYRAPHIS MACROSTYLA. LONG-STYLED. (Bot. Reg. 28.) Fabacæ. Diadelphica Decandria. It was deemed a doubtful species of *Crotolaria*. It is a very pretty greenhouse shrub, blooming freely at the end of summer. It grows a yard high, or more. The pretty pea-like flowers are half crimson and half rose-coloured, and are produced in racemes.

SIDA (ABUTILON) VITIFOLIA. We gave a figure of this very beautiful species in a former volume of the CABINET. Messrs. Veitch had it in splendid bloom last year in the greenhouse, but, as we formerly noticed, it has endured the open air for some years near Dublin. In the greenhouse, however, it is a most charming flowering plant, very much deserving to be grown wherever it can be admitted. It is shrubby, growing from 4 to 6 feet high, flowers in terminal corymbose racemes, each blossom three inches across, bluish-lilac, the purple and golden styles and anthers furnish a very pretty circular eye at the centre.

SOLANUM LYCIOIDES. LYCIUM-LIKE. (Bot. Reg.) Solanacæ. Pentandria Monogynia. Mr. Hartweg discovered it in Peru, and sent it to the Horticultural Society. It is a charming, neat, greenhouse shrub. The flowers are of a very rich sapphire purple, having a golden eye and five reddish plaits. Each blossom is about an inch across; they are produced in profusion.

TORRENIA EDENTULATA. PURPLE-BLOTCHED. (Bot. Mag. 4229.) From the East Indies. It is an annual, stem erect, much branching. Flowers often three together, forming a raceme; tubular, an inch long. The limb of five lobes, yellowish-white variegated with purple. Tube pale-green tinged with purple. It bloomed in the stove at Kew very beautifully last summer.

ON PELARGONIUMS AND FUCHSIAS.—I have lately been re-perusing your account of the London shows held during the past season, that I might select therefrom some of the most successful Geraniums and Fuchsias, and intend to add, such as are different to those I already possess, to my collections. The following list tells the number of occasions from three upwards upon which each kind has been exhibited in prize collections, and undoubtedly all of them are good flowers. Probably, therefore, your insertion of this in the CABINET may be of assistance to some of your numerous subscribers, as it has to

AN AMATEUR FLORIST.

GERANIUMS.

Name.	No. of Prizes.	Name.	No. of Prizes.
Duke of Cornwall, Lyne	14	Conflagration, Foster	4
Madeline, Lumsden	14	Hector, Cock	4
Erectum	13	Milo, Cock	4
Lady Sale	11	Rosetta Superb	4
Superbum	11	Sarah	4
Sir R. Peel	10	Sunbeam	4
Hebe, Beck	8	Albina	3
Ackbar, Gaines	7	Aurora	3
Pulchellum, Foster	7	Black Dwarf	3
Alice Grey	6	Clio	3
Favourite, Beck	6	Constellation	3
Hermione	6	Cotherstone, Gaines	3
Sunrise	6	Desdemona, Beck	3
Symmetry	6	Gipsy Queen	3
Wiich	6	Isabella, Beck	3
Achilles	5	Leonora, Beck	3
Cyrus	5	Marc Antony, Beck	3
Emma	5	Nymph	3
Enchantress	5	Pirate	3
Lady Isabella, Douglas	5	Repeal	3
Matilda, Foster	5	Rosy Circle, Beck	3
Prince of Wales, Gaines	5	Sir W. Scott	3
Queen Phillippa	5	Sunset, Beck	3
Rising Sun	5	Susannah, Beck	3
Roulette	5	Trafalgar, Gaines	3
Sultana, Foster	5	Zanzummin, Beck	3
Sylph	5	Zenobia, Beck	3
Camilla	4		

FUCHSIAS.

Coronet, Smith	9	Duke of Wellington, Epps	4
Goldfinch, Harrison	9	Formosa elegans, Thomposon	4
Vesta, Smith	9	Pearl, Harrison	4
Chandlerii, Chandler	6	Brockmanuii, Brockman	3
Gigantea, Smith	6	Defiance, Smith	3
Britannia, Smith	5	Duchess of Sutherland, Gaines	3
Eppsi, Epps	5	Gem, Harrison	3
Exoniensis, Pince	5	Hope, Barnes	3
Madonna, Harrison	5	Modesta, Smith	3
Prima Donna, Harrison	5	Paragon, Smith	3
Venus Victrix, Cripps	5	Reflexa, Smith	3
Cassandra, Gaines	4	Sir H. Pottinger, Ivery	3

BULBS FROM INDIA, encrusted in white wax, and afterwards wrapped in cotton, though three months so encrusted, were as sound and perfect as when first done.—*Journal of Hort. Society.*

ON THE SIZES OF FLOWER POTS.—If the Conductor would have the kindness to insert in the CABINET the different sizes of flower-pots (*i.e.* the depth and top diameter of each particular size, with the number to the dozen), it would be taken as a great favour; as I imagine our sizes about here are much smaller than what are sometimes recommended for plants to be grown in; nor could they be grown to such perfection in a pot of our size; and please say the price per dozen.

A SUBSCRIBER.

[With a view to have one uniform and much better understood standard, the following has been adopted about London:—

	Old Name.	Usual Breadth in Inches.	Usual Depth in Inches.	New Name.
	Twos . . .	18	14	18 inch.
	Fours . . .	15	13	15 „
	Sixes . . .	13	12	13 „
	Eights . . .	12	11	12 „
	Twelves . . .	11½	10	11 „
	Sixteens . . .	9½	9	9 „
	Twenty-fours . . .	8½	8	8 „
	Thirty-twos . . .	6	6	6 „
	Forty-eights . . .	5	5	5 „
	Sixties . . .	3½	3½	3 „
	Thumbs . . .	2½	2½	Thumb.

It is therefore understood that an 8-inch pot was formerly termed a 24, and an 18-inch pot was termed a 2. Prices vary so much, we cannot satisfactorily assist our correspondent; circumstances influence as to this, as it regards the procuring original materials, as costs, &c.]

ON AZALEAS AND CALCEOLARIAS.—Having some Indian Azaleas in 48-sized pots, and not having been successful last year in obtaining bloom on some of a similar character, I am desirous of your opinion on the subject in your next Number; the plants are at present looking very healthy, but no appearance of bloom.

I have also some young Seedling Calceolarias which are at present remarkably vigorous, but I am desirous of information as to their future treatment, such as potting, watering, &c.

AN OLD SUBSCRIBER.

[AZALEAS.—Probably the plants had been kept in doors all the year; we have known instances of its being done, and it kept the plant in so continuous a state of growth, that it did not bloom from such treatment. Attend to the following directions, and success will result therefrom:—Turfy, sandy, peat soil, not sifted but chopped, which has been laid in a ridge for six months, and about a quarter of rich loam also kept rough, is a compost they delight in, using a free drainage. Care must be taken not to over-pot them, and to let the ball be highest at the centre, and be raised so that the water does not lodge about the collar of the plant, or the plant will be very liable to canker off. They should be re-potted just before they begin to push in spring; when growing, frequently be syringed over head, and kept in a temperature from 50 to 60 degrees. Have a liberal allowance of air and light, taking care they are not placed in a cold current, as it often destroys plants so situated, especially in the early spring months. When *done blooming*, about the end of July, place them in the *open air*, where they will be sheltered, not under the drip of trees, but where they will have the full afternoon sun. Here they will require to be frequently syringed. At the end of September, having *formed their blooming buds*, they should be taken into the greenhouse, and be placed at the back part near to the glass. Some attention is required in forming a plant so as to have a nice leading stem, and it be

clothed from the edge of the pot to the summit with a regular arrangement of blooming shoots. Occasional pinching off the points of the leaders or laterals will be necessary to effect the purpose, but with such attention any desired form is readily obtained. When required to bloom in winter or early in spring, it takes about five or six weeks from beginning to push till they are in bloom, and by regular introduction a constant succession from Christmas to July may be had. Some excellent articles on the *Calceolaria* are inserted in the volumes for 1843, 1844, and 1845, to which we respectfully refer our correspondent.]

ON HEATING A SMALL GREENHOUSE.—You will greatly oblige me by informing me, in the next Number of your instructive and excellent work, whether it is indispensably necessary that a small greenhouse which I am about to erect should be heated during the winter, in order to preserve the plants therein. It will be upon a very small scale, and I do not mean to attempt to grow any but such plants as I have been in the habit of having in my house. I am told, however, that unless I am prepared with some means of heating the greenhouse in the severe frosts of winter, I have no chance of preserving my plants. This will add a good deal to the expense, and I am unwilling to incur it unless I am well advised of its necessity. By doing so you will greatly oblige

A NORTH COUNTRY SUBSCRIBER.

[In our Magazine for February, 1840, a correspondent informs us of a very cheap and effectual plan he had adopted in heating a Greenhouse, which he recommended with the greatest assurance of success. It consists simply of a *fire-brick stove*, on the same principle as Dr. Arnott, with a cast-iron top and air-tight doors. He found it distribute the heat much more equally than an iron one. A stove of this description, 2 feet by 17 inches, and 3 feet high, is sufficient to heat a large greenhouse, requiring no chimney, a small pot tube being quite sufficient, and only consuming a peck of cinders per day. It requires a valve in the bottom door, by means of which the heat may be regulated to any temperature. We find Mr. Rivers, nurseryman, of Sawbridgeworth, has long used the iron Arnott's stove, but recently has erected the fire-brick ones, and even finds them succeed admirably for forcing houses for his Roses. To prevent dust arising from clearing away ashes, &c., the boy sprinkles them over first with water, so that no injury arises therefrom. Upon the top of the stove a pan is placed, the size of the square, a few inches deep, so that when it is necessary to have a moist atmosphere water is poured into it, and being heated thus becomes serviceable to vegetation. A stove of this kind would only cost about from 20s. to 30s., and would serve for a generation. Our correspondent would only require, as we understand, to keep out frost, and occasionally dry up damp, so that this kind of stove would answer most fully every purpose, and be a very trifling cost. Its erection in the greenhouse may be made ornamental, and should be placed near the front, so that the heat may be properly distributed.]

ROSES.—One of your correspondents inquires how the *Crimson Hybrid China Rose "Fulgens"* is made to flower? Simply by using the knife very sparingly in the pruning season. If you cut back the *Hybrid Chinas*, as you ought to do ordinary *Roses*, many, and especially *Fulgens*, will not flower the next season. I did not discover this for some time, and obtained an amazing growth of wood without any flowers; since I have shortened the shoots of the preceding summer about one-fourth part only of their length, I have found this rose bloom as freely as any. The best mode of training this rose and its brethren, *Beauty of Billiard*, *Brennus*, *Legouvé*, *Triomphe d'Angers*, &c., all splendid free-growing roses, is to get them standard high, and place against them an iron stake; the feet made square and flat, and eighteen inches long; the stake branching off at the top, in the form of a cross, so as to support an iron ring, three feet in diameter, which should stand about two or three inches lower than the head of the stock. At the winter pruning, a sufficient number of the shoots must be brought down all round the circle, and tied with tar twine. These roses, thus treated, will present magnificent heads of flower the following summer.

ROSA.

LONDON HORTICULTURAL SOCIETY, April 21st.—A paper was read from Mr. Maher, relative to the prevailing disease in Potatoes, the principal features of which were as follows. A thunder-storm, accompanied by high winds, having occurred in July, 1845, washing away the soil from the tubers, Mr. Maher was of opinion that the disease was caused by the heated water passing down by the cavity formed by the wind-waving of the haulm, and that the malady might be prevented from further spread by storing the tubers when taken up in perfectly dry earth. Specimens illustrative of the good effects of this mode of storing were produced. These evidently showed that they had at one time been diseased; but that its further progress had been stayed by this method of storing. Mr. Maher was also of opinion that the remaining sound portion of the tuber might be safely used as sets for the next year's crop. In regard to other matters, Mr. Rae, gardener to J. J. Blandy, Esq., sent various Orchids, especially a fine specimen of the showy *Cattleya Skinneri*, *Peristeria Humboldtii* with four pendulous spikes of dingy spotted blossoms, the sweet-smelling *Lycaste aromatica*, *Oncidium pictum*, *Huntleya violacea* with curious violet-coloured flowers, having something of the appearance of a bivalve shell, and a seedling *Azalea*. A Knightian medal was awarded.—From Mr. Alnutt, of Clapham, was a large specimen of *Kennedyia coccinea*, for which a certificate was awarded.—Mr. Dobson, gardener to Mr. Beck, of Isleworth, received a certificate for a fine specimen of the larger and best variety of *Oncidium ampliatum*.—From the same collection were also *Oncidium luridum* and *papilio*, and the beautiful golden-veined Ceylon *Anætochilus setaceus*, growing in company with the silver-veined American *Physurus* (—) under a bell-glass in an elegantly-formed Orchid basket. It was constructed of green slate, held together by brass clasps, and had altogether a very neat appearance, and was well calculated for being placed in a drawing-room.—Mr. Conway, of Brompton, sent a large coarse-looking *Fuchsia*, named *Goliath*, exhibiting a multiplication of the petals. Sports in this tribe being of frequent occurrence, it is not impossible that this, although probably the first double *Fuchsia* which has been exhibited, may be only the forerunner of a series of double-flowered varieties much more symmetrical than the subject in question.—Mr. Redding, gardener to Sir J. D. Broughton, Bart., produced two magnificent cut specimens of a purple *Rhododendron*, named *Alta-clerense Broughtonii*, and Messrs. Veitch and Son, of Exeter, sent a *Saccolabium*, stated to be new, but which, if not *S. micranthum* very much resembled that species. Messrs. Fairbairn, of Clapham, received a certificate for a famous specimen of *Erica vestita coccinea*, every branch of which was surmounted by a ring of bright red blossoms.—Mr. Moore, gardener to R. Hanbury, Esq., sent *Oncidium albo-violeaceum*, one of the most delicate of its class, for which a certificate was awarded; and a sweet-smelling *Epidendrum*, from Honduras, apparently *E. varicosum*, was exhibited by Mr. Low, of Clapton.—Mr. Jackson, of Kingston, sent an *Epacris*-like plant, with small white flowers, from Swan River; and beautiful cut blooms of the *Poppy Anemone* came from Mr. Marshall, of Surbiton.—Mr. Glendinning, of the Chiswick Nursery, sent *Begonia albo-coccinea*, a pretty pink-flowered sort.—From Mr. Anderson, gardener to the Marquis of Bath, was *Lælia flava*, a pretty yellow-flowered species, forming a striking contrast with the purple-blossomed kinds. From the same garden was also a sample of Ash-leaved *Kidney Potatoes*, which were said to have been produced from diseased sets. These were clean-skinned fine looking specimens, and apparently free from disease. One which was cut, however, for the purpose of trying them, very soon became discoloured in the centre when exposed, which is characteristic of the disease in an early stage.—From Mr. Plant, gardener to J. H. Schroder, Esq., were *Vanda cristata*, with bright brown streaked blossoms of no great beauty, and a good specimen of the showy *Pimelea spectabilis*.—Mr. Ayres, gardener to J. Cook, Esq., of Brooklands, sent an exceedingly well-managed *Stephanotis floribunda*, loaded with sweet-scented white blossoms down to the very pot, and a well-grown *Ixora crocata*, a pretty species, well deserving of more extensive cultivation than it has received. A Knightian medal was awarded for the *Stephanotis*.

LONDON HORTICULTURAL SOCIETY, May 5th.—A curious novelty came from the gardens of the Duke of Northumberland, at Syon, in the shape of *Platycerium grande*; one of those remarkable Ferns which grow on trunks of trees, deriving their sustenance from the atmosphere, and multiplying themselves by means of little patches of cinnamon-brown bodies, attached to the under sides of the leaves, looking something like diseased spots. A number of seedling plants raised from these bodies was produced, exhibiting a curious peculiarity of growth. The young plant increases in a horizontal direction for a time, then strengthening, throws up from the centre numerous large fronds, having the appearance of antlers; a form of growth observed by all the *Platyceriums*. A Knightian medal was awarded for this noble Fern, of which not more than two or three plants are as yet in England. To ensure success in raising seedlings, it was mentioned that the seed must be sown immediately when ripe. Messrs. Henderson, of Pine-apple-place, sent *Hypocyrtia strigillosa*, a *Solanum*, with lilac blossoms, misnamed *Salvia azurea*, said to be suitable for bedding out, and *Tremandra verticillata*, a pretty little Heath-like Swan River plant, with beautiful violet flowers, having reddish-purple centres, the two colours strikingly contrasting with each other; a Banksian medal was awarded it. From the nursery of Messrs. Rollisson, of Tooting, came *Bifrenaria inodora*, a rather pretty Orchid, having much resemblance to *Maxillaria Harrisoniæ*. Mr. Beck, of Isleworth, again sent a handsome green slate basket—an improvement on that produced at last meeting—containing two Orchids; *Trichopilia tortilis*, remarkable for its twisted petals, and *Oncidium triquetrum*, a rare East Indian species, with small pink spotted flowers. Sir T. D. Acland, Bart., sent blooms of a purple seedling *Rhododendron* from the open ground. From Messrs. Keeling and Hunt, of Monument-yard, were two Yams, weighing respectively $10\frac{1}{2}$ lbs. and $7\frac{1}{2}$ lbs., and samples of unprepared Ginger in a fit state for planting. Specimens in spirits received by Mr. Low, of Clapton, from his son, who is now in Borneo, were exhibited. One of the plants was stated to be a beautiful species of *Hoya*, with large white flowers with purple centres. All colour had, however, been extracted by the fluid in which they were preserved, and therefore little can be said about them in their present state. The other was an Epiphyte, and was mentioned to be an object of extreme beauty. It was found by Mr. Low, growing on old trunks of trees, producing long chains or racemes of inflorescence, 9 or 10 feet in length. Living plants of these were stated to be in England, and if we should succeed in flowering them in perfection, they cannot fail to be striking objects in cultivation.—Of miscellaneous articles, Messrs. Edwards and Pell, of Southampton-street, Strand, sent two glass milk-pans.—From the Garden of the Society were *Corethrostylis bracteata*, a Swan River shrub, of which much was expected, but which has proved a partial failure, its pink flowers, although produced in abundance, wanting brilliancy of colour to render them sufficiently attractive; *Eriostemum buxifolium*, covered with delicate pink stars; three Indian *Azaleas*, a Cape Heath. *Gloxinia caulescens*, a *Cineraria*, a variety of *Gesnera Douglasii*, a rambling *Oncidium* from Guatemala, something in the way of *O. Wentworthianum*; a variety of *Gongora maculata*, *Cyrtochilum hastatum*, and a plant named *Mina lobata*, raised from seeds collected in Mexico by Mr. Hartweg, in his new expedition to California. From the appearance of the foliage of this pretty little plant, nobody could doubt its being a *Convolvulus*, which it certainly is, but the flowers are very unlike those of that tribe; instead of growing singly and spreading, they are contracted at the points, and produced in long one-sided racemes, of a bright orange in an early stage, but becoming pale yellow when full blown. From the same collection was also a bloom of the curious stove climber *Aris tolochia gigas*, whose large concave helmet-like blossoms have attracted the attention of everybody who has visited the gardens for some time back. Various specimens of wood, exhibiting curious expansions of different forms, looking as if they had been carved, were produced. These were, however, not carved, except by the hand of nature; they were the work of a parasite nearly related to our *Misletoe*, which, insinuating itself among the ends of branches, and increasing slowly, stops all growth in that direction. The tree, however, makes

an attempt to grow laterally, and in time almost encases the parasite in its woody embrace; at last the latter shrinks and tumbles out, leaving the beautiful anomalous expansions in question. These specimens were brought over from Guatemala by Mr. Skinner, and show what is going on in these respects in the woods of the tropics.

ON HEATING PLANT HOUSES, PIT FRAMES, &c.—Of late years considerable attention has been paid to improve the system of heating erections for horticultural and floricultural purposes. Much has been effected to advantage. Very recently a system termed the Polmaise has been often discussed, and in some instances has been put into operation in the erections of pits, &c. A great deal has been said in approval and disapproval of its merits; the following particulars relative to it by a nurseryman, Mr. Davis, of Liverpool, has been inserted in the "Gardener's Chronicle," which we extract, to afford our readers an opportunity of what the system is expected to realize.

Polmaise Heating.—A short time ago I was invited by a neighbour to inspect a new mode of heating horticultural buildings, which he termed the Polmaise system. He had erected a small pit running north and south, at one end of which, by way of experiment, he had built a chamber, in which he placed a very small iron stove. At the top of the chamber a hole was made into the pit, through which the hot air flowed at the bottom of the chamber. Immediately under the fire was the mouth of a drain, which ran to the other end of the pit, and through which the cold air was drawn. I went into the pit, and found there was a stream of hot air flowing from the chamber at a very high temperature, so hot that it had discoloured the paint on the wood directly above. A thermometer was placed at each end of the pit; the one most distant from the pit indicated 71°, and the other 70°. The current passing along the top could not have been less than 90° in the centre of the pit, and nearer the chamber much higher. He proposed to modify the heat at the entrance from the chamber, and moisten the air by hanging a wet blanket over the hole. This part of his plan I objected to, for many reasons, and being about to erect a pit of similar form, I resolved to get rid of the blanket, which I have, as well as of all the other objections given in your paper, and that too at a very light expense. I think I can convince you that I have set this grand principle free, and thus disencumbered it of the load of objections so unworthily heaped upon it. Every other mode of heating horticultural buildings will soon disappear; its cheapness, safety, and fitness will, I am sure, throw out of use the boiler, pipes, tank, and manure-bed. I will now attempt to describe my pit; it is 42 feet long by 8 feet wide inside, high roofed, having an east and west aspect, with a wall across the middle, dividing it equally. One half is used for propagating, and the other for greenhouse plants. At the end of the propagating compartment, I have built a chamber 30 inches wide by 36 inches long, and 24 inches high. In this is placed an iron stove, 17 inches long, 12 inches wide, and 12 inches in height; about 12 inches of the air-chamber is carried into the pit; the propagating part is covered with strong slates, giving a chamber of 21 feet long by 8 feet wide, and 30 inches deep. Into this the hot air flows through a hole at the top of the chamber, over which I have placed a piece of sheet iron, which is bent downwards to diffuse the heat and prevent its violence doing injury. From the bottom of the chamber a cold-air drain is carried the whole length of the pit, terminating with an eye at the end of the cold compartment. On this eye a slide is fixed to close the drain when required. In the large chamber there is another eye, which is left constantly open. I have built a small flue round the large chamber; the smoke is conducted through the hot-air chamber into the flue, and back into the chimney by iron pipes, which assist in heating this part as well as in giving an additional draught to the chimney, as will be readily perceived by the return-pipe passing through great heat. When I wish to warm the part intended for plants, I can do so in a few minutes, by drawing a slide which covers a hole that passes through the division wall into the large chamber. This

second chamber cannot be dispensed with, let you apply it to the greenhouse, stove, pit, or frame; the absence of a second chamber must prove fatal, or at least be very inconvenient; hence it is that we hear of scorched leaves, wet blankets, boilers, &c. With a second chamber none of these will be either heard of or required. The second chamber can be easily made in any house; in the Orchid house or stove it may be the stage, and if a greater top-heat is required, draw your slide, and immediately you have a stream of warm air charged with moisture to any extent required. This I can prove by experiments in my own pit. I have gone into the cold compartment when the thermometer has stood at 65° in the propagating part; having previously opened the door of my air-chamber about a quarter of an inch, and drawn the slide, the vapour gently flowing through has filled the place in a few minutes, at the same time gradually raising the thermometer until it has reached 60°. As respects the heat generally in the propagating compartment, I certainly never heard of any construction that would retain heat so long with so small a portion of fire. I got 10 cwt. of coke, which cost 3s. 4d. (?); this I have been burning these three weeks, and I expect it will last three weeks longer. I have kept up a high temperature constantly. I have frequently left the pit at 65° at nine o'clock at night, and found it at 58° in the morning. On one occasion I left it at 60°, and found it in the morning at 59°. I have often left the fire for twelve or fourteen hours, and have found the heat very little diminished. Now for the expense of the apparatus. The whole of the iron work, including the plate and also the stone slab, cost 4l. 6s.; and even this expense might be considerably reduced by purchasing a ready-made stove. The hot-air chamber and flues were built by one man in about a day and a-half. The flues I had built merely to prevent the escape of heat, and to save fuel. As for repairs, I do not expect any will be required for ten or fifteen years, except that the flues may want cleaning in three or four years.—*Isaac Davies, Larkfield Nursery, Wavertree, near Liverpool.*

DESTRUCTION OF RATS, MICE, &c.—Some gardeners are in the habit of employing arsenic for poisoning peas, beans, grain, meat, &c. which they put in places frequented by rats and mice. This practice is exceedingly dangerous for other animals, and likewise for children. It is a much more simple and far less dangerous plan to rasp or crumble some bread, and mix it with equal quantities of powdered quick-lime and sugar, and lay small parcels of this mixture in the way of rats or mice. These, being very fond of sugar, eat the powder, and the liquids of the stomach coming in contact with the quick-lime, produce an effect analogous to that produced by water on this substance; it becomes quenched. The violent inflammation which results causes death; and this may be accelerated by placing a vessel full of water within the reach of the animals.—*Revue Horticole.*

GARDEN STRUCTURES FOR AMATEURS.—For a person who wishes to “try to cultivate many things,” but who has “little money to spare for such purposes,” a low brick pit, either heated by a hot-water pipe or not, would be most suitable; without a pipe he might keep many greenhouse plants in winter, and grow them in summer; with a pipe and proper attention he might grow most things as well as they could be grown in a greenhouse. This pit may be partially sunk if the ground is dry; and it may or may not be large enough to comprehend a narrow path at the back inside, under a roofing of boards or slate, which would greatly facilitate all operations of culture. The pipe should pass along the front and return behind; the glass roof should be at a very low angle; a stage inside, of any kind, or a bed of sand, gravel, or coal-ashes may be provided for the plants; the pipes should flow through a small tank, which would then serve as a reservoir of tepid water for the plants; the pathway of course may be lowered much more than the rest of the pit to get head-room. Such a pit may be from six to nine feet wide, and should be heated by a row of three-inch pipe passed round it, attached to the smallest sized boiler.—*Gardeners' Journal.*

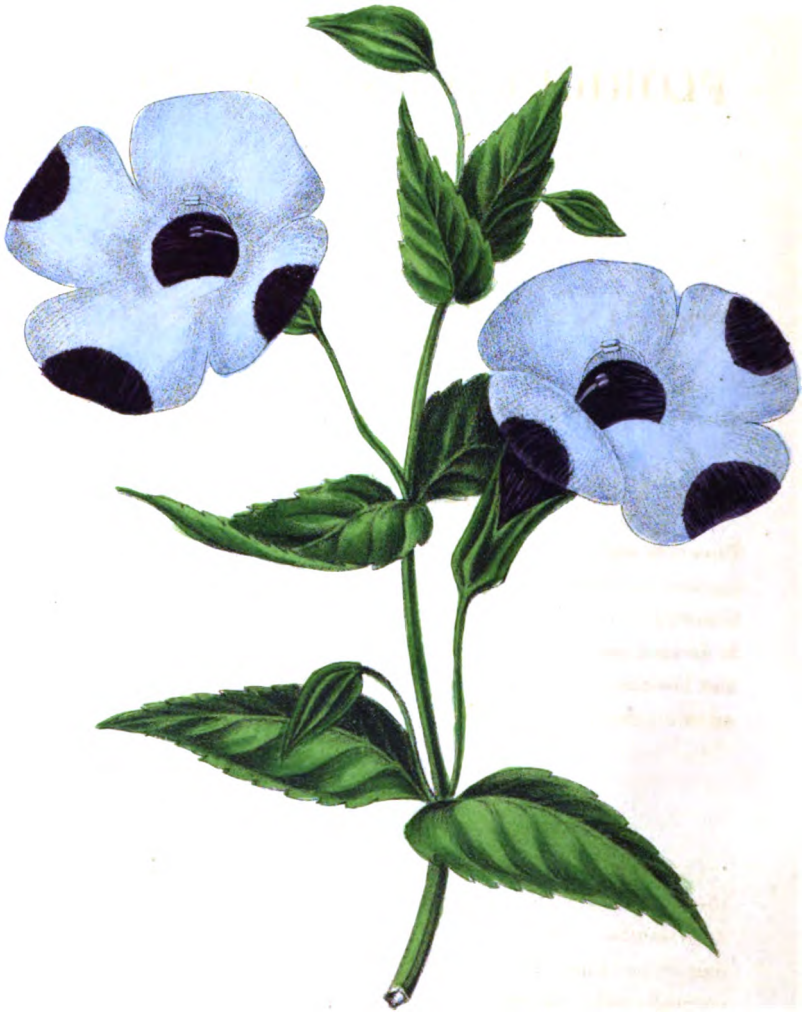
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1, *ACHIMENES LIEPMANNII*.

2, *GLOXINIA CARTONII*.

Floricultural Cabinet.



TORENIA ASIATICA.

Flacultural Cabinet.

THE
FLORICULTURAL CABINET,
JULY 1ST, 1846.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I. EMBELLISHMENTS.

Plate I.

TORENIA ASIATICA.

This new and very beautiful species has just bloomed in the Royal Gardens at Kew Palace, and was exhibited at the last show at the Chiswick Gardens, where it was the admiration of all who saw it. It forms a neat branching plant, which appears to be easy of culture, and blooming so freely, is one of the most lovely of plants, and will merit a place in every collection.

Plate II.

1. ACHIMENES LIEPMANNII.

Our drawing of this new species was made from a plant which bloomed in our collection this spring. In habit, the plant resembles *A. grandiflora*, the flowers, however, are of a much more rich and deep colour than those of that variety. It is a strong grower, and succeeds well with the ordinary treatment.

2. GLOXINIA CARTONII.

This is one of the most beautiful of the many varieties of this interesting family. We believe it was originated in the garden of His Grace the Duke of Northumberland, at Sion House, Isleworth. It is

a vigorous grower, a very prolific bloomer, and being of a bright and lovely rose colour, which is delicately softened off towards the margin of the lip, it cannot fail to please all who grow it. It can be had at any of the principal nurseries near London.

ARTICLE II.

ON HYBRIDIZING.

BY J. E. M.

IF we knew a person anxious for the attainment of some pastime combining dexterous manual management with considerable intellectual exercise, we do not know of one to whom we could more confidently point him than the pursuit of horticulture and floriculture. There is in the cultivation of flowers a charm for the most vacant mind; they also open up a field of study for the man of most austere thought; here, also, the most refined mind, alive to loveliness in every form, and beauty in every phase, finds ample scope for admiration; true, indeed, "Solomon in all his glory was not arrayed like one of these."

One of the greatest pleasures attendant on the pursuit of this art, consists in raising new and improved varieties of flowers; for, however beautiful flowers naturally are, there is no denying that they are doubly so when they come from the hands of the skilful hybridizer. In doing this, we are only taking advantage of the known laws that govern vegetable reproduction; it is on a small scale, art dictating to nature, and to that, in a great measure, we owe our many improved varieties of fruits and flowers. The field of experiment is boundless as the extent of nature itself. Thousands of flowers that our fathers looked upon as the pride and glory of their gardens, we now look upon as almost worthless as plants of ornament; were some old amateur of half a century ago to have a look at our gardens now, he would be bewildered by the blaze of beauty that would meet his eye; the change is not greater in form than in substance; the style of laying out gardens has advanced as well as the productions with which they are enriched. For the majority of our most beautiful varieties of flowers we are indebted to the skilful hybridizer; he soon gains a wonderful power over the colour and form of vegetable existence.

We shall suppose him admiring some beautiful flower, but, alas! it is too delicate for our surly climate; it comes from some country where frost never congealed its flowing sap, or blighted its opening beauties; still he admires and covets it; he has some of the same family in his garden, hardy fellows, that brave every blast; but they want the beautiful colour and form of their exotic relations. Our amateur is one who has studied the structure and functions of plants, and the laws by which those functions are governed in their operations; he thinks he may transfer the beautiful inflorescence of the exotic to its more hardy relations in the garden. And he does so; art triumphs over all, his skill and forethought are abundantly crowned with success. In thousands of instances has this transfer of inflorescence taken place, to the gratification of every admirer of nature's most lovely productions. The skill of the artist is rapidly changing the face of the floral world; a standard of perfection has been laid before the florist, and all are bent on its attainment. The art, however, is but in its infancy; there is not that precision and certainty in results which we think will yet be attained. However, much has been done; it is an employment full of the most pleasant excitement, and one to which we would invite all amateurs to share in.

As the object of hybridizing is to improve in form and colour, only the most perfect varieties of flowers ought to be chosen for this purpose; little advance need be expected, unless that rule be strictly attended to, as flowers that have been artificially improved are very apt to run back to their originals, unless urged on by the same superior attention that has brought them so far as they are. The plants to be operated on must not only be of the best and most perfect varieties, but they must also be in a high state of health, otherwise good seed cannot be obtained. When the flowers of a plant, intended for the seed plant, are about to open, and just before they expand, the petals must be gently opened, and with a fine pointed scissors cut out all the stamens, taking care not to hurt the stigma. The reason for thus early cutting out the stamens, is to prevent the pollen on them from coming in contact with the stigma, which would defeat any attempts at cross impregnation by being done in the natural way. The plant to be operated on, and the plant to be operated with, must both be in the same state of forwardness as regards their blossom; very soon after the petals are expanded is the proper time to apply

the pollen of the one to the stigma of the other; this may be done in various ways; either by bringing the flowers in contact, or by transferring the pollen on the point of a fine camel-hair pencil; for various reasons we prefer the former way when carefully done. After the operation is performed, which may be done two or three times to make sure, it is important that no contact with any other flower be permitted, either by flies, bees, or otherwise; to prevent that, we advise a covering of very thin gauze, or other similar materials, until the petals have faded, then to be discontinued. The plant must all the while be in such a situation as light, air, &c. will have free access, and due attention to watering, so as to keep it in full health.

In trying to gain a flower to the garden, it in general holds good, that seedlings from crossed flowers assume more of the blossom of the male plant, and in general character and hardness the features of the mother, or seed plant, prevail; that is worth recollecting, when endeavours to produce the inflorescence of an exotic to stand our climate is the object of crossing. The above rule will also apply in the case of plants of bad habit, as many fine flowers often turn out. By attention and perseverance the flowers of a plant of bad habit may be transferred to one of the same family of fine habit, by impregnating the one of fine habit with pollen from the one of bad habit. The exact flower, in form and colour, may not be produced, but a near approach may, and often does turn out, and very frequently something much superior.

Now will be a good time to cross the many varieties of the calceolarias, some of the best shrubby ones may be impregnated with the finest formed and marked of the herbaceous ones, as they are not only more easily kept, but with good management make finer specimens, and the herbaceous and shrubby ones cross quite freely. Fuchsias may now be done also, operating with those having flowers of the largest size, of very clear distinct colours, and marked contrast. We would recommend the amateur to cross many of his perennials of distinct and opposite colours, such as Phloxes, Mimulis, Pentstemons, &c.; we need not mention Geraniums, Roses, Bouvardias, &c. However, in following this art, the amateur should be in possession of the standards of perfection for the different flowers as laid down, and acknowledged by the leaders in floral cultivation, so as he may be able to judge as to the relative value of flowers; other-

wise, he may toil away, and when he sends the product of his pains and perseverance for the inspection of some competent judge, he may perhaps find out that they are all worthless. How often is this the case? And in most cases, it proceeds from using inferior varieties as breeding flowers, those far behind the standard of excellence.

ARTICLE III.

REMARKS ON THE DISPOSING OF EVERGREEN TREES AND SHRUBS.

IF yews be planted in proximity to a mansion, for the sake of valuable shelter from bleak winds, they should not assume a prominent position, but should be interspersed with groups of Weymouth pine or bay, and be faced with laurels of luxuriant growth. By such contrast, the gloom of their dingy leaf is relieved with vivid and glossy green; or, if the contrast appear too strong, it may be mellowed by blending Portugal laurel in an intermediate position. In short, the recommendation cannot be too frequently reiterated, to substitute a studied assortment of tints for tasteless indiscriminate admixture. Let but the pictorial artist be permitted, or the amateur condescend, to transfer his principles of taste, the one from his easel, the other from his gallery, to occasional superintendence of English landscap-gardening, and he would contribute to the production of a living vegetative picture, constituting incalculable improvement in style, and commanding inevitable commendation from the spectator of cultivated taste. Nay, pleasure-grounds thus constructed would excite universal admiration, and impart universal gratification. Picturesque effect, copying and harmonising with natural scenery, elicits pleasurable emotions, even in such as "know not why, and care not wherefore." But, for accomplishment of such an important desideratum, science must be suffered to acquire unlimited confidence, in exercise of control; while prejudice must cease to plead for senseless "custom, more honoured in the breach than in the observance." An individual proprietor, or a public association, might rest assured of the anticipation of a result decidedly warranting the experiment.

In resumption of the topic of evergreen trees, for formation of a

ore-ground, it may strongly be recommended, while collecting perennial foliage of every species, to permit each variety of the beautiful ilex to predominate. Single or combined, from elegance of shape, delicacy of leaf, and duration of mantling, the ilex constitutes an embellishment almost unparalleled, yet too frequently neglected. Of faster growth than the deciduous oak, it attains expansion competent to the gratification of the painter's eye, with not less certainty, in the ordinary calculation of life's duration, than to please and profit posterity. It should, then, on various accounts, abound in the proximity of a decorated mansion, blended with masses of bay, backed by cypress, yew, and pinaster, and faced with laurel, laurestinus, Portugal laurel, privet, phillyrea, arbutus, with other flowering or variegated shrubs.

In similar relative situation, but in prominent advance from trees and unblossomed shrubs, flowering evergreens should invariably rank. Defying "the icy fang and churlish chiding of the winter's wind," the gay, cheering, precocious laurestinus anticipates the lingering arrival of an English spring. Tenacious of foliage and permanently retentive of foliated decoration, it is entitled to numerical predominance over every blossoming shrub. By seasonable intervention and flowering profusion, it compensates for temporary diminution of ornament, in other component ingredients of a shrubbery, thus transferring to nipping winter's gloom the exhilarating semblance of summer's embellishment. Productive of such interesting impression in pleasing the eye, it certainly merits conspicuousness by prominent position.

The arbutus is a shrub peculiarly elegant and eligible, from perennial decoration, rapid growth, and superior beauty in shape and tint of leaf, from delicate blossom, and glowing berry. If suffered to remain unpruned, by gaining height, it becomes hollow and leafless beneath, retaining, like other evergreens, only two years' leaves, except about Midsummer, when the third years' are annexed, some weeks previous to the decay of the first. If not surrounded by evergreens more stunted in growth, for concealment of its lower leafless branches, it should biennially be deprived of a few long shoots, by application of the pruning-knife, the shears being calculated to render a shrub hideously cabbage-poled. Any shrub judiciously pruned will retain resemblance of its natural form. Artificial treat-

ment should be studiously disguised, and interposition of control be invariably concealed.

The phillyrea presents striking contrast to the gay or gaudy display of flowering shrubs, being characterised by singular chasteness and unobtrusive simplicity. It is of intermediate tint, diminutive leaf, and moderate growth; consequently is precisely adapted to an advanced position. It will there present a striking contrast to the imposing glare of variegated shrubs, whether holly, aucuba, or others of similar class. Here, too, that lowly, yet cheering harbinger of spring, the mezereon, should rank, interspersed with contemporaneous masses of hepatica, snowdrop, erocus, red daisy, and other vernal flowers, protected by a wicker fence. The cypress is adapted, by its taper form and elevation, to relieve a structure. The pyracantha, pomegranate, trumpet-pomegranate, white jessamine, but, paramount to all, the elegant tamarisk, supply ornamental covering to a wall. In a sheltered nook, even these may be surpassed by the beautiful single-blossomed myrtle. From mildness of climate, it abounds in Devonshire, perhaps in no instance so luxuriantly as in a garden of Mr. Neck's, curate of Kings Kerswell, where it acquires considerable size detached from a wall, as well as height when attached. The front of a house at Bishops Teington has long been covered to the top by myrtles of forty years' growth, protected from the easterly wind by a wing, and from the westerly by an equal defence, with the advantage of a southern aspect.

ARTICLE IV.

ON CULTIVATING PLANTS IN ROOMS.

BY A LADY AMATEUR CULTIVATOR.

BEING AN admirer of the prevailing practice of cultivating greenhouse plants in rooms, and having had much success in their management, I am induced to draw up the accompanying remarks, judging that they may be in some degree useful to a portion at least of the readers of the FLORICULTURAL CABINET. If the hints are thought deserving a place therein, they are at your service. I do not wish it to be understood that I think plants can be grown as vigorous, or blossom as freely in rooms, as those cultivated in well-

constructed greenhouses, but I do not hesitate to assert, that those persons who may think proper to adopt the rules hereafter laid down, will find the result to answer every expectation.

Pots.—The necessity of having pots of various sizes is very obvious; the shape, however, should be uniform, in proportion as follows: viz., five inches deep, (inside measure,) five inches diameter at the top, and three and a half inches diameter at the bottom. Pans should be provided to correspond.

Draining.—Good draining is essentially requisite. Each pot, according to their different sizes should have from two to four inches deep of coal cinders, broken to the size of a child's common play marble laid at the bottom, first placing a piece of pot over the hole at the bottom, taking care the piece is not flat, but of that form that it will freely allow superabundant water to pass off.

Soil.—Take the top spit with the turf upon it from a common or old pasture field, not digging deeper than six inches, the soil should be entirely free from clay, and if the loam be sandy, it is preferable. To this soil add one-fourth of rotten horse dung. The longer this compost is laid together, the better. Before using it for planting in, it must be well chopped and broken, but not sifted at all through a riddle, as plants flourish far more freely in the soil when left open, there being a freer passage for water, heat, air, &c. to the roots. There are but five families of greenhouse plants that refuse to flourish in such a compost as the above. I do not include Camellias and Ericas (Heaths,) though I have no doubt but they may be cultivated in rooms with success; the latter tribe will be found the most tenacious of injury in such an habitation.

Potting.—I consider it but superfluous saying anything about propagating plants, when the cost of a small plant is so trifling, and may be obtained at most nurseries.

To begin with a plant procured from the nursery. In the first place, examine if the roots are coming through the hole at the bottom of the pot; if so, this points out the necessity of repotting, which must be repeated until the plant has attained the size required for blooming. The size of the pot for repotting in should be about two inches more in diameter than the one the plant is taken out of.

Watering.—River or rain water is the best, and should always be

of the same temperature as the room in which the plant is placed. The pot should always stand in a pan or feeder, but water should not be allowed to stand in it, excepting when a plant is pushing forth flower-shoots or stems, at which period many plants; particularly strong growing kinds, are much assisted by having a constant supply of it, not to glut them, but to allow that given to be dried up before a fresh quantity is given. Particular attention should always be paid that no plant be allowed to flag its leaves. In some stages of growth and situation, there will be found plants that will require water to be given them twice in one day, and at other times not oftener than once a-week. The best criterion to know when a plant requires water to be given, is when the soil on the top of the pot appears dry; then a flooding over is sufficient.

Filth.—With some kinds of plants the green fly is often found very troublesome. Sprinkle them over with diluted tobacco-water, or the plants infested may be put into a packing-case, and fumigated with tobacco-paper; by either application the insects will be effectually destroyed. The tobacco-water, or tobacco-paper, may be procured of the tobacconists at a very trifling cost; one shilling expended in either would serve for twelve months, with a number of plants. It is necessary to keep the plants free from dust, and to pick off decayed leaves; also frequently stirring the mould on the surface with a blunted stick. They will require washing over their tops once a week, either by means of a syringe or watering-pot. In frosty weather, watering over their tops should be performed in-doors.

Air and Light.—When the air is not frosty, a free circulation is at all times beneficial. In order to have healthful-looking plants, the branches should not be allowed to touch each other, and should always be kept as near the light as possible, frequently turning the plants, to prevent the heads being deformed, as the natural inclination is to lean towards the light.

Pruning.—Taking off the point of the main shoot of a woody plant when young, causes it to grow bushy, and to be formed of a handsome shape. Also, when a plant is making shoots for flowering, taking off the points of the most luxuriant shoots, tends to increase the quantity and size of the blossoms.

Ripening the Buds.—The singularly formed foliage, or shape of

some plants, may obtain for them a place in collections, but in general most plants are admired for their blossoms. In order to have them in perfection as well as profusion, it is highly essential that the embryo, or bud, be in a mature state. Bulbous plants, as Amaryllises, Hyacinths, &c., when the flower is decayed, the foliage must be encouraged for a few weeks; after which, it may be allowed to die away and remain at rest. The pots retaining the bulbs may be placed on a shelf, where they will be dry, until the time of re-potting, which in general will be in October. Those plants which produce their blossoms upon the wood of the same season, as Pelargoniums (Geraniums), Salvias, Roses, Chrysanthemums, &c., after flowering, require their shoots to be cut back to three or four buds, taking care to preserve the form of the plant, and giving but little water during the state of rest. When the plant begins to grow in the spring, having a larger pot given, and a regular supply of water afforded, and kept in moderate warmth, the blossoms will be produced. Herbaceous plants, as most species and varieties of Calceolarias, &c., after flowering, require their tops cutting off, and but little water during their rest; a large pot is given when the plants begin to grow. Deciduous plants, as Fuchsias, Hydrangeas, &c., when the leaves begin to fall, will require but little water, and rest until spring, when a larger pot will be necessary, and the shoots to be pruned back a little. Evergreens, as Azaleas, Myrtles, &c., when done flowering, require a larger pot, and their wood encouraging until it becomes ripe. Here I include the Cactus tribe, &c. At this potting, some of the species will require their old wood thinning out.

Choice of Plants.—The taste of persons being so dissimilar, no list of plants I could furnish would be able to give entire satisfaction; I therefore think it unnecessary to attempt it here, and must leave the amateur to suit himself, his experience and fancy being likely to afford the best directions on the choice of plants suitable for him to cultivate.

ARTICLE V.

ON CAPTURING THE COMMON GARDEN SLUG.

BY K.

DURING the past few weeks I have been making use of a more effectual means of capturing the common *garden slug*, than any plan of which I was previously aware.

It consists simply in placing near their haunts, or on the borders which they infest, small portions of the staves of which sugar casks are made. The wood is probably strongly impregnated with the syrup of the sugar, and the slug appears to be particularly attracted by it, for these pests of the florist will congregate in far greater numbers on the under surface of the wood than I ever found them do under the cabbage leaf which is so commonly recommended. If cut into small squares the wood has not an unsightly appearance, and will probably last for a length of time. The plan I describe is cheap and effectual, and if your readers try it I shall be glad to see in your pages the result of their experience.

ARTICLE VI.

ON THE PREVENTION AND DESTRUCTION OF INSECTS.

BY J. F. WALKER, ESQ.

A FEW observations upon the insect tribe may perhaps be acceptable to the readers of the CABINET.

The Green Fly, or Aphides, is one of the most frequent enemies to a garden, both in hot-houses, green-houses, and the open air. Wherever they have attacked during summer, and not been destroyed, they will be found deposited in the immediate neighbouring branches, during the winter. They are vivaporous in warm weather or situations, and oviparous in cold weather or situations. In the former case, the young is brought forth naked, and speedily begin to move: in the latter they are covered with a glutinous substance, and where deposited they remain during the winter, or cold season; the glutinous substance attaching them to the place, till dissolved by warmth. They then issue forth to the nearest shoots, and commit their depre-

dations. When they thus appear, an effectual remedy is found in fumigating with tobacco, or other strong smoke, or an application of tobacco water. Either will speedily destroy all that are touched by it. But I have found that this insect can be best destroyed and prevented from attacking during summer, by washing the trees occasionally during winter with the soap-suds from the wash-house, applying it by means of the garden engine or the syringe;—the glutinous and greasy matter of the soap-suds preventing their movements: for, in addition to the difficulty of moving upon such glutinous matter, it has a tendency to secure them in the places where they are deposited. If, however they do creep forth, the alkaline of the suds is generally fatal to them. When a remedy and preventative is employed in the winter season of the year, it not only prevents injury to the shoots, but the time can be much more conveniently devoted to the purpose of destruction or prevention in winter than in summer. I can assure the readers of the *CABINET* that the washing as suggested is most effectual. This washing is equally applicable to the Caterpillar and Red Spider; in fact, my fruit trees, before attending to this washing, were always pestered in spring and summer: it was contending with a constant foe, and the trees and fruit suffering severely. But now my wall trees, vines, and stove plants, are vigorous and healthy, and no trouble or injury is sustained in summer. I have not had my trees at all attacked with mildew since I washed them; but the branches and shoots are of a fine bright and healthy colour. I am fully satisfied that considerable expense, trouble, and anxiety would be saved, if a judicious and frequent application of soap-suds was used.

ARTICLE VII.

CULTURE OF THE DOUBLE POMEGRANATE.

BY A DEVONIAN.

OBSERVING a query in a former number of the *CABINET*, on the blooming of the Double Pomegranate, I beg to forward this extract from Evelyn's *Silva*, which may probably be useful to the enquirer. "There are of this glorious shrub three sorts, easily enough educated under any warm shelter, even to the raising hedges of them;

nor indeed affects it so much heat, as plentiful watering. They supported a very severe winter in my garden, 1663, without any trouble or artifice; and if they present us their blushing double flowers for the pains of recission and well pruning, (for they must be diligently pruned of superfluous wood,) it is recompense enough. It is a *Perdifolia* in winter, and growing abroad, requires no extraordinary rich earth, but that the mould be loosened and eased about the root, and hearty compost applied in spring and autumn; thus cultivated, it will rise to a pretty tree. 'Tis best increased by layers, approach and inarching (as they term it), and is said to marry with laurels, the damson, ash, almond, mulberry, citron; too many I fear to hold. But after all they do best being eased, the mould well mixed with rotten hogs-dung, its peculiar delight, and kept to a single stem, and treated like other plants in the winter shelter." There seems, however, to be some contradiction in the quaint writer's statement, and most assuredly the plants do not require "the winter-shelter," (at least in the South of England,) to induce them to flower abundantly, but I know from experience, that they are capricious bloomers, and very often the whole strength of the plant is apparently engaged in the formation of countless branches and foliage. I have a double red pomegranate many feet high, trained against the front of my house, which for years never produced a single blossom; to induce it to flower, I removed all the soil around it, and filled the pit with a rich compost, but this plan was not successful, as for two seasons a solitary blossom only was produced. I was then recommended by a nurseryman to have some of the principal roots cut through, to check the luxuriant growth of the plant, which, early in the ensuing spring, was done; this plan succeeded perfectly, and towards the end of the summer, numerous blushing double flowers were produced—and the tree has ever since bloomed annually. I do not, however, recommend this plan; those plants are probably too young to blossom, whereas mine is upwards of thirty years old; notwithstanding, comparatively small pomegranate trees often flower abundantly, and I have seen one not above five or six feet in height, which had fifty blossoms open at one time,—the soil in which it was growing was a heavy loam,—almost clay, which kind of earth suits the pomegranate better than any other. I agree with Evelyn in considering this a "glorious shrub," and its brilliant flowers are assuredly a sufficient

recompence for any trouble we may take with it. Does your correspondent know the yellow variety? it is worth having, as its blossoms are similar in size and shape to the red, but of a delicate sulphur colour; there is also a white variety, but I am not acquainted with it. I hope my hints may be useful, though, being only an amateur, I cannot give that information which a scientific gardener is capable of imparting.

ARTICLE VIII.

ON THE MANAGEMENT OF THE DOUBLE FLOWERED POMEGRANATE, *PUNICA GRANATUM MULTIPLEX*.

BY MR. WILLIAM HILL, OF ROCHDALE.

THE Pomegranate is an old inhabitant of our gardens, but it seems to have been known to the Africans for many ages before it came into our possession; it is mentioned in holy writ, as being in the possession of the Egyptians more than 3000 years ago; it is a native of the South of Europe and North of Africa. Dr. Sibthorpe informs us that it is found plentiful in Greece, both in a wild and cultivated state; it was introduced into this country about the year 1548. The double flowering kind is much more esteemed than the other in this country, for the sake of its large fine double flowers, which are of a most beautiful scarlet colour; and if the trees are well managed, and supplied with due nourishment, they will continue to produce flowers for four or five months successively, which renders it one of the most valuable flowering trees; this sort may be rendered more productive of flowers, by grafting it upon stocks of the single kind, which check the luxuriance of the trees, and cause them to produce flowers upon almost every shoot. There have been various ways recommended to manage the pomegranate, so as to make it flower freely, and forty years experience has taught me what I conceive to be the most successful method. I do all my pruning in the summer season, training the branches at a regular distance, of about four inches apart, in the same way as I train a plum tree; towards the latter end of June I look over the trees, and remove all the shoots that are running to wood, at which time they are young and tender, and are easily removed without the assistance of a knife. Care must be taken

to leave all blossom shoots and spurs, these are easily distinguished from wood shoots; this I do about three times during summer, and by this treatment the tree continues to flower four or five months, making a very grand appearance, and repaying by its beauty for every care a gardener can bestow.

P. S. The knife should never be used about these trees in winter, except to remove decayed branches, &c. They are easily propagated by layers or cuttings. To accomplish the first: in March, select some of the young branches for the purpose, give a little slit at a bud underneath, they will easily strike root without slitting, and I consider that method to be the safest; lay them in the usual way, water them occasionally during the summer, and by the following autumn they will be well rooted so that they may be taken off and removed to any warm situation, to gain strength, before they are planted where they are to remain.

Cuttings.—If cuttings are required in June, take some young tops of branches, select a warm place in the garden, place them under a hand-glass, shade them in hot weather, and by autumn they will have taken root.

ARTICLE IX.

ON THE CULTURE OF THE CALCEOLAREA.

BY A SUCCESSFUL EXHIBITOR AT THE LONDON SHOWS.

THE perfection in culture to which the Calceolarea is now brought, as is seen especially by the specimens exhibited at the floral shows around London, is truly astonishing; so great is the change effected, that the same kinds, as formerly grown, can scarcely be recognized under the improved mode of treatment. Being a successful exhibitor on many occasions at the shows referred to, I send particulars of the mode of treatment.

Young plants from the herbaceous and half shrubby kinds are readily increased by slips in October and November, the cool and damp of being then housed induces the off-shoots that are undermost to emit a quantity of small rootlets. Young, well-ripened shoots of the true shrubby kinds may be struck in summer, in sandy loam and peat, but with the greatest success when plants are kept in a cool and moist situation, in October and November, then rootlets are

produced ; such shoots being then taken off, and potted separately, establish themselves well before the severity of winter ; they should be potted into small pots, in a light sandy loam and vegetable mould equal parts. Immediately on potting, they must be placed in a close frame for about a month ; this closeness very materially contributes to an immediate growth, for, when exposed to a stronger current of air, it has a tendency to dry the foliage and injure the plant. Whilst in the frame, keep the soil moist, but be careful not to wet the foliage, as it would be likely to rot the plants. At the end of November, the plants should be placed on a shelf near the glass in a greenhouse to remain during the winter. In this situation they will grow freely, and if the pots become filled with roots, they should be re-potted into larger : this encourages them to grow in size, without which weak blooming shoots would in all probability push, to the injury of a proper bloom the following season.

At the beginning of March the plants must be re-potted into twenty-four sized pots, using wide-mouthed pots, as such keep the earth in a much better state than upright ones. Have a sandy loam enriched with well rotted cow-dung : the latter is found very beneficial ; being of a cooler nature than horse-dung, it is more suited to the Calceolarea. At the beginning of April, re-pot into twelve-sized pots, using the same kind of compost. At each potting a free portion of drainage should be given, to admit the water to run off easily upon the potsherds, lumps of loam, bog, and dung of two or three inches in diameter ; this admits a greater proportion of water being applied, and affords a corresponding quantity of nutriment. Fresh water and liquid manure should be regularly used from the potting into twenty-fours, using the liquid manure every third watering. The plants should be kept in the front part of a greenhouse during the time from autumn to the close of their blooming, which is usually the end of July. In hot sun a net shading or canvas shade is requisite over the glass. At that time, the stems being withered, I re-pot those desired for extra-sized plants the following year, by reducing the balls of earth and potting them into pots about half the size they had been growing in. After potting they should be placed in a cool frame, and shaded from hot sun for a month. Then expose them to the open air, placing them in the shade from mid-day sun till about the middle of October, when they should be removed into

the greenhouse as before. In March and April following they should again be re-potted, and treated as above named during the former year. It is the best practice to take off a quantity of offsets each autumn, so as to have a stock of large two-year-old plants to bloom every season.

By this mode of treatment plants may be produced from two to four feet high, stocked with blooming shoots in every part, so as to form a head of flowers a yard in diameter.

Where there are a considerable number of plants, it is advisable to turn out some into the open border, choosing a situation where they can have shade from eleven till four o'clock in the afternoon, the intense heat of mid-day sun being injurious to the flowers of *Calceolarias*.

To raise seedlings. As soon as the seed is ripe, which from earliest blooms will be the case by the middle or end of July, sow it in pots placed in a shady part of a hot-bed frame or forcing-house. The plants soon come up. Take care to keep the soil moist but not wet, as the tender roots are soon rotted off. When sufficiently strong to pot off, which they usually are by the middle of September, pot them into sixty-sized pots, well drained, in a compost of equal parts of well rotted vegetable mould and loam. After potting, place them in a cool frame, kept close and shaded from mid-day sun for a week or two, gradually exposing them to the air. When strong enough to bear a removal without injury, have them taken to a greenhouse and placed in a shady situation. By the end of autumn the plants are quite strong, and will withstand a winter's treatment without injury; and by thus getting them forward, they bloom during the following season. This mode of immediate sowing of the seed after gathering will not do for late collected seed, as very young plants are liable to damp off during winter.

ARTICLE X

OBSERVATIONS UPON THE ORANGE TREE.

BY CLERICUS.

It has been with much pleasure I have observed a great increase of taste for small bouquets of fragrant flowers to adorn and regale the sitting-rooms, dining-rooms, &c. of the nobility and gentry in and

around London. This delightful result I see has induced the nurserymen and florists to give special attention to the production of such flowers, more particularly for spring and early summer, and the flowers of the orange tree are most deservedly in high estimation. Thinking that a few particulars relative to it, would, at this season, too, be acceptable, I send the following for insertion in the "FLORICULTURAL CABINET."

The derivation of the word Citrus is unknown : some say it is the name of a place in Asia ; others will have it of African origin ; some fix it on the Arabian.—*French*, l'oranger.—*Italian*, melarancio ; arancio ; melangolo.

The orange most known in England is the China or Portugal Orange, so called from its having been brought from China by the Portuguese. There are several other varieties in the English gardens ; as the Turkey-orange, the Double-flowering, the Dwarf or Nutmeg-orange, the Seville, &c.

The leaves of the Dwarf-orange are very small, and grow in clusters ; the flowers grow very close together and appear like a nosegay, the branches being completely covered with them. This species is very ornamental ; and, when in blossom, will perfume a room most delightfully.

The Seville Orange is the most hardy, and has the largest and most beautiful leaves. The China Orange rarely produces good fruit in England : the varieties with striped leaves never produce it good, nor do they bear so many blossoms as the plain ones.

To have Oranges in perfection, it is considered necessary to graft the trees, even in the warm countries of which they are natives :— " We rode deeper into the wood, and refreshed ourselves with wild Oranges (*laranja da terra*), which have a mawkish, sweet taste. Oranges, to be good, must be grafted ; even in Brazil, if suffered to grow wild, the fruit is flat and rather bitter. Their flowers emitted a delicious smell, and attracted a great number of humming-birds." —*Prince Maximilian's Travels in Brazil*, p. 76.

In another part of his work, the same author says : " The heat was intense ; we therefore refreshed ourselves with cold punch and excellent Oranges, which in many parts may be had gratis. This excellent fruit can be eaten without injury to the health, even when a person is over-heated ; but in the evening it is said not to be

wholesome. Much more caution is necessary in eating cocoa-nuts and other cooling fruits."

The Brazilians are probably the only people who think so much caution necessary in eating oranges, as to refrain from their use in the evening.

The following passage may be found in a note in Koster's *Brazil*: Lobat says,* "The orange is cut into two pieces, and is rubbed violently upon the wound."—Vol. II. p. 196.

"The first China Orange," says Evelyn, "which appeared in Europe was sent a present to the old Conde Mellor, then prime minister to the king of Portugal; but of the whole case sent to Lisbon, there was but one plant which escaped the being so spoiled and tainted, that, with great care, it hardly recovered, to be since become the parent of all those flourishing trees of that name cultivated by our gardeners, though not without sensibly degenerating. Receiving this account from the illustrious son of the Conde, I thought fit to mention it for an instance of what industry may produce in less than half an age."

Mickle, in the *History of the Portuguese Empire in Asia*, prefixed to his translation of the *Lusiad*, informs us "that the famous John de Castro, the Portuguese conqueror in Asia, was said to have been the first who brought the Orange tree to Europe, and to have esteemed this gift to his country as the greatest of his actions." He adds, "that Orange-trees are still preserved in Cintra, in memorial of the place where he first planted that valuable fruitage."

The Orange tree is thought to produce more fruit, if deprived of some of its blossoms. Rapin, in his *Poem on Plants*, recommends that the nymphs should be allowed unchecked to pluck the silvery blossoms, to adorn their bosoms and their vases. "Let your wife, your children, your whole family be there," says he, "and let them bear away a portion of the fragrant spoils."

The Orange is supposed to be the golden apple presented to Jupiter by Juno on the day of their nuptials. These apples could be preserved nowhere but in the gardens of the Hesperides, where they were protected by three nymphs, bearing that name, the daughters of Hesperus; and by a more effectual and appalling guard, a never-

* They employ the juice of sour oranges with wonderful and infallible success in the cure of ulcers, however old and obstinate.

leeping dragon. It was one of the labours of Hercules to obtain some of these golden apples: he succeeded, but, as they could not be preserved elsewhere, it is said that they were carried back again by Minerva.

Lucan is particularly earnest that no one should doubt this story :

“ Here by the wakeful dragon kept of old.
 Hesperian fruits grew rich with living gold ;
 Long since the fruit was from the branches torn,
 And now the gardens their lost honours mourn.
 Such was in ancient times the tale received,
 Such by our good forefathers was believed :
 Nor let inquirers the tradition wrong,
 Or dare to question now the poet's sacred song.
 Then take it for a truth, the wealthy wood
 Here under golden boughs low-bending stood :
 On some large tree his folds the serpent wound,
 The fair Hesperian virgins watched around,
 And joined to guard the rich forbidden ground.
 But great Alcides came to end their care,
 Stript the gay grove, and left the branches bare ;
 Then back returning, sought the Argive shore,
 And the bright spoil to proud Eurystheus bore.”

These, too, were the golden apples by means of which Hippomeues won the Arcadian Atalanta ; who halted in the race to pick them up, when he artfully dropped them at three several times, in the hope of her so doing ; he having received them for that purpose from the goddess Venus.

And probably this may be the golden apple, the bestowal of which first gave origin to the Grecian war.

The Orange-tree is mentioned both by Cowley and Rapin ; but the poems being originally written in Latin, and the translations very poor, they will not admit of quotation. It has been celebrated by poets ancient and modern, and well has it deserved its fame, not only for its fine fruit, but also for its handsome leaves, exquisite blossoms, and delicious perfume.

Mr. Moore gives a pleasant picture of the Orange-tree, in his *Paradise and the Peri*.

“ Just then beneath some orange-trees,
Whose fruit and blossoms in the breeze
Were wantoning together, free,
Like age at play with infancy——.”

The orange-tree is one of the very few which at once delight us with the promise of spring, and the ripe luxuriance of summer. The poet tells us in his notes, that from the Orange-trees of Kauzeroon the bees cull a celebrated honey.

—————“ In short
All the sweet cups to which the bees resort,
With plots of grass, and perfumed walks between,
Of citron, honeysuckle, and jessamine,
With orange whose warm leaves so finely suit,
And look as if they'd shade a golden fruit.”

The Orange upon its bough looks, indeed, like sunshine playing in the shade ; its large green leaves have a happy effect in softening its brilliancy, and nothing can better harmonize than this fine fruit with its foliage. The poets frequently speak of the leaves as of a shade to the orange :—

“ He hangs in shade the Orange bright,
Like golden lambs in a green night.”

ANDREW MARVELL.

“ Through the green shade the golden orange glows.”

ARMSTRONG.

—————“ Thus was this place
A happy rural seat of various view ;
Groves whose rich trees wept odorous gums and balm ;
Others whose fruit, burnished with golden rind,
Hung amiable, Hesperian fables true,
If true, here only, and of delicious taste.”

PARADISE LOST.

Cowper places the Orange in his green-house :—

—————“ The golden boast
Of Portugal and western India there,
The ruddier orange, and the paler lime,
Peep through their polished foliage at the storm,
And seem to smile at what they need not fear.”

COWPER'S TASK.

“ The garden of Proserpina this hight,
 And in the midst thereof a silver seat
 With a thick arbour goodly overdight,
 In which she often used from open heat
 Herself to shroud, and pleasures to entreat
 Next thereunto did grow a goodly tree,
 With branches broad dispread, and body great,
 Clothed with leaves that none the wood mote see,
 And loden all with fruit, as thick as thick might be.

“ The fruit were golden apples glistening bright,
 That goodly was their glory to behold,
 On earth like never grew, ne living wight
 Like ever saw ; but they from hence were sold
 For those which Hercules with conquest bold
 Got from great Atlas’ daughters ; hence began,
 And planted there, did bring forth fruit of gold,
 And those with which th’ Eubœan young man wan
 Swift Atalanta, when through craft he her outran.

“ Here also sprang that goodly golden fruit,
 With which Acontius got his lover true,
 Whom he had long time sought with fruitless suit ;
 Here eke that famous golden apple grew,
 The which among the gods false Ate threw,
 For which th’ Idæan ladies disagreed,
 Till partial Paris dempt it Venus’ due,
 And had (of her) fair Helen for his meed,
 That many noble Greeks and Trojans made to bleed.”

SPENCER’S FAIRY QUEEN.

—————“ Her lover’s genius formed
 A glittering fane, where rare and alien plants
 Might safely flourish : where the citron sweet
 And fragrant orange, rich in fruit and flowers,
 Might hang their silver stars, their golden globes,
 On the same odorous stem——.”

MASON’S ENGLISH GARDEN.

Mrs. C. Smith speaks of the Orange-tree in her lines addressed to

Thunberg speaks of a curious Lilliputian kind of Orange, growing in Japan: "A very small species of Orange (*Citrus Japonica*) is frequently cultivated in the houses, in pots. This shrub hardly exceeds six inches in height, and its fruit, which is sweet and palatable, like China Oranges, is not larger than an ordinary cherry.

In visiting the forcing nursery establishments around London during the spring of 1845 and the present one, I endeavoured to ascertain the best mode of culture. The following are essential. There must be a very free drainage of broken pot over which some pieces of rough turfy soil be laid. The compost to be turfy loam, well enriched with one year old cow-dung, the two being mixed up for six months before using. At the time of potting the soil must not be sifted, but chopped, and a sprinkling of pieces of charcoal added. During the growing and blooming period, the pots are plunged in tan, or stable dung, having a covering of tan at the surface to prevent the unsightly appearance of the dung. In one case a neat covering of green moss had been supplied, which looked well. Rain-water of a tepid temperature, and manure water too, is used; but only just sufficient to keep the soil moist, not wet. The plants are frequently syringed over head, morning and evening, in dry weather, or when the house is of moderate heat. In order to prevent worms entering the hole at the bottom of the pot, the pot in which the plant is growing is cased in another pot which is a size less, and on its being placed within it, the bottom of the plant pot does not descend within four or six inches of the case pot; this allows the water to drain away properly, admits the warmth to rise, and entirely precludes the worms entering the plant pot. After the Orange-tree has ceased blooming a season of rest is allowed, and about a month before the time of exciting them to grow again, they are re-potted, carefully putting away the exterior soil, to admit a due proportion of new compost. It is necessary at the season of rest, that the plants are not supplied with bottom heat, but kept in a greenhouse, or similar habitation.

ARTICLE XI.

ON THE CULTURE OF CHOROZEMAS.

BY THE FOREMAN OF A LONDON NURSERY.

By the request of one of the correspondents in the CABINET, I forward the particulars of my mode of treatment with the *Chorozemas*. This genus is generally considered difficult to cultivate, but I have grown them with considerable success by pursuing the following method:—The soil I use is a sandy, fibrous peat, well broken with the spade, but not sifted. The best time for potting is March or April; care must be taken not to over-pot the plants, or injure the roots while potting, and the soil must be made perfectly firm and compact about the roots, and the pots well drained; they must then be placed in the greenhouse in an open, airy situation, and not crowded among other plants. It is also preferable to keep them in the greenhouse during summer, but in hot weather they must be shaded for a few hours each day during sunshine. They require a reasonable supply of water, that is, they must not be sodden nor left to get too dry. They may be propagated in the following manner: cuttings should be taken off while the wood is young, and carefully prepared; take off the bottom leaves with a sharp knife, and make a clear cut just through the joint; the cutting pot should be drained, and then filled to within two inches of the top with the soil before spoken of. On the top of this put a layer of white sand, into which plant the cuttings, making a little hole for their reception with a small stick. When the pot is full, give them a steady watering with a fine rose, after which place a clean glass over them. In this state they may be removed to the propagating-house, where the temperature should be about 65°, and plunged in a little saw-dust or sand. They should be shaded from the sun, which can easily be done by placing a sheet of coarse paper over the glasses. As soon as the cuttings are rooted, which may be known by their beginning to grow, they must be potted off, taking care not to injure the roots, and they must be covered again for a week or fortnight, till they make fresh roots, after which they must be gradually inured to the greenhouse, and treated as old plants.

ARTICLE XII.

THE METROPOLITAN FLORAL EXHIBITIONS.

THE HORTICULTURAL SOCIETY, *May 9.*

WE resume our reports of these exhibitions for another season, commencing with the Horticultural Society's show of May 9, which was an assemblage of almost hitherto unequalled splendour and beauty; a very gratifying feature was, that scarcely one plant throughout the immense number could have been found deserving the name of an ill grown one.

We will proceed at once to describe briefly the principal prize collections in the stove and greenhouse plants, and then enumerate the florists' flowers.

1.—STOVE AND GREENHOUSE PLANTS.

In collections of 40.

Here the competitors were Mr. Robertson, gardener to Mrs. Lawrence, of Ealing Park, and Mr. Barnes, gardener to G. W. Norman, Esq., of Bromley. The first prize, value 20*l.*, on this occasion was awarded to Mr. Robertson. The collection was composed of large and altogether fine specimens of cultivation. At the back stood a beautiful plant of the purple *Azalea phœnicea*, and supporting it were *Epacris grandiflora*, 3 feet in height, and nearly as much in diameter; *Eriostemon myoporoides*, about 5 feet in height and 4 feet in diameter; two immense bushes of *Chorozema varium*; a *Hardenbergia macrophylla*, closely covering an upright cylindrical trellis, about 6 feet in height; two fine specimens of *Pimelea spectabilis*; immense bushes of *P. decussata*, and *P. hypericifolia*, the latter covered with little tufts of white blossoms; a *Gnidia pinifolia*, about 2 ft. in height, and 3 ft. in diameter, perhaps the finest plant of the kind ever exhibited. A tall *Eriostemon cuspidatum*, *Zichya inophylla floribunda*, trained over a circular trellis, well bloomed plants of *Lechenaultia Baxteri* and *L. formosa*, a small but neat *Hovea Celsi*, in fine bloom; and the curious yellow-flowered *Anthocercis littorea*, with a splendid *Buronia pinnata*, covered with multitudes of pink star-shaped flowers. In front were *Acrophyllum venosum*, a pretty little plant with numerous spikes of white flowers; *Chorozema Hendersoni*, trained over a wire trellis; *Podolobium staurophyllum*, a mass of bloom; *Gastrolobium spinosum*, a fine plant covered with multitudes of *Chorozema*-like flowers; a neat well-bloomed *Daviesia Fraseri*; and a luxuriant growing plant of the scarlet-flowered *Siphocampylus coccineus*. Of *Azaleas*, in addition to the centre one, the collection contained several finely-grown specimens. Of the genus *Erica*, we remarked a large *intermedia*, well bloomed; two fine specimens of *Persoluta alba*, about five feet in height, literally masses of white blossom; and a good *Vestita alba*, richly ornamented with whorls of white flowers. Mr. Barnes received the second prize; the most remarkable plants in whose collection were a noble white Indian *Azalea*, and supporting it *Epacris grandiflora*, a large plant in fine health; an immense specimen, three feet in height and four in diameter, of *Phœnocoma prolifera*, and a famous *Aphellexis vestita*. *Polygala oppositifolia*, four feet in height, and a mass of blossom; an excellent *Podolobium staurophyllum*, covered with flowers; a pretty *Pimelea Hendersoni*, two feet in height and the same in diameter; *Daviesia latifolia*, trained on a wire trellis, with the lateral branches hanging gracefully, and loaded with flowers;

and a famous plant, well bloomed, of the larger flowered *Aphelexis purpurea*. Of the genus *Erica*, we saw a fine plant of *grandinosa*, four feet in height and three in diameter; a *Hartnelli* of similar dimensions, and finely in bloom; a large and fine *Intermedia*; *Thuubergia*, three feet in height and as much across, covered with small orange flowers; and a large *Ventricosa tricolor*, not sufficiently in bloom.

In collections of 20.

Two of these were produced; the first prize was awarded to Messrs. Frazier, nurserymen, Lea Bridge, in whose collection were some very remarkable examples of first-rate cultivation. We may mention an immense bush of *Pimelia linifolia*, four feet in height, and upwards of five feet in diameter; a large *P. lanata*, and a remarkably well-grown *P. spectabilis*; along with these were *Eutaxia pungens*, a tall and fine *Daviesia latifolia*, *Erica suaveolens*, covered with whorls of lilac blossoms; a large but thinly-bloomed purple *Azalea*; *Franciscea Hopeana*, loaded with white and blue flowers; and a beautiful *Aphelexis humilis*. *Zichya villosa*, five feet in height; an admirably grown *Podolobium staurophyllum*; an excellent *Chorozema Henchmanni*, four feet in height and three feet in diameter; a splendid specimen of the yellow-blossomed *Erica campanulata*, and an immense bush of *Epacris grandiflora*. Mr. Hunt, gardener to Miss Trail, of Bromley, who obtained the second prize, showed a famous *Gompholobium polymorphum* just coming into bloom, covering beautifully a shield-formed trellis of large dimensions; a large and fine *Pimelea decussata*; *Azalea variegata*, two feet in height and three feet in width, literally a mass of flowers; *Erica Hartnelli*, four feet in height and the same in width; a very fine *E. perspicua nana*, covering the pot; *Ixora coccinea*, having 14 heads of bloom; a fine *Azalea laterita*, measuring four feet in height and about three feet in width; and a large *Pimelea spectabilis*, at least five feet in diameter, hardly enough advanced in bloom.

In collections of 12.

In this class there were six collections exhibited; that contributed by Mr. Green, gardener to Sir E. Antrobus, Bart., was placed first; it contained a very fine large *Azalea Gledstanesii*, *Hovea Celsi* in lovely condition, a splendidly grown *Aphelexis humilis* in fine bloom, a pretty *Boronia serrulata*, and *Epiphyllum rubrum cæruleum*, the latter quite a mass of flowers. The next group in point of merit was produced by Mr. Ayres, gardener to J. Cook, Esq., of Brooklands, Blackheath. In this collection we remarked a famous *Leschenaultia formosa*, *Erica Hartnelli* in fine condition, the sweet *Stephanotis floribunda*, a fine plant of the large flowered variety of *Aphelexis spectabilis*, and a most beautiful dwarf compact *Azalea*, composed of three varieties—*Lateritia*, *Gledstanesii*, and *Variiegata*—inarched in one stock, the various coloured flowers with which it was studded contrasting finely with one another. Mr. Bruce, gardener to B. Miller, Esq., of Colliers Wood, Lower Tooting, received a third prize. We remarked beautiful plants of the red and blue flowered *Leschenaultias*, a good *Chorozema varium*, *Stephanotis floribuuda*, in lovely condition; a famous *Erica propendens*, covered with little pink bells; a fine plant of *Chorozema varium*; and a splendid plant of *Adenandria speciosa*, forming a complete ball of flowers, nearly three feet in diameter.—Mr. Slowe, gardener to W. R. Baker, Esq., of Bayfordbury, also received a third-class prize for a collection, containing some fine plants; and collections were also shown by Mr. Epps, of Maidstone, and Mr. Pamplin, of Walthamstow, to both of whom prizes were given.

In collections of 6.

There were no less than eleven collections exhibited in this class, and all of them highly creditable to the contributors. The group to which the first prize was awarded was from the garden of W. Block, Esq., Muswell-hill; it contained a good *Aphelexis humilis*, an *Ixora coccinea*, a large *Tropæolum tricolor*, a *Genista*, *Boronia serrulata*, and a good *Chorozema varium*. Mr. Catleugh, of Chelsea, obtained a similar prize for a well-grown *Lantana mutabilis*; *Euphor-*

bia splendens, in fine condition; a capital *Statice arborea*; a small but good *Pimelea spectabilis*; a pretty *Chorozema varium*, and a well-grown *Gardenia radicans*. An equal prize was also given to Mr. Carson, gardener to W. F. G. Farmer, Esq., of Nonsuch Park, Cheam, who had a large *Epacris grandiflora*; *Hardenbergia monophylla*; a large *Pimelea decussata*; a standard *Azalea Gleditansii*; a good *Polygala oppositifolia*; and a pretty *Tropæolum tricolor*. In addition to these, several other prizes were awarded.

ORCHIDACEOUS PLANTS.

The collections of these, although numerous, and containing very many good specimens, presented nothing very brilliant, compared with what we have seen before. The first prizes were awarded as under:—

In collections of 20.

To Mr. Robertson, gardener to Mrs. Lawrence, of Ealing Park. In this group we remarked *Saccolabium guttatum*, with nine pendent racemes of purple blossoms; a large *Dendrobium cupreum*, with buff blossoms, having a dark spot in the centre; *D. macrophyllum*, producing one strong flower spike; the gracefully drooping *Oncidium divaricatum*; and a large and fine *Dendrobium fimbriatum*; together with the curious brown-streaked *Vanda cristata*, and a good plant of the rare *Barkeria spectabilis*; also a tall *Oncidium luridum*, with six fine spikes of dingy flowers; a splendid *Dendrobium densiflorum*, having eleven large drooping clusters of yellow blossoms; *Oncidium ampliatum*, with three spikes of yellow flowers; the pretty *Saccolabium præmorsum*, and the handsome *Aerides affine*, *Dendrobium secundum*, and two plants of *D. aggregatum*.

In collections of 12.

That which gained the first was from the garden of C. B. Warner, Esq., of Hoddesdon. It contained a small specimen of the beautiful *Dendrobium nobile*, *Epidendrum crassifolium*, *Camarotis purpurea*, a fine *Calanthe veratrifolia*, with six spikes of snow-white flowers; *Oncidium flexuosum*, in creditable condition; *O. sphacelatum*, with five flower-spikes; *Maxillaria tenuifolia*, with chocolate flowers; and a small pretty *Dendrobium moniliforme*.

In collections of 6.

The first prize was given to Mr. Eyles, gardener to Sir George Larpent, Roehampton. We remarked *Vanda Roxburghii cærulea*, with spotted-green petals and light blue lip; a good *Oncidium luridum*; the singular *Coryanthes macrantha*, with large chocolate-spotted blossoms; and a capital *Oncidium altissimum*.

In single Specimens.

The most splendid plant at the exhibition was perhaps the *Cyrtopodium punctatum*, from Mr. Scott, gardener to Sir G. Staunton. It could hardly have been less than seven feet in height and quite as much in diameter; the large spreading palm-like branches were completely surrounded with innumerable blossoms, presenting an object of beauty and luxuriance equalled only by specimens in its native land. The largest prize (71.) ever given by the Society for one plant was awarded to it. From Mr. Cameron, of the Birmingham Botanic Garden, was a specimen of the green-veined *Chlora virescens*, one of those beautiful terrestrial Orchids inhabiting the subalpine pastures of the Cordilleras of Chili.

AZALEAS.

The collections of these were numerous, the plants were generally large specimens, and being well in bloom made an excellent display.

In collections of 12.

Mr. Green, gardener to Sir E. Antrobus, Bart., was first. This group consisted of *Azalea exqu Coast*, a very distinct variety, with delicate pink blossoms edged with white; *Jenkinsoni*, lilac; *speciosissima*, very fine; *eximia*, bright red; a fine plant of *variegata*; the yellow-flowered *sinensis*; *Smith's coccinea*, six feet in height, and a mass of blossom; *triumphans*; a fine plant of *lateritia*, thickly clad with blossoms at the top; a rather thin plant of *alba multiflora*; *Georgiana*, lilac; and *Conqueror*, rosy pink. Mr. Falconer, gardener to A. Palmer, Esq., of Cheam, had the second prize; we saw fine plants of *Rawsoni*, *Palmeriana*, *lateritia variegata*, a large *Gledstanesii*; *Theresa*, small bright rose; *Agnesii*, fine crimson; *Emmeline*, and a tall plant of *Danielsiana*. A third prize was given to Mr. Robertson, who had fine specimens of *coronata*, *splendens*; *optima*, a bright red variety; *Rawsoni*, bluish purple; *variegata*, *rosea superba*; *speciosissima*, very fine rosy pink; and a good *Gledstanesii*;

In collections of 6.

Mr. Barnes had the first prize with *splendens*, two feet in height and four feet in width; a fine plant of *Smith's coccinea*; a capital *lateritia*; *sinensis*; *speciosissima*, and *purpurea superba*.

CAPE HEATHS.

The collections of these were numerous and fine, but there was a want of diversity among them, the various groups containing nearly the same species.

In collections of 20.

The first prize to amateur growers was awarded Mr. Hunt, gardener to Miss Trail; we remarked a pretty odore *roseæ*; the little pink-blossomed *ovata*; the lilac-flowered *suaveolens*; *Sprengelii*, a variety something in the way of *Hartnelli*; a large plant of one of the numerous varieties of *ampullacea*; a beautiful little *depressa*; *Hartnelli*, four feet in height and about the same in diameter; and an equally large specimen of *gemmifera*. In the same group was also a pretty little plant of *elegans*; *Westphalingia*, ornamented with numerous bright rosy tubes, and a lovely little *aristata major*. Amongst nurserymen, Messrs. Fairbairn, of Clapham, obtained the first prize; we remarked *dilecta*, a sort something in the way of *mundula*; the pretty little yellow-blossomed *denticulata moschata*; the beautiful *vestita rosea*; *Wilsoni*, a good and scarce variety; the bright rosy-blossomed *metulæflora* and *Beaumontia*, the latter densely covered with small lilac bell-shaped flowers.

In collections of 12.

Mr. May, of Bromley, obtained the first prize in the amateurs' class, and Messrs. Fraser, of Lea-bridge, in the nurserymen's. In both these collections were some remarkably good plants. Mr. May showed *Hubbertiana*, in fine condition; the larger variety of *aristata major*; the pretty white-flowered *mirabilis*; *fastigiata bractescens*, in capital order, and a pretty *depressa*. Messrs. Fraser had fine plants of *mundula*, *intermedia*, and *Hartnelli*. Collections of six species were numerous, and several fine plants were shown as single specimens.

CACTI.

Collections of these, in fine condition, were sent by Mr. Green and by Mr. Robertson. Mr. Green had the first prize; his plants were *Epiphyllum speciosum*, the larger and smaller varieties of *E. Ackermanni*, *E. Russellianum*, a gracefully drooping variety with small purple flowers; the larger *E. speciosum*, *E. Jenkinsoni*, and a splendid *Cereus speciosissimus*. The most remarkable plants in Mr. Robertson's collection were *Cereus speciosissimus*, *Epiphyllum Lawrenceanum*, *E. Ackermanni*, and two of *E. splendens*.

As Single Specimens of superior cultivation a considerable number of plants were exhibited. Mr. Green sent a very large double red *Asalea*, at least 6 feet in height, and nearly the same in diameter, a blaze of red blossoms. From Messrs. Frazer was *Boronia serrulata*, displaying first-rate management, and the same may be said of a noble *Helichrysum humile*, from Mr. Bruce, of Tooting. A large *Epacris grandiflora* was produced from the nursery of Mr. Pamplin; a famous *Pimelea spectabilis* was sent by Mr. Clarke; and a no less remarkable plant of *Crocea saligna*, in the most robust health, from Mr. W. P. Ayres. To each of these plants prizes were awarded.

NEW OR RARE PLANTS.

These were neither numerous nor very remarkable. Prizes, however, were given to Messrs. Veitch and Son, of Exeter, for *Eranthemum variabile*, a plant with silvery-veined leaves and lilac flowers; *Rhodostemma gardenioides*, with sweet scented, but rather dingy looking flowers; and *Mussanda frondosa*, a long lost, but recently re-introduced plant, with yellow tubular blossoms, and singular large white bracts. Mr. Robertson received a prize for *Hydrolea spinosa*, a pretty little bush, with bright blue flowers. Mr. Cameron had a prize for *Anthericum cæruleum*, a blue flowered, well-known plant. Besides these were shown from Mr. Cameron, a new species of *Goodia*, with yellow lotus-like flowers. From Mr. Dod, gardener to Sir George Warrender, Bart., *Dysophyllum stellatum*, with small starry purple flowers. From Mr. E. Beck, was the little white flowered *Achimenes argyrostignia*. From Mr. Harrison, nurseryman, Richmond, was *Chirita sinensis*. And from Messrs. Fairbairn, of Clapham, a *Polygalia* named *Dalmaisiana*.

II. FLORISTS FLOWERS.

PELARGONIUMS.

In collections of 12 new and first-rate varieties.

In the amateurs' class, Mr. Cuck, of Chiswick, was the only competitor, and received the first-rate prize for the following varieties:—*Duke of Cornwall*, *Hector*, *Atalanta*, *Rosetta*, *Mustee*, *Emma*, *Milo*, *Sultana*, *Duchess of Leinster*, *Eliza Sauvage*, *Orion*, and *Isabella*. In the nurserymen's class, the first prize was given to Mr. E. Beck, florist, Isleworth, for *Hebe's Lip*, *Susanna*, *Master Walter*, *Mustee*, *Isabel*, *Lurida*, *Hector*, *Resplendent*, *Rosy Circle*, *Desdemona*, *Aurora*, and *Arabella*.—The second prize was voted to Mr. Catleugh, of Chelsea, for *Milo*, *Magog*, *Emma*, *Orion*, *Free Briton*, *Duchess of Sutherland*, *Sultana*, *Mary*, *Rosetta*, *Luna*, *Duke of Cornwall*, and *Rosetta superba*; and the third prize was obtained by Mr. Gaines, of Battersea, whose flowers were *Xarifa*, *Milo*, *Nosegay*, *Athenian*, *Ackbar*, *Don Juan*, *Lady Smith*, *Amelia*, *Cossack*, *Prince Alfred*, *Redworth*, and *Lady Caroline Douglas*.

In collections of 12 distinct varieties.

Mr. Cuck here also received a first prize, for *Orion*, *Emma*, *Cicero*, *Eliza Sauvage*, *Sarah*, *Queen Philippa*, *Sir R. Peel*, *Sultana*, *Erectum*, *Cyrus Superb*,

and Princess Alice. Mr. Staines received a third prize for Rosalie, Adonis, Sunbeam, Ackbar, Erectum, Clio, Sylph, Lady Ebrington, Lady Sale, Duke of Cornwall, Marchioness of Lothian, and Duke of Wellington. In the nurserymen's class, the first prize was awarded to Mr. Catleugh, for Madonna, Sultana, Juliet, Hebe, Queen of Beauties, Charles the Tenth, Coronation, Madeline, Luna, Symmetry, Duke of Cornwall, and Rosetta Superb. Mr. Gaines received the second prize for Coronation Superb, Sultana, Augusta, Queen of Bourbons, Pirate, Emma, Rising Sun, Saxon King, Egbert, Albina, Vanguard, and Lady Prudhoe; and a prize was also awarded to Mr. Beck, for Rosy Circle, Luna, Sultana, Hero, Zanzummin, Arabella, Matilda, Sir R. Peel, Margaret, Mustee, Lord Chancellor, and Duke of Cornwall.

In collections of 6 varieties.

The amateurs' prize, was awarded to Mr. J. Parker, gardener to — Oughton, Esq., of Rosehampton, for Coronation, Erectum, Duke of Cornwall, Mabel, Unit, and Master Humphrey. In the nurserymen's class, Mr. Gaines received a prize for Cyrus, Rising Sun, Erectum, Albina, Lady Sale, and Coronation.

ROSES.

The Roses in pots were not particularly fine.

Among amateurs, Mr. Slowe, gardener to W. R. Baker, Esq., was the only exhibitor. In this group we observed, of *Tea-scented* varieties, there were Devoniansis, Safrona, yellow; Bougère, rose; Triomphe de Luxembourg, large buff; and Caroline. Of *Bourbons*—Bouquet de Flore, deep carmine. Of *Chinas*—Napoleon, large blush; Mrs. Bosanquet, pale flesh; Triomphante, crimson; and Paris. In the nurserymen's class, Messrs. Paul and Sons, of Cheshunt, was first. Among these were, of *Hybrid Perpetuals*—Clementine Duval, bright rose; Louis Bonaparte, rosy crimson; Lane, large deep rose; Aubernon, light crimson; Madame Laffay, rosy crimson; Mrs. Elliot, lilac; Pauline Plantier, Antinous, purplish crimson; and Great Western. *Tea*—Ning, Clara, Sylvain, and Taglioni. *Bourb.*—Souvenir de la Malmaison, pale flesh; and Madame Nerard, delicate blush. Messrs. Lane and Son, of Great Berkhamstead, was second; we observed *Alba*—Blanchefleur, white, with blush centre. *Hyb. Perp.*—Comte de Paris, pale blush; Madame Emma Dampierre, purplish red; Marquis of Ailsa, crimson; William Jesse, crimson tinged with lilac; Grand Capitaine, velvety, fiery crimson; Duc de Chartres, shaded carmine. *Tea*—Adam, glossy blush, with salmon centre; Barbot, reddish rose, with yellow centre; Hamon, blush, shaded with crimson; Mini, rich cream; Moiré, pale yellow; Nisida, shaded buff; Triomphe de la Guillotiere, fawn; and Triomphe de Luxembourg, buff and rose. Mr. Francis, of Hertford, was third; among others, we saw *Tea*—Melville, Goubault, and Mansais. *Hyb. Perp.*—Fulgorie, Duchess of Sutherland, and Rivers. *China*—Clara Sylvain, Comte de Paris, and Gardenia. Mr. Beck also received a prize; we remarked *Bourb.*—Queen, beautiful fawn-coloured. *Hyb. Perp.*—La Reine, fine glossy rose; Princesse Helene, deep purplish red. *Tea*—Goubault, bright rose; Hardy, pale flesh, rosy centre; Belle Allemande. *China*—Victoire d'Aumay, Henry V., and Fabvier. *Hyb. China*—General Allard, a rosy red, distinct and fine sort. A small group of Roses in pots was likewise produced from the garden of A. Rowland, Esq., of Lewisham. In this, we remarked Harrisonii, Rubens, Persian yellow, Rival de Posthume, and Marshal Villars. Of single specimens, only one plant was sent, Elise Sauvage, from Mr. Slowe.

CALCEOLARIAS.

The collections of these were limited in number, and two of them were disqualified in consequence of non-conformity with the Society's rules. Mr. Gaines, in the nurserymen's class, showed some remark

ably well managed, compact plants, and deservedly received the first prize. His kinds were, Miss Houston, compacta (Gaines), Mab (Kinghorn), Mirabilis (Gaines), Alpha (Gaines), and Enchantress (Gaines). In the amateurs' class, Mr. G. Stanley obtained a prize for some rather long-legged specimens of King John, Mammoth, Monarch, Prince Alfred, Queen of the Fairies, and British Queen.

FUCHSIAS.

The Society only offer prizes this season for single specimens, for which all parties are admitted to equal competition. Messrs. Lane and Son, obtained the first prize (value 25*s.*) for a compact specimen of their seedling, named Mrs. Lane, a flower remarkable for the richness of its corolla, and of excellent habit.* Mr. Kendal, florist, Stoke Newington, received the second prize.

SEEDLING FLORIST'S FLOWERS.

But a small number of these were exhibited, and amongst PELARGONIUMS none of the present season were considered by the judges deserving a prize. Mr. Hoyle, of Guernsey, however, showed some very excellent flowers, which if no great improvement upon others already out, certainly would lose nothing by comparison with them. One of his flowers struck us as likely to be a very good one; it was named Governor General, possessing a remarkably smooth and even surface, very round, and the colours clear and well defined. Several prizes were awarded for two year old seedlings. Mr. Hoyle received a prize for Mount Etna, a flower of extraordinary brilliancy and beauty of colour, being a rich bright scarlet crimson, with a distinct dark blotch in the upper petals. Mr. E. Beck received four prizes, 1st. for Competitor, a smooth and good shaped flower, the top petals are covered with an even tint of velvety-maroon, leaving a narrow rim of rosy crimson on the edge. The centre of the flower is light, with lower petals of a bright rose, having a deeper rose-coloured spot in each. 2nd. Bacchus, a very round and fine flower; the upper petals are of a deep maroon, with a narrow border of rose, centre white, rose-coloured under petals, having dark veins and blotches in each. 3rd. Hebe's Lip, a flower with velvety top petals,

* Messrs. Lane also showed a kind named Curiosa, which if not the same, is very similar to Cordifolia.

surrounded with crimson, white centre, with bright rosy pink under petals; and 4th. Patrician, a remarkably smooth and even textured flower, having rosy pink lower petals, with dark top petals, changing to rosy crimson on the edge.

CALCEOLARIAS.

Three prizes were awarded by the judges for these, namely, to Kinghorn's *Masterpiece*, Gaines's *Lord Hardinge*, and Green's *La Polka*, each of them being distinct and desirable varieties.

Some *Fuchsias* and *Cinerarias* were shown, but none possessing novelty or striking peculiarities appeared amongst them.

ARTICLE XIII.

ON THE CULTURE OF ACHIMENES.

If our North Country Correspondent who requests information on the cultivation of the *Achimenes*, will pursue the following directions, he will be amply compensated with *fine* specimens.

ACHIMENES COCCINEA.—In the beginning of February take the pots that contain the roots of the plants that have flowered the season previous, and carefully take away the surface soil till the small tubers appear. Then fill the pots up with a compost of peat soil, light loam, and leaf soil, and give the whole a gentle watering. Then place the pots in a fruiting pine-stove or hot-bed frame, the temperature of which is kept from 70° to 85° of heat. Give water sparingly for about ten days, but afterwards more freely, so as to effectually moisten the whole of the soil to the bottom of the pots, which will have become very dry from having been kept during the winter without water.

When the shoots have attained the height of about three inches, turn the bulbs out of their pots, and carefully break them till you can divide the young shoots. Then select the strongest, and retain all the roots attached to them, and plant singly into sixty-sized pots, in the same compost as recommended for earthing up the pots, with the addition of one-fifth fine clean sand. Grow the plants in a moist heat and in a slight shade, occasionally sprinkling them with a sy-

ringe or the fine rose of a watering-pan. As they advance in growth and fill their pots with roots, frequently repot them into pots a size larger till finally remove them, the strongest plants into sixteens, and the others into twenty-fours, using the same kind of compost, except for the last shifting, at which time give them pots two sizes larger, and add one-fourth of well-decomposed hotbed manure, using the other part of the compost more turfy and open. Be particular in draining the pots well at each shifting with plenty of broken pots, and to the depth of one inch at least at the last potting. Examine them at each removal, and take away any suckers that may appear about their stems, and also two or three of their lowest side branches; this tends to strengthen the main stem, and encourages them to make fine symmetrical pyramidal heads. After they are well established, and are beginning to produce flowers, place them, some in a cooler stove, and others in the greenhouse, being careful that they enjoy as much light as possible, which materially enhances the brilliancy of their scarlet flowers, and adds much to their general lustre.*

After they have done flowering, gradually withhold water, but do not cut their stems away till they have entirely died down. Keep the dormant roots in the pots, on a shelf in the greenhouse, without any water till they are again wanted to vegetate.

Achimenes Picta blooms far more profusely by the following treatment:—the tubers being preserved through winter as the others are directed to be done, must be excited quite early in January, and when the plants can be separated must be done, potting them singly. As soon as they are large enough, cut off the tops at two or three inches long, close under a joint, and strike them in sand; they readily root, pot off as soon as rooted, and treat in all respects afterwards as stated in the particulars relative to *Achimenes coccinea*.

Plants raised from the tubers grow much more into stem and foliage, but are shy of blooming, whereas those from cuttings, whilst they grow vigorously, bloom profusely. This species, too, can be kept growing through the winter, so that, where convenient, a large plant being kept for the purpose of supplying cuttings early forwards the preparation of plants early in spring. Plants raised from cuttings do not so certainly produce tubers for next year's pushing, as do those

* We have had plants so treated two feet high, and nearly the same in diameter, forming one mass of beauty and brilliancy.

grown from the tuber, so that a plant or two grown from the tuber is desirable even for the certainty of a stock.

Achimenes pedunculata and *hirsuta* also bloom more freely, when raised from cuttings, but they become more dwarf than when produced from the tuber.

Achimenes longiflora and *grandiflora* flourish admirably when treated as a *coccinea*, if fine specimens be the object; but dwarfier ones are readily obtained by having a proportionate poor compost. They will do well, and produce a pretty effect, if grown in baskets, and be suspended, as is done with many of the *Orchidææ*; the stems hang over the sides, and bloom very freely.

The *Achimenes rosea* requires in all respects the treatment given to *Achimenes coccinea*. Allowing of the tubers to push stems before separating and potting them in spring, is much more successful than *first* separating the tubers before pushing; this is applicable especially with *A. coccinea*, *rosea*, *grandiflora*, *pedunculata*, *hirsuta*, and *longiflora*. The entire management is very simple, and easily accomplished, and the reward a most ample display of lovely flowers.

PART II.

MISCELLANY

OF

NOTES AND CORRESPONDENCE.

New or Rare Plants.

ANSELLIA AFRICANA. AFRICAN ANSELLIA. (Bot. Reg. 30.) *Orchidaceæ*. *Gynandria Monandria*. When Mr. Ansell was ill from the effects of the Niger Expedition at Fernando Po, he found growing on the stems of the oil palm an epiphyte with a slender jointed stem about two feet long, and long three-ribbed leaves, having a terminal panicle of numerous flowers, of a pale green ground colour, beautifully spotted with dark purple. It has bloomed in the collection of Messrs. Loddiges's, and very splendidly in the collection of the Rev. John Clowes, at Broughton. The panicle bears from 30 to 40 flowers. Each blossom is about two inches across. It is a most beautiful species, and deserves to be in every collection.

BEAUMONTIA GRANDIFLORA. GREAT-FLOWERED. (Pax. Mag. Bot.) *Apocynaceæ*. *Pentandria Monogynia*. An evergreen hothouse climber, a vigorous growing plant, but now found to bloom freely when coiled round a trellis. The flower is nearly as large as *Magnolia grandiflora*, large tube, and a magnificent fine spreading limb; white, with a dark throat. It is a noble flowering plant, and having been found to bloom well, treated as above named, it will form a fine

addition to this class of plants, well suited to exhibit at the shows. It is an old plant, and may be obtained cheap.

RUSTOMA EXALTATUM. THE TALL. (Pax. Mag. Bot.) Gentianaceæ. Pentandria Monogynia. (Synonym *Lisianthus exaltatus*.) A very suitable companion to *Lisianthus Russellianus*. It is an annual. The flowers are of a lilac-blue, with a five parted white centre, and a dark shade round the white margin.

ODONTOGLOSSUM MEMBRANACEUM. MEMBRANE SHEATHED. (Bot. Reg. 31.) Orchidaceæ. Gynandria Monandria. From Mexico. It has bloomed with Messrs. Loddiges. The flowers are white, transversely lined around the centre with bright red. Each blossom is about two inches across. The flower scape bears from two to four blossoms. Very neat.

The following are figured, but of little interest, or have been previously noticed by us:—*Cypripedium macranthum*, Bell. *Eschianthus purpurescens*. *Cirrhopetalum Thouarsii*. *Calliandria Harrisii*. In the Bot. Reg., *Primula involucrata*, *Bouvardia flava*, *Saxifraga thysanodes*. In Pax. Mag. of Bot., *Fuchsia macrantha*, *Kpidendrum verrucosum*.

NEW PLANTS NOTICED.

CHIRITI SINENSIS. The flowers are of the labiate order, produced in spikes about nine inches high, lilac, having the inside marked with bright orange, as well as the upper lip being so marked. This may now be had at most nurseries, and well deserves a place in the greenhouse.

CUPHEA MINIATA. A new species, having fine brilliant crimson flowers, with rich purple woolly tufts around the stamens and anthers, producing a pretty contrast. It is in bloom at Messrs. Rollissons', of Tooting.

JASMINUM DIANTHIIFOLIA. A new and singular looking species, with small white, but very highly fragrant flowers, also at Messrs. Rollissons'. Very desirable for the greenhouse. At Tooting Nursery.

ACHIMENES LONGIFLORA, VARIETY. It is a *dwarf* variety, and the flowers are of a much deeper colour than the species, also more circular. It is a pretty addition to this lovely family. In the Tooting Nursery.

CUPHEA PLATYCENTRE. This very beautiful species produces flowers of a rich orange colour, and like the other is highly ornamental. A handsome specimen of it was exhibited at the Regent's Park show by Mr. Smith, gardener to J. Anderson, Esq., of Regent's Park, London.

TROPÆOLIUM MINUS. The flowers are double, of a beautiful orange-scarlet, and are produced in great profusion. This plant may be had cheap at the London nurseries. It is a very pretty thing for planting in beds, or on rock-work.

TETRAETHERA VERTICILLATA. This very beautiful blue flowering plant merits a place in every greenhouse.

RUPELLIA MACROPHYLLA. This noble species with its brilliant scarlet flowers is highly ornamental for the stove, or during summer for the greenhouse.

LONDON HORTICULTURAL SOCIETY, June 2.—Among subjects of exhibition produced on this occasion was a charming collection of hardy hybrid *Azaleas*, from the Earl of Carnarvon's gardens at Highclere. Some of them were the result of a cross between *A. pontica* and *A. rubescens*, and a beautiful display of various coloured flowers has been produced. This has also been the case in another group of hybrids obtained from *A. sinensis*, which had the glaucous foliage and inflorescence of that species modified by the various tints of crimson, producing a striking effect. Another new hybrid is also well worth notice, adding to the colour of the broad-leaved *Kalmia* the habit of *Rhododendron fragrans*; this had been effected by a cross between the *Azalea rubescens* and

the Highclere Rhododendron. There were other mules obtained similar to our hardy European purple Rhododendrons, but greatly improved in foliage by the use of the crimson Indian variety. A Banksian medal was awarded.—Hybrid cacti were sent by Mr. Errington, gardener to Sir P. G. Egerton, Bart., M. P.; they belonged to the pendulous division of this tribe of plants; *Cereus flagelliformis* was one of the parents; among them was a very delicate pink variety of considerable size and beauty.—Mr. Smith, of Dalston, exhibited two *Fuchsias*, one named *Eximia*, and the other *Beauty of Dalston*, a variety in the way of *Conspicua*, but larger; also a *Cactus formosissimus*.—Messrs. Veitch, of Kxeter, sent a specimen of *Didymocarpus crinitus*, a *Gloxinia*-looking plant, having snowy white flowers streaked with yellow in the tube, together with a *Dendrobium hymenophyllum*, the flowers of a dull yellow colour, and not very interesting except for novelty. For the former a certificate was awarded.—Messrs. Chandler and Sons, of Vauxhall, exhibited 12 *Pelargoniums*; a bluish-purple *Cineraria*, named *Bijou*; and two *Yams*, received from Peru.—Mr. Gollidge, of Stratford, sent a collection of *Calceolarias*, including a seedling named *Forget-me-not*.—From Mr. Groom, of Clapham Rise, was a small bouquet composed of various sorts of *Anemone hortensis*, a better coloured though smaller kind than *A. coronaria*.—Mr. S. Widnall, nurseryman, Granchester, sent a fine specimen of *Fuchsia serratifolia*, nearly six feet high, and which had it not been rather damaged in travelling would have been still more interesting. It was awarded a Banksian medal.—Mr. J. Cuthill, of Camberwell, exhibited *Leianthus longifolius*, nearly allied to *Lisianthus*, and a fine sample of sound new ash-leaved Kidney Potato.

From the Society's gardens was *Achimenes patens*, a new and beautiful species from Mexico, it is the loveliest of the genus, the colour of the flower resembling *A. grandiflora*, but is much brighter and deeper. The specimens shown were received by post only a few weeks ago.—There was also *Campanula nobilis*, lately received from China, a hardy species producing large lilac coloured flowers.—The same collection also produced an Annual with light blue cruciform flowers, having white centres, which open in the morning, close at noon, and drop off soon after; this short duration of the flowers is more especially a matter of regret, as they are produced in abundance, and have in the morning a striking effect. It is named *Heliophila trifida*.—Associated with these were the handsome scarlet *Pitcairnia punicea*, *Cypripedium barbatum*, two species of *Oncidium*, a *Gloxinia*, the rose coloured variety of *Epidendrum macrochilum*; and though last, not least, a noble specimen of *Phalenopsis anabilis*, which had been obtained from Manilla, through Mr. Fortune; this, being most difficult to procure, will always be a scarce species.

CINERARIAS.—In a recent Number of the CABINET I noticed that when *Cinerarias* had done blooming, they were to have the tops dipped into tobacco-water to destroy any green fly which usually infest them, after which the plants were to be turned out of the pots into a warm sheltered border. Mine bloomed nearly all winter and spring, and about a month back I turned them out as directed; they have taken root into the fresh soil and are flourishing rapidly. In former seasons, being ignorant of this treatment, I usually lost a great part of my stock of old plants, now I perceive the great advantage of the recommended system of management, and shall take up the suckers, &c. in autumn as instructed. A. B.

GREEN FLY.—My Rose trees have been severely attacked with it this season; they had covered the buds and ends of the shoots before I discovered the pest. I immediately had a bucket full of puddle made of loam and water to the consistency of cream, and the ends of the shoots and buds were dipped into it; the liquid soon dried over the insects, and in three or four days I extirpated the race, with the exception of a few shoots which, by some casualty, had not been perfectly dipped; and discovering that a few stragglers remained, I had them dipped again, and now, a month since I performed the operation, the trees are perfectly clean and healthy. This mode of effecting a riddance is cheap, easy

of application, and accomplishes the purpose effectually. After the liquid has remained over the shoots for several days, it may easily be washed off by a syringing or use of the water engine, water-pot, &c. This method not only kills the insects it envelopes, but they cannot find food if even they escape such destruction, for the young tips of the shoots and buds which they feed upon are rendered unfit for their voracious appetites. Strong tobacco-water being prepared and dip the shoots will also answer, but it is more costly. Sulphur and Scotch snuff, or pepper and sulphur dusted wholly over, and underside too of the foliage, buds, &c., will partially effect the desired object, but nothing I have tried equals the mode I recently adopted.

JUVENIS.

TO DESTROY THE SCALE INSECT.—I have a few plants of the Oleandar and Camellias which for the last two seasons have been a good deal affected with the sea's insect; it struck me to try and cover over the parts attacked with a solution of starch, I did so, and in three days gave a repetition of the application; these attentions wholly answered the end contemplated, the plants are clean and healthy. I applied the starch by means of the syringe, it hurts no part of the plant, but appears in all respects beneficial.

SENEC.

SOAKING SEEDS TO HASTEN GERMINATION.—Seeds that are difficult to vegetate may be hastened two or more weeks by steeping them in water of about 80 degrees of temperature, and placing the vessel where the temperature can be so maintained. I keep the seed thus immersed for six or seven hours, then remove the vessel, strain the water from it, cover it over with a cloth, and remove it where it may be about 60 degrees of temperature, turning the seeds once or twice. As soon as the seeds appear to be bursting then take and sow them. I have adopted this method with many of the seeds I have received from the Cape, West Indies, and other remote places, and with much advantage.

CLEMENS.

HYDRANGEA JAPONICA.—In the notices on new plants in last year's CABINET, I observed the above plant recommended. I then procured a strong one, and it is now in profuse bloom in my greenhouse, having 24 large heads of flowers. The flowers in the centre of each head are of a pretty lavender-blue, and the barren outer portion of them a pure white, which produces a very pretty and striking contrast. It is a beautiful and noble looking object, and deserves a place wherever it can be grown. It is cheap, easy of culture, and readily increased.

FLORA.

ON SAVING SEEDS OF TEN-WEEK AND OTHER STOCKS.—I resided three years in Germany in one of the largest floral establishments, and where the best mode of obtaining double stocks was attempted I ever saw. We had many thousands of pots of the various kinds, and at the first potting had them in small ones, so kept till they showed a flower; and on ascertaining that the single ones had only four petals all such were destroyed, when it was discovered that they had five petals such were repotted into larger ones, and from such only were seed saved. The plants being removed to a distant garden, so that they might be kept free from impregnation with others; each class too of Stocks were kept remote, so that an intermixture of colours was prevented thereby.

RANUNCULUS BED.—The season is at hand when the bloom is over, take care not to allow the bed to be rained upon after the entire bloom is over. If the roots are not so protected, and heavy rain descends, they will be likely soon to vegetate afresh, and the least which would materially damage the next year's bloom. The roots must be protected by a canvas or other covering, and as soon as the foliage becomes yellow let the roots be carefully taken up and dried.

A PRACTICAL FLOURIST.

SLUGS.—Although the past season has been so very dry, yet early I suffered enormously in my garden from the devastation of slugs. I was told if I scattered over my flower, seed-beds, &c., a number of the leaves of the Elder-tree, it would effectually protect my plants. I did so, both in my flower-beds and seed-beds in my kitchen-garden, and the result has been fully satisfactory.

AN AMATEUR FLORIST.

PANSIES.—The best situation for a bed of Pansies is a spot where the morning sun shines till about 10 o'clock, or the afternoon sun after 3. They require a light rich soil, and a cool moist (not wet) situation. In such situations, with the ordinary degree of cultural attention, and by keeping a supply of young and vigorous plants, Pansies may be had in perfection.

ON PLACING GREENHOUSE PLANTS IN THE OPEN AIR DURING SUMMER.—When the pots are exposed to the heat of the sun and drying winds, the fibrous roots which are in quantity about the roots are much injured by it, although the interior of the ball of earth be in a moist condition. The result of the pots being so exposed during summer is soon apparent by the edges of the leaves turning brown, or many of the leaves becoming wholly so. The plan I have adopted for four years has been the following,—the plants have grown freely and been of a fine healthy green, blooming profusely. I made a bed of sifted gravel six inches deep, choosing the gravel that was about the size of horse-beans. This admitted the wet to draw away, at the substratum I had a few inches of coal ashes to prevent worms coming through. The surface being levelled, I placed the pots and filled up the spaces between with moss nearly to the rims of the pots. This method kept them cool but not wet. If this be inserted in the July Number of the *CAMPER*, it may be of service to some of those persons who turn out plants during summer.

CLERICUS.

ON CALCEOLARIAS, &c.—I am an ardent admirer of the Calceolaria, but having no convenience for keeping my plants in winter I almost always lose them. I wish to raise a few seedlings this year, and I want to know if I should have any chance of keeping the plants in a common frame, banking up the sides with earth, and covering against frost; and whether it would be best to place the pots upon a raised floor of boards, leaving a space beneath for the purpose of introducing a little heat occasionally to dry up damp. I should also be much obliged if you could tell me what is the best material for covering to exclude frost. [*Asphalt, Conductor.*] An early answer will oblige.

TYRO.

P.S.—The only situation in which I can place my frame is against a south wall, which is erected so that only the upper part of it receives any sun during the winter months.

[The frame will answer well if constructed, &c., as described. Why not elevate it so it may receive more sun in winter? Excess of damp and frost are the things to be guarded against. Early in spring additional warmth will be requisite to promote the growth of the plants; this must be effected either by keeping the sashes closed longer, or artificially provided, if a good bloom is to be realized.]

ROSES FOR FORCING.—I wish you would give a list of some of the best Roses for forcing, with variety as to colour.

J. C. L.

[The following kinds composed the very splendid collections in pots exhibited at the last Horticultural Show at Chiswick on June 13th; and our correspondent will readily observe which kinds are most prominent, &c.]

In the Amateurs' Class for 12, there were two exhibitors—Mr. Terry, gardener to Lady Puller, Youngsbury, and Mr. Slowe, gardener to W. R. Baker, Esq., of Bayforlibury. Mr. Terry sent the following:—*Tes*: Napoleon, pale pink; *Nina*,

pink; Madame Breon, pale rose; Comte de Paris, pale blush; Cels Multiflora, blush. *Gallica*: Boule de Nanteuil, shaded crimson; Henri Barbot, bright rose; La Moskowa, shaded crimson. *Bourbon*: Paul Perras, rose; Queen, blush. *Hybrid perpetual*: Duchess of Sutherland, pale rose. *Noisette*: L'amarque, white.—Among Mr. Slowe's plants were:—*Bourbon*: Edouard Denfosses, bright rose; Gloire de Paris, crimson, shaded with purple; Armosa, purple. *Tea*: Safrano, bright fawn; Elise Sauvage, pale yellow, orange centres; Nina, pink. *Hybrid perpetual*: Fulgorie, deep rose, tinged with purple; Pauline Plantier; Princess Hélène, deep purplish red; Queen Victoria. *China*: Mrs. Bosanquet, pale flesh.—In the Nurserymen's Class, for 18 varieties, there were four exhibitors, viz., Messrs. Lane and Sons, of Great Berkhamstead; Mr. Dobson, foreman to Mr. Beck, of Isleworth; Messrs. Paul and Son, of Cheshunt; and Mr. Francis, of Hertford.—Mr. Lane sent:—*Tea*: Adam, rose, very large; Diana Vernon; Moire, rose, shaded with fawn; Le Pactole, lemon, with bright yellow centre; Abricote, rosy fawn. *Bourbon*: Madame Nerard, blush; Armosa, purple; Celimène; Phoenix, reddish purple; Thérésita; Souvenir de la Malmaison, pale flesh. *China*: Abbé Moiland; Fabvier; Eugène Beauharnais, bright amaranth; Madame Bureau, white. *Gallica*: Boule de Nanteuil, large, crimson purple. *Provence*: Illustre Beauté. *Hybrid China*: Comtesse de Lacépède, silvery pale blush.—In Messrs. Paul's group were:—*Tea*: Roussel; Pauline Plantier; Julie Mansais, white with lemon centre. *Hybrid China*: Madame Plantier, white; Dombrowski; Velours Episcopal; General Kleber; Belle Marie. *Hybrid perpetual*: Madame Laffay, rosy crimson; Louis Bonaparte, crimson. *Gallica*: Reine des Français. *Hybrid Sweetbrier*: Madeline, white shaded with pink. *Alba*: Félicité Parmentier. *Bourbon*: Augustine Margot; Paul Perras, shaded rose; and Chenédolé, large crim-on.—Mr. Francis produced—*Hybrid perpetual*: La Reine, brilliant rose; Madame Laffay, rosy crimson; Madame Dameme, lilac rose; William Jesse, crimson and lilac. *Hybrid China*: Madame Rameau, bright crimson; Reine des Hybrides; General Allard, bright crimson; Velours Episcopal; Blairi No. 2; General Weber. *Noisette*: Smith's Yellow. *Gallica*: Laura. *Bourbon*: Charles Duval, bright rose; Augustine Margot; Armosa, purple. *Tea*: Niphotos, large white. *Moss*: De Metz, bright rose. As a single specimen, Mr. Slowe sent Pactolus, with thirty-six fine pale-yellow flowers. Mr. Dobson, a standard Belle Maria.]

ON MARSHAL VILLARS' (*Indica Bourboniana*) ROSK.—I have had a plant of the above Rose in my greenhouse two seasons; and though the plant appears healthy, and the flower buds strong, they never expand. It is planted in a mixture of loam and the manure of an old hot-bed. If some reader hereof will give me some information on the proper mode of treatment with this beautiful Rose, it will much oblige a Subscriber. Also any information as to what is the cause of the shoots of the Fabiana imbricata rose constantly withering after having flowered.—June, 1846.

ON TOBACCO WATER.—An Old Subscriber wishes to ask Mr. Harrison, where there is not the convenience of getting tobacco water from a tobacconist, to mention the solution he recommends for syringing plants in preference to fumigating them when attacked by the green fly, what quantity of tobacco would be requisite to make water at home of a proper strength to dilute in the same way, viz., what quantity of tobacco to a gallon of water, whether it should be infused in hot or cold water, and whether it is necessary for this purpose to have the very best tobacco? Mr. Harrison's notice of this question in his next Number, if time allows, will much oblige.

26th May, 1846.

[Either fumigation with tobacco, or dipping the plants in tobacco liquid, or even syringing the plants under the leaves as well as over, will answer effectually. The former is more expensive, and sometimes attended with danger; the dipping is free from it. We obtain our liquid from the tobacconist, at from 8d. to 1s. per gallon. The liquid is very strong; so that not having to prepare it, we

never tried the exact proportions. However strong, it does not injure even the tenderest shoots. An experiment or two, with a proportion, will suffice to show what it will effect on the insect. Boiling water poured upon the tobacco will produce the stronger liquid in the shortest time. It must be cool when applied to the plant.]

ON VERONICAS AND IRISES.—I should feel much obliged if some of your correspondents would give a descriptive list of twenty-four best hardy Veronicas, also a few of the best Irises, in an early Number.

June 8, 1846.

A. B., A SUBSCRIBER.

STOVE AQUATICS.—One of the greatest errors in cultivating stove aquatics, is the subjecting of the roots to occasional chills of cold water. Nothing can be more opposed to healthy growth and the attaining of a flowering state. This state of things is usually owing to the circumstance that aquatic plants are placed in the tank from which water is used for the various purposes of watering, syringing, &c., and, the deficiency being supplied by additions of cold water, the plants are, in consequence, submitted to sudden checks in their development. This ought not to be; a regular and even warmth of about 80 degrees, should be kept up, and the plants will then be enabled to grow without hindrance, and attain the degree of perfection of which they are susceptible.—*Hort. Mag.*

NEAPOLITAN VIOLETS.—Parties desirous of having new beds of Neapolitan Violets in flower next winter, may be reminded that the present is a very seasonable time for propagating this favourite flower. Let stout runners be selected and planted in rich soil. They may be expected to become good plants by August or September. A mixture of peat, sand, and loam, will ensure their success.

GAS-TARRING WALKS.—Happening to be at Margate a few days ago, I observed that the public walk upon the cliff was covered over with gas-tar. Upon inquiry, I found that this plan had answered perfectly upon the gravel-walk in the centre of the pier, which has been done some years, is quite smooth and hard, and has all the appearance of being covered with Claridge's asphalt. I consider this plan of gas-tarring walks a great hit. They are thus made dry in all weathers, the worms are destroyed, no weeds can grow, and all trouble of keeping them in order is saved. The gas-tar is applied hot to the gravel walk with a brush, and dry sand is sifted over the tar to harden it. I should say that some powdered quick-lime might be added to the sand with advantage. Three or four coats are required, which may be renewed every two or three years as needful. I laid down two barn-floors in 1839 with Claridge's asphalt, half-an-inch thick. They are now in as good a state as when first done, and have answered my wishes in every respect. They cost me one shilling per square foot, which included a heavy laud-carriage for the materials. After having seen the gas-tar applied to the walks at Margate, I should now not go to the expense of laying down a barn floor with Claridge's asphalt. I should prepare the floor with a solid concrete of broken stones, and then apply three or four coats of gas-tar, with sand and quick-lime sifted over the tar. I think it would pay a farmer to prepare in this way all his homesteads. He would save all loss by rats, mice, and dampness. In using gas-tar as a covering for boards, I have found great advantage in mixing a little resin with each kettle of gas-tar. Thus mixed, it will last longer, and have more body and glossiness.—*H. Morris, in Gardeners' Chronicle.*

ON POTTING PLANTS.—Plants that have not for some time been shifted or repotted, will require much care and attention in performing it; the soil should be shaken from the roots; if it is dry and hard it should be soaked in water, so that it may become pulverized and fall freely from them; the roots should be examined to see if they are in a good state of health, and the unhealthy ones

should be cut away, and others shortened back. This done, and having some good soil—not too wet, nor yet too dry, but moist, and some porous pots and crocks in readiness, the crocks are to be placed over the hole at the bottom of the pot carefully, so as to prevent the ingress of worms; then some coarse soil, then a little finer, next place the roots of the plant, and lay them out carefully; then put in the soil, and give the plant a gentle shake, so that the soil may get between the roots; keep the collar of the plant a little above the surface. The pot should not be filled with soil, as it would throw off the water. The soil should not be pressed hard, nor the pot knocked hard on the potting board, only just sufficient to settle the soil about the roots. If the plant requires support do it by means of a neat stick, and take the plant to its stage or its place for growth, and give it water enough to moisten the whole of the soil. When plants are watered, they should always have enough to penetrate the whole of the soil. In shifting plants from one pot to another, care should be taken not to destroy the roots; take off the surface of the ball, and carefully take out the old crocks, and pot it as before stated; work in the soil between the ball and the pot by means of a stick. Plants are more or less nourished and augmented as the water which is given to them contains a greater or smaller quantity of proper terrestrial matter in it. There is a considerable quantity of this matter contained both in rain, spring, and river water; spring and rain water contain pretty near an equal quantity of vegetable matter, river water more than either of them. Water is not the matter that composes vegetable bodies, it is only the agent by which it is conveyed to them, and by which it is introduced and distributed to their several parts; but water is not capable of performing this office to plants, unless assisted by a due quantity of heat, and this must concur, or vegetation will not succeed. It is not possible to imagine how one uniform homogeneous matter having its principles or original parts all of the same substance, constitution, magnitude, figure, and gravity, should ever constitute bodies so egregiously unlike in all those respects as vegetables of different kinds are, nay, even as the different parts of the same vegetable. One plant carries a resinous, another a milky, a third a yellow, a fourth a red, juice in its veins; one affords a fragrant, another an offensive smell; one is sweet to the taste, another bitter; one is nourishing, another poisonous; one purging, another astringent, &c. Soil in its natural state is filled with the remains of organic bodies which decompose and yield nitrogen, or become converted into carbonic acid. Nitrogen and the carbonic acid incessantly forming below the surface of the earth, enter freely into the roots, and, combining with water, and such other principles as may already have been formed there, they ascend the stem, the carbonic acid decomposing to a certain extent as it passes along, and giving, apparently, its oxygen to the spiral vessels, which convey it into other parts of the system; when it reaches the leaves it liberates its oxygen completely, and leaves its carbon to unite with the tissue of vegetation, or to enter into new combinations with water, atmospheric air, or other elements that it finds itself in contact with, whence proceed the gummy, amylaceous, resinous, oily, and other products peculiar to the vegetable kingdom. The life and growth of a plant greatly depends upon the system of potting and watering; if the soil is not kept open, the water cannot penetrate it, and then the whole mass becomes sour, and the plant will show signs of sickness: although plants require a constant supply of water, they do not like the soil stagnated; when such is the case turn out the plant and shake off the sour soil, and repot it in some of a more porous quality. In watering, it is generally necessary that the soil should be nearly dry before water is again administered. We hardly know of any fluid in all nature, except fire, whose constituent parts are so subtle and small as those of water are; this enables them to enter the finest tubes and vessels of plants, and to introduce the terrestrial matter, conveying it to all their parts, whilst each, by means of organs it is endowed with for the purpose, intercepts and appropriates to itself such particles as are suitable to its own nature, letting the rest pass on through the common ducts.—*J. Cooper.*
Read before the Long Ditton Gard. Soc.

ROELIA CILIATA.—This is a fine old greenhouse plant, which has been neglected for more novel favourites. I know of no plant that merits more attention

than this pretty shrub, which is of a dwarf habit of growth, and produces handsome campanulate brilliant blue flowers. Being a native of the Cape, it requires treatment similar to that given to Heaths, and contrasts well with the lighter colours of that beautiful family. It should be potted in a light rich soil, using two parts of rough fibrous peat, one part of leaf mould, and one of equal parts of silver sand, and well rotted cowdung: a few lumps of charcoal should be used in the potting, as no plant requires or enjoys a good drainage more than this. It flourishes in a well-ventilated pit or greenhouse; if grown in the latter, it should be near the glass. To grow dwarf handsome plants, the points of the shoots should be well stopped in the spring; it will then break freely, making numerous shoots, all of which will be crowned with flowers by July, when it will be a lovely object, and amply repay the cultivator for the pains taken.—*M. Busby, Stockwood Park. (United Gardeners' Journal.)*

ON BRITISH FERNS.—By the following simple method I grow, very successfully, the British Ferns. In winter I place them in a cool frame, or pit, and keep them dry. In February I remove them into a pit, where I give them a slight heat, and by the end of March they usually have pushed afresh; I then remove them into the greenhouse, and there they flourish through the season. At the end of September, I replace them in the cool frame or pit. I increase them by division in August, planting them in broken pots, charcoal, and turfy-peat.—
C. C.

ON MOIST ATMOSPHERE IN PLANT HOUSES.—Various are the means employed to produce atmospheric moisture in hothouses, and many of them are, in my opinion, inefficient, and also inconvenient. I am persuaded that a sudden hot steam is at all times inimical to the well being of vegetation in general; and no wonder. Such a steam is frequently produced by dish covers, on the hotter parts of pipes or flues, or by pouring water on, or syringing very hot surfaces; and although I am a great advocate for much atmospheric moisture in general, I must protest against such plans. I am of opinion that what is wanted in general is, such a character of air as will guarantee the leaves of the plants from any tendency to desiccation, especially during the day; whilst at night there should be even a slight deposit of moisture condensed on the leaves; some few cases, such as conservatories, &c., excepted. All floors to houses should be grated, and, if convenient, a body of porous material should be placed beneath, in large lumps; perhaps masses of coke or charcoal would answer the purpose; water frequently poured thereon would yield a wholesome vapour at all times, although in a slow ratio. In addition to this, I would for most purposes have the return pipe in a cemented brick trench, with a supply of water at one end, and a ready escape, by plug or tap, at the other.—*Gardeners' Chronicle.*

ON GRAFTING THE CACTUS.—In making use of the word Cactus, I include all the divisions of the family which formerly bore the name.

STOCKS.—I have used *Cereus triangularis*, *C. speciosissima*, *Opuntia Braziliensis*, *Pereskia acullata* and *longispina*, but find none equal to *Cereus speciosissimus*; it is much hardier than any of the others, and not so liable to damp off.

The best method of preparing the stocks is, in February to take some of the strongest shoots, from six inches to six feet, as any length will do; then with a sharp knife remove the eyes for four or six inches from the bottom; this prevents the stocks making suckers. Let them remain in a cool place for a few days to dry, to prevent damping; then place each cutting in small pots of good rich sandy loam, and filling in a good bark bed, withholding water for ten or twenty days. When the roots protrude through the bottom of the pots, remove into larger, which, when well established, are ready for grafting.

The operation is performed by taking off the head of the stock where the columnar axis has become firm, dividing it with a sharp knife to the depth of a quarter of an inch, being careful not to bruise the soft outer coat. Grafts of any

length, from six inches to eighteen inches long, will succeed; those of last year being the best. Leave the end of the graft wedge-shaped; that is, the columnar axis three-fourths of an inch, clearing away all the soft fleshy part to that length; then press it firmly into the stock until both edges meet, passing a spine of *Opuntia longispina*, or some other strong *Opuntia*, through the stock and graft, to keep it from rising out of its place; bind a little soft moss round the part operated upon, and keep it shaded; in a week or ten days it will have taken hold, provided it is properly performed; in the course of a month the moss may be removed, and the graft cut to four or six eyes, if a bushy regular head is required. Plants on stocks six feet high look the best trained on mushroom-shaped trellises. I have found grafts with several shoots of from six to twelve inches each succeed as well as smaller ones, provided the stocks are healthy. I have a plant at this time of *Epiphyllum speciosum*, grafted on *Cereus speciosissimus* Sept. 4, 1840; the stock is six feet high, and the circumference of the head twelve feet; many of the branches or leaves four feet long.

TO RAISE ROSES FROM SEED.—Having succeeded in raising some beautiful seedlings, I forward the particulars of my method.

In October, I collected the ripest hips of the red officinal, Portland, and velvet Roses. These three sorts seed freely. They were growing among the finer sorts, which seldom ripen any seed. After gathering the hips, I laid them on a stone-paved floor, and rubbed them under a brick, to soften the seed-vessels; then I rubbed them one by one between my fingers. Of this mass I had about two quarts. I sowed the seed immediately, on a wall border, with an aspect opposite the sun at eight o'clock in the morning. The soil was sandy loam. I covered them half an inch deep, and added an inch of sawdust to keep the bed from caking in winter. I removed the sawdust about the middle of the following March, and in the end of that month the plants began to appear; but in a few days I found that the small birds picked them up as soon as their seed-leaves appeared above ground. I put hoops over the beds, and threw a net over them, so as to exclude the birds. The plants continued to come up till September, when mildew attacked them, and in a short time deprived them of their leaves; by counting the plants on a square foot, I found that the bed contained about 800. As winter set in I sifted some fine sand among the plants; but, in spite of all my care, the weakest of them died before the next March. When I took them up, the living plants amounted only to about 100. I planted them in rows a foot separate each way. A few more died; but what remained grew vigorously, and stood their second winter without a death. I did not at all prune them, and the following summer they have all grown well.

ON THE CULTIVATION OF *ANTHOLYZA ÆTHIOPICA*.—*Antholyza Æthiopica* is an old acquaintance of mine, and I have never seen or found any difficulty in blooming it, treated precisely the same as *Ixia Babiana*, and that class of Cape bulbs, which is directly opposite to the above suggestions. Among other bulbs, some two or three years ago, were some of *Antholyza Æthiopica*, in pots. In the month of September of that year, I shook them out of their pots, &c., where they had apparently stood several years, and I re-potted them in some fresh compost, of equal proportions of peat and loam, with an eighth of white sand (more or less peat and sand, in proportion to the texture of the loam); they were then placed in a cold frame, with other things of their class, with the lights off day and night at first; and, as they began to grow, and the nights got colder, shut up at night, and always, from a superabundance of wet, watered only as they required it. In this situation they were kept as late in the fall as possible, protected by mats from frosts at night, until the season began to have a wintry aspect, when they were removed into a cool part of the greenhouse, where they had plenty of light and air. In this way we have had, in the month of March, for the last two years, *Antholyza Æthiopica* flower very freely. Although not the most splendid genus of the order, it is really very

curious and handsome; we have also had several species of *Ixias*, *Sparaxis*, *Gladiolus*, *Watsonia*, &c. bloom splendidly, treated in the above manner. When done flowering, and as soon as the grass or leaves begin to decay, they are placed on shelves, or any other convenient place, to be kept in their arid state until September, when they should again be annually re-potted. Treated in the above manner, I have never known any of the Cape bulbs to fail blooming, and I believe the Iridæ include all which are technically called Cape bulbs. I do not wish to be understood as claiming any originality in my system of treatment, being nothing more than I have seen practised successfully for many years, and, consequently, well known to most practical, and all scientific gardeners. But, being anxious my old acquaintance *Antholyza Æthiopica* should not be rejected as worthless, and fearful lest some inexperienced amateur, who may perchance get a few Cape bulbs, may be induced to experiment on high temperature, &c., in their treatment, I was induced to forward for your consideration the above remarks.—*Hovey's Magazine*.

ON PROMOTING THE GERMINATION OF SEEDS.—Many plans have been recommended and adopted for assisting and ensuring the growth of those seeds which are of difficult germination—such as steeping them in solutions of iodine, chlorine, &c.—and happily with considerable success. The fact, is, indeed established, that by certain chemical stimuli, the tardy and latent vital principle of seeds may be excited into action. We must not for a moment, however, confound and degrade the operation of the vital principle itself into mere chemical action; the chemical phenomena are developed as soon as the wonderful operations of this principle are observable.

Of all chemical agents, perhaps none exert a wider and more powerful influence than light. In the vegetable world its effects are manifest and important, the very colour of plants and flowers being dependent on it. When it is withheld, colour is lost, as in the familiar example of blanching celery. I make these general observations respecting the great influence of light on vegetation, in order to bespeak attention to the contrivance I now wish to recommend for promoting the germination of seeds—the application of the chemical stimulus of light. It is simply the placing a square of violet-coloured glass over the top of the flower-pot in which the seeds are sown. It will be found that seeds exposed to the influence of this violet-coloured light will vegetate more quickly than when covered with common unstained glass, or with glass of any other colour. The explanation is this:—when a ray of light is transmitted through a prism, it is separated into its seven component colours, viz.—red, orange, yellow, green, blue, indigo, and violet. Now it is proved by experiment that the violet-coloured ray possesses by far the greatest power of producing chemical action; next to it the indigo, then blue, green, and so on, up to the red ray, which possesses no chemically acting power whatever. On the contrary, the red ray has the greatest heat-giving power, while the violet, the opposite end of the spectrum, exhibits scarcely any. As chemical stimuli are known to promote the germination of seeds, this of the violet-coloured ray of light, as transmitted through a square of stained glass, will be found of the greatest possible efficacy. Mr. Robert Hunt, in his experiments on the effects of different-coloured light (viz., red, yellow, green, and blue) on the vegetation of seeds has manifestly stopped short of the truth. Had he proceeded to the indigo, the quickening effects would have been much greater, and if the violet-coloured ray, they would have been tenfold. For practical purposes, it will of course be much more convenient to use squares of violet-coloured glass, placed on the top of the flower-pot, than transmitting the light through a bottle containing a violet-coloured fluid, as in Mr. Hunt's experiments; moreover, the mere mechanical effects of a square of glass so placed are very material in assisting the growth of seeds, by preventing the evaporation of water from the soil, and thus preserving a uniform state of moisture.—**F. R. HORNEN.**—*Gardeners' Chronicle*.

ON USING CHARCOAL FOR POT PLANTS.—A Practitioner begs to call the attention of plant growers to the admixture of pieces of charcoal in the compost.

Since the time that Mr. Barnes, of Bicton, made known his application of it in such successful plant culture, I have adopted it, and with a most astonishing improvement upon my plants. I find, however, it is the more useful when a very free bottom drainage is prepared.

ON COMPOST FOR PELARGONIUMS.—A Constant Subscriber will be obliged by a little information on the subject of growing Pelargoniums. What is the best soil and dung to pot in, and what is the best liquid to promote a vigorous bloom. I want to grow them in a cottage for exhibiting at the floral shows.

D. SAXON.

The following modes of treatment are what two of the first-rate growers for showing gave us, and they will give D. S., as well as others, useful information for growing the plants in any situation which circumstances admit:—

“The cuttings are placed in an open border, about the middle of July, and the situation selected is one fully exposed to the mid-day sun. In about six weeks they are rooted, and then potted into 60-sized pots. The pots are placed in a shady situation, on boards or slates, and in three weeks removed to a more exposed and airy situation, when the wood becomes hard. They remain here till nearly the end of September, when they are taken into the house for the winter. At this time the plants are stopped at the third or fourth joint, and they are at the same time shifted into 48-sized pots. The soil is a turfy loam and sand. After this shifting, but little air is given for about eight or ten days; but after this time as much air is again allowed as the state of the weather will admit till about the beginning of December, when the pots will be well filled with roots, and require to be again removed into 32 sized pots. Bone dust is added, but with caution; and never near the surface of the soil, because it is of too drying a nature. The plants are again stopped, and the temperature of the house is maintained at about 45 degrees; at the end of ten days it is allowed to fall to 42 or 40. The flues are damped two or three times every night, to keep the air of the house moist, allowing top air when the weather is favourable. About the middle of February, the plants intended for large specimens are again shifted into 42-sized pots; and the vigorous sized kinds require a size larger. At this time each shoot is tied separately to a proper stake. Fires are discontinued about the beginning of April, and the plants are syringed over head three times a-week, and the house closed for the night. This treatment is continued for about a month, the house being damped every evening, and the top sashes opened the first thing in the morning, and as much air allowed during the day as can be given with safety. When the plants show bloom they are freely watered and shaded with canvas. At the time of housing the plants, the dead leaves are carefully removed, and when the green fly makes its appearance, a fumigation of tobacco is used, care being taken that the plants are in a dry state at the time; they must be well watered over head in a day or two afterwards. When the flowering season is over, the plants are removed to an exposed situation for a fortnight, till the wood is hard, when they are cut down. Those plants intended as specimens the second year after heading down, are placed in a sheltered situation, where little water is given, and when the shoots are an inch long, they are shaken out of the pots and planted in others two sizes smaller, by this treatment they are kept more healthy during winter. When thus potted, they are placed on a stage in a shady situation, and removed to the house “at the proper time,” and treated during the winter as already described. The plants intended for exhibition are occasionally watered with liquid manure or guano, and syringing overhead is discontinued. Gauze blinds are used, by which bees are prevented entering the house to injure the bloom, and are on no account allowed to flag by exposure to the sun, or for want of water. It is especially recommended to commence the training of the plants at an early period of their growth, while the shoots are young and pliable. By early training, the shoots acquire the desired form, and fewer stakes are therefore required. The flowers are arranged so that there is an equal distribution of blooms over the head of the plant; to effect this, small willow twigs are used. Practice alone can teach the art of preparing flowers for exhibition. The less art is used the better,

and the means should always be kept out of sight. The compost I use is the following:—Two barrows full of good maiden loam, with the turf, one ditto well rotted cow dung, three years old, and one of rotted leaf mould. This requires to be frequently well turned over in winter, to destroy the worms and insects. One peck of silver sand, and one ditto of bone dust; for the winter repotting, a little more sand is added.”

“ I strike the cuttings about the beginning of June; or sooner, if the plants will bear cutting. As soon as rooted, they are removed into 60-sized pots, and set in a shady situation on boards or slates, or in a cold frame. When rooted, they are removed to an open situation, and as soon as the plants will bear the sun without flagging, they are stopped. In September they are repotted into 48-sized pots, and at this time I commence training. In December and January those that are sufficiently strong, are again shifted into 16-sized pots; in these pots they are allowed to bloom. About the middle of July or beginning of August, they are headed down and set in a shady sheltered situation; and when the plants have shoots near an inch long, the soil is nearly all shaken from the roots, and they are again repotted into the same sized pots. As the shoots are formed they are carefully thinned out. In the greenhouse, the plants intended for exhibition are kept four feet apart; the front sashes are kept open on all convenient occasions. In November the plants are stopped, and a stake put to each shoot. The leaves are thinned out to allow the air to circulate freely. In December and January, the strongest plants are again selected and potted into 8-sized pots, and at this time additional heat is applied to enable the plants to root rapidly. In February, they are syringed in the afternoon, but sufficiently early to allow them to dry before night. In March they are again repotted in 2-sized pots, water is now very liberally supplied. When the flowers begin to open, a shading of cheese-cloth is used on the outside of the house. Air is admitted before the sun has much power on the glass, and this is found to prevent the attacks of the green fly. The success of all the other operations depends on the mode of applying fire heat. The fires are lighted at 3 or 4 o'clock in the afternoon, allowed to go out about 9 or 10. They are again lighted about 3 or 4 in the morning. The thermometer during the night is kept at 40 degrees or 42 degrees Fahrenheit. The soil is prepared thus—a quantity of turfy loam is chopped and laid up in a heap, a quantity of fresh stable litter is then shaken up and laid in the form of a mushroom bed. If the weather is dry at the time, the manure is well watered; liquid manure and the steam or ammonia is prevented from passing off by a covering of slates. In this state it is allowed to remain fifteen or sixteen days, and is then mixed with about an equal quantity of fresh loam, and when the mixing is completed, the heap is at last covered with loam. At the end of a month or five weeks it is turned over three or four times, in order that the dung and loam may incorporate well together. In twelve months it is fit for use. To two barrowfuls of this compost is added one of leaf mould, and a peck and a half of silver sand.”

A LIST OF THE COLLECTIONS OF PELARGONIUMS EXHIBITED AT CHISWICK AND REGENT'S PARK SHOWS, &c.—A Country Florist will be obliged by an early list of the names, &c., of the new Geraniums exhibited at the London Shows.

[We shall give a particular descriptive list in our next number, in the mean time we give the names of those shown at Chiswick at the last exhibition, and which were unusually superb:—

Twelve new and first-rate kinds, Mr. Cock, of Chiswick—Lucifer, Orion, Mars, Ate, Pearl, Hector, Rosy Circle, President, Negress, Zenobia, Margaret, Desdemona.

Mr. Dobson, of Isleworth—Queen Pomare, Orion, Rosy Circle, Adolphus, Arabella, Competitor, Isabella, Hebe's Lip, Hindoo, Othello, Margaret, Gigantic.
Mr. Gaines, of Battersea—Pamela, Agrippina, Hector, Arabica, Duchess of Leinster, Medusa.

Mr. Catleugh—Orion, Pearl, Hector, Magog, Agrippina, Rosetta Superb.
The above are the new kinds.

The following were shown in general selections:—Twelve kinds, Mr. Cock—Orion, Duchess of Leinster, Queen Agrippina, Rosy Circle, Sir R. Peel, Shield of Achilles, Hector, Repeal, Duke of Cornwall, Emma, Rosetta, Katinka.

Mr. Robinson—Duke of Cornwall, Aurora, Priory Queen, Krectum.

Mr. Dobson—Pulchellum, Marcus, Isabella, Marc Antony, Zenobia, Ragged Robin, Mustee, Rosy Circle, Matilda, Pauline, Margaret, Orion.

Pinks.—Mr. Turner's collection, first prize—Norman's Henry Creed, Hale's Queen of England, Turner's Masterpiece and Sir H. Smith, Norman's Defiance, Eclipse (Brown's), and Garland; Harris's Dauntless, Holmes's Coronation, Unsworth's Omega, Collis's Majestic, Lord Valentia, Garratt's Alpha, Wilmer's Prince of Wales, Weedon's Victoria, White's Warden, Cousin's Little Wonder, Ward's Great Britain, Caul's Criterion, George Glenny, Melona, Jones's Huntsman, and Heariston's Prince Albert.

Pelargoniums (seedlings), blooming first time in 1846.—*President*, *Gem*, *Centurion*, and *Cassandra*.]

Floral Operations for July.

GREENHOUSE plants of most kinds now strike readily by cuttings, the new wood being somewhat firm. Those annual plants that have not yet been transplanted out should now be done, in cloudy and showery weather, keeping as much earth to their roots as possible, and supporting those with sticks that require it; they will bloom well in August and September. Tender annuals may now be turned out into the flower borders; they should be refreshed at least once a day with water, and if the sun is very powerful they will require to be shaded, till they have taken fresh root; those that remain to flower in pots must be frequently supplied with water, repotting, &c., as they require it. Finish transplanting perennial and biennial plants sown in spring. Double Sweet Williams should now be laid. Those Carnations in pots require particular attention in keeping them well supplied with water, and to support the flower stems by tying them to neat green sticks with bass; pipings of the young shoots may still be put in; those cut at the second or third joints make the handsomest plants; they should be kept shaded from the hot sun, otherwise they will soon get scorched and dried up; they should be finished layering by the middle of the month. Pinks may still be propagated by pipings as in June. Auricula plants in pots will require a little water frequently in hot weather, taking care not to pour it on the heart of the plant; all dead leaves should be removed; if any of the plants are attacked with the green fly they should be smoked with tobacco, or sprinkled with tobacco water. Transplant seedling Auriculas and Polyantheses, and keep them in a shady place. Pansies may still be propagated by slips of the young shoots; the seed should be sown either in pots or borders, in a shady place, and well supplied with moisture. All sorts of Roses (with the exception of the China and its varieties) should now be budded. Many sorts of bulbous-rooted plants, as Ranunculuses, Tulips, Anemones, &c., which will now be past flowering, and their leaves decayed, should be taken up, well dried, cleaned, and the offsets separated, and put in a cool, airy place, till the planting season again commences. The double scarlet Lychnis, and such like plants, should be propagated by cuttings. Geraniums may now be increased by cuttings. Dahlia cuttings will easily take root if placed in a brisk heat. Continue to cut box edgings and hedges, where it was not done last month. Mignonette now sown will bloom well in September. Pelargonium cuttings should now be put in, so as to have well-established plants for blooming next year, or for growing in next year, so as to prepare them for extra specimens for the year following. Carnations, &c., where there are more than three buds upon a stem, take off the others, in order to improve the size. If attacked by green fly use immediate remedy by tobacco water, or loam and water in a liquid state.

1. The first part of the book is devoted to a general introduction to the subject of the history of the world, and to a description of the various methods which have been employed by historians in the pursuit of their science.

2. The second part of the book is devoted to a description of the various methods which have been employed by historians in the pursuit of their science.



1. *LIPARIA PINNATIFIDA.*

2. *CALYSTEGIA PUBESCENS.*

THE
FLORICULTURAL CABINET,

AUGUST 1st, 1846.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I. EMBELLISHMENTS.

1. LIPERIA PINNATIFIDA.

THIS pretty little green-house plant from South Africa, forms a slender neat bush, blooms very freely, and will readily flourish in any light good soil. It is also well adapted for beds in the summer flower garden. It may be had at the principal nurseries.

2. CALYSTEGIA PUBESCENS.

Mr. Fortune, the collector sent out by the Horticultural Society, to China, sent home this new bindweed, during the past year; and as we have already noticed it at p. 115, we will only add here, that we find it to grow freely in the *open border*, forming a very handsome climber, and as it may be increased with the facility of the tribe, we have no doubt it will soon become very generally cultivated.

ARTICLE II.

SOME REMARKS ON THE AMOUNT OF MOISTURE ABSORBED
BY PLANTS.

BY MR. J. TODD, DENTON GARDENS, LINCOLNSHIRE.

As the chief operations of horticulture are calculated either directly or indirectly to influence the vital actions of plants, it is obvious that

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the results of our proceedings will be successful in proportion to their accordance with the economy of vegetation. Hence I would impress upon the minds of amateurs and gardeners in general, the necessity of acquiring some knowledge of, and acting upon, strictly physiological principles. This, and this only, will elevate their pursuits something higher than the mere work of chance, and enable them to calculate with certainty upon the results of their operations.

My intention is to submit to the readers of the CABINET, a few popular remarks elucidative of the *science* of Horticulture. The amount of fluid absorbed by the roots of plants, varies according to the constitution and habits of the species; the humidity or dryness of the surrounding atmosphere, and also the presence or absence of solar light. Most herbaceous and quick-growing soft-wooded species, require a far greater quantity of moisture to keep them in a healthy condition, than those whose wood is of slower growth, and firmer texture. It would have been difficult to have given a healthy young Vine, Fig-tree, Balsam, Calceolaria, Cockscomb, or Scarlet Pelargonium, too much water during the bright dry days of last month (June), whereas an Acacia, Hovea, Eutaxia, Lechenaultia, &c., would have soon become sickly, and died under similar treatment. Now this great difference between the absorbing powers of the former and latter species of plants, results (as above intimated) from their peculiar constitution and habits. The rapid growth of the former necessarily involves the taking up of a large supply of fluid by the roots, to be converted into nutritious juice; which conversion is chiefly effected by the leaves under the influence of light. Here by a wonderful process it is elaborated, the superfluous portion being principally exhaled from their breathing pores (stomata), chiefly situated on their under surface, and the remainder returned (now termed proper juice) for the formation of new tissues, and the consolidation of that already formed. The process of vegetation in the latter tribe of plants is precisely on the same plan, though on a smaller scale; these roots are less numerous, and have fewer fibres and sponglets; these breathing pores are also much smaller, and not nearly so many on a given space. Hence it will be perceived, that the small amount of moisture necessary to the support of these, in proportion to such as the former mentioned plants, is owing to their incapacity to dispose of it. So in their culture great care should be taken not to administer a

larger supply of this very necessary element, than they have the power to consume, otherwise they will soon assume a sickly appearance, and their roots become black and rotten by stagnation. And again in making a selection for window culture, the generality of such plants ought to be rejected, as in such situations dust is mostly generated, which soon chokes up their digestive organs, and renders them inadequate to perform their functions; under which circumstances it is impossible to keep the plants long in a healthy condition. In regard to the state of the atmosphere, much also depends. If it be highly charged with moisture, the exhalations of watery particles from the surface of the leaves, will be necessarily impeded, and therefore the absorption by the roots, as the one is always in proportion to the other. And this is the reason why cuttings strike much more freely, and certainly in a moist atmosphere, than in a dry one. In the former case the quantity of fluid exhaled is so small (particularly if the atmosphere is confined), as not to exceed the quantity imbibed by the severed ends of the young shoots, whereby an equilibrium is established, and the life of the individuals sustained till such time as they have made roots of their own; whilst in the latter, the quantity passed off is so great in proportion to that taken up by their cut ends, that their leaves soon become flaccid and dried up, and the cuttings not unfrequently die. And should they even overcome the shock caused by this undue demand upon their crippled energies, they will have made less progress, and be in a much worse condition at the end of three months, than they would have done at the end of three weeks, had due attention been paid to their constitutional wants. The reason why sun-light so greatly accelerates the amount of moisture sucked up by the roots of plants, is due to its influence over the leaves, whose breathing pores or mouths it causes to open to the widest extent, and consequently facilitates the liberation of those aqueous particles which are ever being evolved during the process of elaboration. Under such circumstances, therefore, a plentiful supply of water is indispensable, or the drooping of the plants will be the consequence; and even this will be insufficient in the case of newly-planted and weak subjects, which, in addition to plenty of water, should have the scorching rays of the sun partially intercepted by some kind of shading, as thin garden-mats, nets, boughs of trees, &c., as circumstances may suggest.

Should the above remarks meet with your approval, they will be

succeeded from time to time by sundry papers, calculated (it is hoped) to interest your readers, and elucidate some particular branch of their pursuits.

[We hope to be favoured with the promised communications from our intelligent Correspondent.—CONDUCTOR.]

ARTICLE III.

ON PROPAGATING ERICAS FROM SEEDS, AND GENERAL CULTIVATION.

BY A PRACTITIONER.

I AM glad to observe that this very highly interesting genus of plants is again becoming extensively cultivated. I think too upon a more successful system of management than was practised a dozen years back. I herewith forward the mode of management I have pursued, with the greatest success.

PROPAGATING ERICAS.—This very interesting and numerous genus is best cultivated in a house dedicated exclusively for themselves; and where such is the case, such house is known by the appellation of heath-house or heathery, and to be complete should contain from about two hundred and fifty to three hundred species, which will afford a considerable share of bloom throughout the year. Heaths are comparatively of late introduction, for we find that in Miller's time, few were known, and those only of the hardy kinds: none of the Cape species being at that time introduced. To his late Majesty George the Third we are considerably indebted for the introduction of this charming genus of plants.

That monarch, at his private expense, sent Mr. Mason, a most assiduous collector, two voyages to Africa, for the almost express purpose, and by his exertions, the first collection of Ericas in this country was formed. The late venerable Mr. James Lee, in company with Mr. Kennedy, of the Hammersmith nursery, may be looked upon as the first professional characters who embarked in this speculation, and their collection was looked upon as unrivalled in Europe. These were not only the first commercial collections formed, but there also the mode of culture first devised, which has been the means of disseminating them throughout Europe, chiefly under the management and direction of our late ingenious, although unfortunate friend, Cushing. Subsequent collectors have added considerably to this

genus, and although last, but not least, that indefatigable young botanist, Bowie, who not only visited Africa with a view to discover new species, but also to draw conclusions from their natural habits, to enable us to improve their culture; and from the observations made by him, and freely communicated to us as well as to others, there is no doubt, that had he survived his second journey, this genus, which hitherto has been considered difficult to propagate and cultivate, would have been much improved by his valued observations. A genus so interesting, and, we may say, so long fashionable, must necessarily have attracted the attention of home cultivators; and from the profusion of flowers which most of the species produce, and their parts of generation being for the most part so perfect, we need not be surprised at the many hybrids which the care or curiosity of the cultivator has produced. To the valuable exertions of the Hon. and Rev. W. Herbert, we are primarily indebted for many plants of this description; and from his paper on this subject, in the Transactions of the Horticultural Society, we are led to infer, that this promiscuous impregnation goes on to a considerable extent at the Cape, where millions of them must be in flower at the same time.

Heaths, like most other plants, propagate themselves from seed, although most of them cultivated in this country have hitherto been originated from cuttings; few from layers, and so far as we know, none have been propagated by grafting, or similar processes. A considerable portion of them ripen their seeds with us, and there are annual importations of seeds from the Cape. Those seeds ripened in this country vegetate most readily; whilst those imported are often too old, or sometimes injured, before they reach us. As those imported generally reach us in winter, they should be sown early in spring; indeed some cultivators advise their being sown immediately after their arrival; but we have hitherto found, that if sown too soon, that is, in February or the beginning of March, that they do not vegetate so quickly, and, in consequence, many of the seeds are rotted; for it is a maxim that should never be lost sight of in the culture of this tribe, which is, that artificial heat should never be employed, excepting in some cases of slow growing kinds, that may require a slight heat to draw the young shoots out to a sufficient length for the purpose of cutting; but even in this case, the seldomer they are so excited, the better.

Artificial heat, therefore, is injurious to the process of originating heaths from seeds ; we, therefore, in our own practice, as well as from observation of that of others, prefer the latter end of March or beginning of April for sowing these seeds ; the natural warmth of the season then is sufficient to stimulate vegetation, and the young tender plants so originated have not the chance of being destroyed by damp cloudy weather, which we often experience in spring, and which would be of the utmost injury to them in their young state. Where extensive collections of plants are kept up, and in all large nurseries, there is generally a seed-house, that is, one expressly dedicated for the rearing of plants from seeds ; such houses are generally low, having a northern aspect, as is the case in the Hammersmith and other nurseries.

Cultivators, who have but few seeds requiring such a structure, content themselves, therefore, with a good garden frame and glasses ; and as such is portable, it can be placed where it is either shaded from the meridian sun, or great care taken in shading it artificially. The situation of such a frame should be both dry and airy, for damp would be extremely injurious to the young plants. Pots should be prepared for the seeds, of ordinary sizes, but those known as seed-pots are to be preferred ; they are broad and shallow, which admits of a considerable surface for the seed to be sown on, and of being rendered perfectly dry at bottom. Great care should be taken in draining them, for although the surface will require to be kept pretty moist, still no impediment must be left whereby the superabundant moisture would be prevented from passing freely off. The directions given for draining cutting-pots will be, if acted upon, sufficient for this purpose. The mould upon which the seeds of heaths are sown, should be of the sort called peat-earth, having naturally a considerable portion of fine white shining sand in it, or, if deficient in this material, it should be added to it by the cultivator.

As the seeds are very small, the mould for this purpose, to the thickness of an inch and a half, should be sifted very fine, and the surface of the mould in the pot rendered smooth and level with a small circular piece of wood, say of three inches diameter, having a nail driven into the centre of its upper surface, by which the operator can use it to much greater advantage. Upon the surface so prepared, the seeds should be thinly sown regularly all over it, and covered

with the same kind of mould to the thickness of one-eighth of an inch, more or less, according to the size of the seeds, as some are larger than others. The pots so sown should be then placed upon the platform in the seed-house, or upon a floor (if in frames) of finely-sifted coal-ashes, and after being gently watered with a very fine rose watering-pot, be shaded from the sun. This shading must be continued constantly on during sun-shine, until the plants be from half-an-inch to an inch high; afterwards it must be gradually removed to harden them by degrees, to fit them for potting off into separate pots. Some cultivators place bell or hand-glasses over the seed-pots when sown, and when such can be spared, they may be with some propriety used. For five or six weeks, the surface of the mould must never be allowed to become dry, but be daily examined, at the end of which time, the seeds may be expected to have vegetated. When such is the case, the bell or hand-glasses should be gradually removed, first by being lifted up about a quarter-of-an-inch, and in increasing this air, until entirely removed. Some seeds of course do not vegetate so soon as others, therefore the pots should be still carefully attended to; but if after three months, or little more, all hope of their vegetating may be given up. Plants, so originated, will be about the middle or end of September in a fit state to plant out into thumb or thimble pots, as they are called, and which are the smallest sizes that are made.

Heaths which ripen their seeds in this country, should be sown as soon as they are ripe, provided this does not occur after the first of September; such as ripen afterwards (and several do so) had better be kept packed up in paper till the following April, when they may be sown as above directed. Plants originated at this time will be sufficiently strong by autumn to pot off; and it is even better then to pot off such as are very small, than allow them to stand in the seed-pots all winter. It is perhaps not easily accounted for, but plants stand the winter better when potted off in autumn in single pots, than if they were to remain in the seed or cutting-pots all winter; and the same rule holds good in regard to potting off cuttings propagated at any period of the year when quite young, that is, immediately after they have commenced making roots. This is not perhaps generally known, at least it is not always acted upon, as many persons, from an idea that the plants will become strong and better rooted, defer too long the process of potting off, and, in consequence, lose both time

and many of their plants. It may, perhaps, not be quite out of place here to observe, that such seedlings or cuttings as have originated in the fine white sand of cultivators, should have their roots completely cleared of it before they are potted in their natural mould; for although most plants emit roots in that sand, it becomes injurious to many of them after they quit their cutting or seed state.

We may here however remark, that this family are less annoyed by insects than most other exotic plants, still they are not entirely exempt; for that destroying insect, the green fly of gardeners, sometimes attacks the heath, and as it is found impatient of the usual remedy, tobacco smoke, the best cultivators dip the plant, or parts infected, in a decoction of tobacco liquor. Mildew sometimes attacks the heath; but this, like the cause of its appearance in all other cases, must be owing to damp or stagnation of air. To remedy this evil, has not always been found an easy task; indeed, we recollect, about two years ago, to have seen nearly the whole collection of this family in the nursery of a cultivator, who is allowed to be one of the best in the neighbourhood of London, nearly destroyed by it. Free ventilation and a dry atmosphere seem the basis of a certain cure, and the application of flour of sulphur dusted on the plants, or put on them in form of paste, may be considered as effectual in removing the evil.

(*To be continued.*)

ARTICLE IV.

THE METROPOLITAN FLORAL EXHIBITIONS.

ROYAL BOTANIC SOCIETY, *May 20.*

At this, the first exhibition for the season, the magnificent display of plants and numerous attendance of visitors, amply testified that their already great popularity is increasing; and we only regret limited space, as usual, prevents so full a report being given as we could wish.

1. —STOVE AND GREENHOUSE PLANTS.

In collections of 30.—In this class two collections were shown, one by Messrs. Frazer, of Leabridge, and the other by Mr. Barnes, gardener to G. W. Norman, Esq., of Bromley. The group from the former comprised the most magnificent specimens of first-rate cultivation. We will name particularly *Boronia serrulata*, a splendid bush, 3 feet by 4; *Eutaxia pungens*, about the same size; a well-grown *Bomisea disticha plumosa*, producing multitudes of dull yellow and brown

flowers; a very fine *Gardenia radicans*, covering the pot with healthy foliage, and ornamented with upwards of 50 of its sweet-smelling blossoms; *Azalea indica ledifolia*, 6 feet in height, and 4 feet in diameter; *Chorozema spectabile* in good condition, and *C. Henchmannii* equally fine; also superb plants of *Epacris grandiflora*, *Pimelia linifolia*, and *Aphelexis humilis*. Mr. Barnes had, as usual, some remarkable plants, particularly *Rondeletia speciosa*, about 3 feet high, and nearly as much in diameter; *Gompholobium tenellum*, *Dillwynia splendens*, *Phenocoma proliferum*, *Erica Thunbergia*, and *Pimelia Hendersonii*. We likewise noticed good plants of *Cyrtoceras reflexum*, and *Acrophyllum venosum*.

In collections of 20.—Here there were five competitors; the first prize was won by Mr. Hunt, gardener to Miss Trail, in whose collection we noticed a splendid plant of a variety of *Chorizama cordata*, trained to a globular trellis; *Gompholobium polymorphum*, trained to a large shield, beautifully in bloom; *Pimelia decussata*, large and fine, together with some fine *Azaleas*, *Ericas*, and other plants. Messrs. Lucomb, Pince, and Co., of Exeter, received the second prize. We remarked that lovely stove climber, *Dipladenia crassinoda*, the comparatively new *Epacris miniata*, presenting a good display of its brilliant flowers; *Cattleya Forbeaii*, with eleven flowering spikes; a large *Gompholobium barbigerum*, covered with large yellow blossoms; a pyramidal *Eriostemon buxifolium*, near 5 feet high; and also excellent specimens of *Azalea leucomegista*, and variegata; with *Acrophyllum venosum*, *Epacris grandiflora*, *Erica intermedia*, and others. The third prize was awarded to Mr. Pamplin, of Walthamstow, and to Mr. Cattleugh, of Chelsea the fourth.

In collections of 10.—There were seven exhibitors of these. Mr. Green, gardener to Sir E. Antrabus, Bart., of Cheam, produced the best; we remarked *Chorizema varium*, var. *Chandlerii*, *Gompholobium splendens*, and fine specimens of *Pimelia Hendersonii*; *Aphelexis humilis*; *Ixora coccinea*; *Leschenaultia formosa*; and *Erica Beaumontia*. The next group in point of merit was from Mr. Ayres, gardener to J. Cook, Esq., of Blackheath; in it we saw *Polygala oppositifolia*, 2½ feet in height, and 3 feet in diameter, quite a mass of blossoms; *Aphelexis splendens*, very fine; and *A. spectabilis grandiflora*, the best of the genus, together with a charming *Azalea lateritia*, and an exceedingly healthy *Crowea saligna*.—Mr. May, gardener to E. Goodheart, Esq., of Bromley, was third, and sent *Hovea Celsi*, a rather bare plant, but finely in bloom; a well-flowered *Azalea lateritia*, trained to a face; a large *Erica hybrida*; *Aphelexis purpurea grandiflora*; and *Polygala acuminata*. A fourth prize was given to Mr. Kyle, gardener to R. Barclay, Esq., Leyton, who showed some excellent plants, particularly *Podolobium trilobatum*, and *Stephanotus floribundus*. In the groups from other growers, which our space forbids us to particularize, we observed the white-flowered variety of *Swainsonia galegifolia*; a large *Indigofera australis*; *Mahernia incisa*, nearly 5 feet high; and a large *Kennedia longiracemosa*, trained over a wire trellis; quite a mass of lilac flowers.

In collections of 6.—Mr. Clarke, gardener to W. Block, Esq., of Muswell Hill, obtained the first prize in this class. His plants were, *Ixora coccinea*; *Chorizema varia*; *Boronia serrulata*; *Erica perspicua nana*; *Aphelexis humilis*, and *Leschenaultia formosa*. The second prize was given to Mr. Kaye, gardener to R. D. Colvin, Esq., of Norwood, for *Azalea variegata*; *Pimelia decussata*; *Epiphyllum Jenkinsonii*; *Selago Gillesii*; *Erica M'Nabiana*; and *Euphorbia splendens*. Other prizes were awarded, but the collections did not comprise anything very remarkable.

ORCHIDACEOUS PLANTS.

The exhibitors in this class were few. Messrs. Rollisson, of Tooting, received the first prize, and Mr. Plant, gardener to J. H. Schroder, Esq., the second, in the class of *fifteen species*.

In the group from the former, we noticed the beautiful *Phaius bicolor*; *Dendrobium chrysanthemum*; the curious *Myanthus cernuus*; the red-flowered

Broughtonia sanguinea; *Cirrhaea fuscolutea*, with two pendent racemes of green flowers, more curious than beautiful; the Mexican *Trichopilia tortilis*; *Calanthe veratrifolia*, and some others. The group from Mr. Plant contained, among others, the well-known *Brassia maculata*; the rare and delicate white-flowered *Phalænopsis amabilis*; and a good *Myanthus cernuus*.

In collections of 10.—Mr. Green obtained the first prize; and the next group in point of merit came from Mr. Hunt. The latter contained a fine plant of the Indian *Phaius Wallichii*. Mr. Don, gardener to F. G. Cox, Esq., of Stockwell, received a third prize; we noticed a fine plant of *Brassia Laucana*, with dense drooping racemes of buff blossoms, of no great beauty; *Stanhopea eburnea*; *Cyrtorchilum maculatum*; and *Cymbidium lancifolium*, var. *Gibsonii*. In addition to these there was a collection from Mr. Rae, gardener to J. T. Blandy, Esq., of Reading, and which was considered the best collection; but on account of non-conformity with the Society's rules, was disqualified; among other things it comprised a small plant of the very handsome *Dendrobium Devonianum*; a good *Cattleya Skinneri*, with six spikes of purple blossoms; the best variety of *Oncidium ampliatum*; and *Vanda Roxburghi*, with pale brown-veined petals and violet lip.

CAPE HEATHS.

A considerable number of these were produced, embracing many very excellent specimens; there was nothing, however, very new amongst them.

In the collections of 15 species.—Mr. May, gardener to E. Goodheart, Esq., Beckenham, received the first prize. The most striking kinds were, *Thunbergia*; *Ventricosa alba*; *Sprengelli*, and *grandinosa*.

In collections of 12 species.—For nurserymen; the first prize was awarded to Messrs. Fairbairn, who produced, among others, *jasminoides*, a fine *ventricosa alba*, and *metulaeflora*, having numerous heads of flowers, the violet tinge of whose reflexed petals contrast well with the red waxy-looking tubes. The next group was contributed by Messrs. Fraser. It contained a lovely *propendens ventricosa breviflora*, clad to the pot with foliage and flowers, and a pretty *daphnoides*.—Messrs. Rollisson sent *denticulata moschata*, loaded with small white and yellow flowers. Several others were shown. The first prize for a collection of six, open to private growers only, was obtained by Mr. Green, with *Cavendishii*, three feet by three; *suaveolens* and *Hartnelli*, about the same size; *intermedia* and *ventricosa coccinea minor*, each about two feet by three; and *glauca* (?) two feet by two. Mr. Maylon, Blackheath, received the second prize for *mirabilis*, *hybrida*, *ventricosa coccinea*, and *coccinea minor*, *vestita alba*, and *vestita coccinea*, all neatly grown.

AZALEAS.

For eight plants, Mr. Fraser obtained the first prize, with *triumphans*, *Gledstanesii*, *fulgens*, *variegata*, and *exquisita*, each about two feet by two; and larger bushes of *speciosissima*, *phœnicea*, and *smensia*. Collections of four varieties were shown by Mr. Barnes, Mr. Green, and J. Alnutt, Esq., who respectively obtained the first, second, and third prizes. Mr. Barnes had *lateritia*, *Herbertii*, *variegata*, and *macrantha purpurea*. Mr. Green had *sinensis*, *Rawsonii*, *Smithii coccinea*, and *alba*. Mr. Alnutt's plants were—*variegata*, *alba*, *phœnicea*, and *fulgens*.

SPECIMEN PLANTS.

A number of prizes was awarded to these, the highest being given to Mr. Clark, of Muswell Hill, for a finely bloomed *Pimelia spectabilis*, nearly three feet high, by as much across. A second prize was awarded to Mr. Green for a well-bloomed plant of *Ixora coccinea*,

and a third prize was given to Mr. Verdon, gardener to Earl Cornwallis, Linton Park, for *Cattleya labiata*. Several other prizes were also awarded.

NEW OR RARE PLANTS.

In this class there was nothing very striking; of those which were *in bloom*, and deemed by the judges deserving an award, was a rutaceous plant exhibited by Messrs. Lucombe and Pince, named *Erythrochiton Braziliense*, having large white flowers, half enveloped within a brown calyx. Messrs. Rolliesson, of Tooting, received a prize for *Theophrasta Jussæi*, a plant brought from Spain some years ago, but probably not very generally known. Messrs. Lucombe and Co. also received a prize for a species of *Gompholobium*, with light crimson-red flowers, in the way of *G. Youngii*. There were also exhibited by Mr. Dods, gardener to Sir G. Warrenden, Clifden, *Lyperia pinnatifida* (figured in our present number), and *Franciscea acuminata* (Pohlina) by Mr. Wood, of Poole, a species of *Orchidaceæ*, in the way of *Cyrtochilum filipes*; by Mr. Henchman, of Edmonton, *Kennedia glabrata minor*; and by Mr. Barnes, *Chorizema ericoides*, and *Gompholobium Hugellii*; the latter plant was also shown by Messrs. Lucombe and Co. Of new or rare plants *not in bloom*, but remarkable for the beauty of their foliage, Mr. Robertson, gardener to Mrs. Lawrence, obtained a prize with *Pavetta Borbonica*, a noble looking plant, with beautifully spotted leaves, having deep red midribs. Messrs. Lucombe and Co. received the next prize with *Sarracenia Drummondii*. These gentlemen also sent the curious little *Cephalotus follicularis*; and Mr. E. Beck, florist, Isleworth, showed *Anætochilus setaceus*.

II. FLORISTS' FLOWERS.

PELARGONIUMS.

In collections of 12 new varieties.—In this class, amongst private growers, Mr. Cock, of Chiswick, and Mr. Staines, of Paddington, were the only competitors. The former was awarded the first prize for some splendid specimens of *Erectum*, *Emma*, *Hector*, *Mustee*, *Marc Antony*, *Milo*, *Rosy Circle*, *Rosetta*, *Sir Robert Peel*, *Sultana*, *Shield of Achilles*, and *Cora*. Mr. Staines had the second prize with *Adonis*, *Ackbar*, *Aurora*, *Duke of Wellington*, *Duke of Cornwall*, *Erectum*, *Marchioness of Lothian*, *Nestor*, *Sir Robert Peel*, *Sunbeam*, *Sylph*, and *Rosalie*. In the nurserymen's class, the first award was given to Mr. E. Beck for *Aurora*, *Arabella*, *Bellona*, *Desdemona*, *Favourite*, *Hebe's Lip*, *Hindoo*, *Isabella*, *Mustee*, *Resplendent*, *Rosy Circle*, and *Zenobia*. Mr. Catleugh was second with *Duke of Sutherland*, *Free Briton*, *Grand Monarch*, *Hebe*, *Luna*, *Madeline*, *Milo*, *Magog*, *Mary*, *Orion*, *Rosetta*, and *Symmetry*. Mr. Gaines showed some very

excellent plants of Cothelstone, Nosegay, Augusta, Prince Alfred (Gaines), Excelsa, Don Juan, Alba Superba, a fine white, Fire King, Cossack, Lady Prudhoe, Imperialis, and Pilot: for these a third prize was awarded. To Messrs. Smith, of Pimlico, a fourth prize was given for Hebe, Vanguard, Madeline, Sylph, Fair Maid of Devon, Duke of Cornwall, Lady Sale, Queen of Beauties, Coronation, Cleopatra, Queen of the Fairies, and Leonora.

In collections of 12 varieties.—Mr. Parker, gardener to J. Oughton, Esq., Rotherhampton, was the only exhibitor amongst amateurs, and Mr. Gaines amongst nurserymen; each of whose collection was very fine, and received a first prize. The former showed Gipsy, Priory Queen, Hebe, Nymph, Erectum, Queen of Beauties, Caroline, Madeline, Duke of Cornwall, Unit, Superba, and Comte de Paris. Mr. Gaines had Lady Isabella Douglas, Nymph, Una, Rising Sun, Coronation, Albina, Sylph, Matilda, Lady Sale, Erectum, and Victory.

In collections of 8 varieties.—Mr. Coysh, of Clapham, obtained the first prize with Hebe, Madeline, Erectum, Alice Grey, Lady Sale, Unit, Comte de Paris, and Evening Star. Mr. Miller, of Edgware, received a second prize for Erectum, Duke of Cornwall, Duchess of Sutherland, Enchantress, Mulberry, Susannah, Marchioness of Lothian, and Cleopatra.

ROSES.

In collections of 12 in pots.—These were mostly of a very superior description. Messrs. Lane, of Berkhamstead, obtained the first prize; Messrs. Paul, of Cheshunt, the second; Mr. Beck, the third; and Mr. Francis, of Hertford, fourth. Messrs. Lane's plants were the following:—*Tea*—Barbot, Reine, Victoria, Nisida. Triumph de la Guillotiere, Elise Sauvage, Anteros. *Alba*—Princess de Lamballe. *Hyb. Per.*—Queen, Psyche, Grand Capitaine. *China*—Mielles; and *Bourb.*—Proserpine. Messrs. Paul's were, *Tea*—Nina, Taglioni, Safrano. *Hyb. Per.*—Louis Bonaparte, Aubernon, Rivers. *Hyb. Bourb.*—Great Western. *Hyb. China*—General Allard. *Bourb.*—Bouquet de Flora, Paul Joseph, Armosa; and *Austrian*—Persian Yellow. Mr. Beck's were, *Tea*—Comte de Paris, Devonensis, Goubalt. *China*—Virginie, Fabvier. *Bourb.*—Queen, Le Grenadier. *Hyb. Per.*—Comte D'Eu, William Jesse, Prudence Ræser. *Austrian*—Harrisonii; and *Hyb. China*—General Allard.

FUCHSIAS.

In collections of 6.—Four of these were produced; a first prize was given to Mr. Kendal, of Stoke Newington, for Queen Victoria (Smith), Cassandra (Gaines), Erecta elegans (Kendal), Sappho, Lady Sale, and Miss Prettyman (Miller). A first prize was also adjudged to Mr. Robertson, gardener to J. Simpson, Esq., Pimlico, for Goldfinch (Harrison), Magnet (Pawley), Vesta (Smith), Iveryana, Hope, and Unique. Mr. Gaines showed some remarkably well managed and uniform plants, for which a second prize was given, the kinds being—Favorite (Gaines), Duchess of Sutherland (Gaines), Clara (Harrison), Princess Mary (Gaines), Queen of Bourbons (Gaines), and Unique. The other collection was from Mr. Pawley.

CALCEOLARIAS.

The exhibition of these was small, and amongst nurserymen Mr. Gaines had it to himself. His collection of 6, however, comprised capital specimens of successful management, and deservedly received the highest award. The sorts were, Ada, Madeline, Prince Alfred, Alpha, Enchantress, and Duchess of Beaufort. In the amateur's division, Mr. Garrod, of Hampstead, obtained the first prize with Sandishii, Fructicosa elegans, Sir R. Sale, Lady of the Lake, Prince of Wales, and Surprise. Mr. Wren, of Holloway, obtained the second prize with Andromache, Anne, William Paine, Artilleryman, Sandishii, and Sir R. Sale. And Mr. Louis, gr. to P. Hurd, Esq., of Kentish-town, received the third prize for Magnet, Artilleryman, Corymbiflora, Lady Constable, Target, and Defiance.

TULIPS.

Two stands of these (*in 12 varieties*) only were exhibited, which, considering the precarious season, were creditable.

The first prize the Rev. Mr. Wilson, of Norwich, obtained, with *Surpass*, *Salvator Rosa*, *Coriolanus*, *Nanteau Duçal*, *Aglaia*, *King* (Holnes), *Reine de Nan* (?), *Incomparable de Lisle*, *Charlotte*, *Polyphemus*, *Cerise à Belle Forme*, *Brutus*, and *Optimus*. Messrs. Norman, of Woolwich, received the second prize for *William* (Norman), *Aglaia*, *Lord Bloomfield*, a fine bloom of *Maria* (Goldham), *Roi de Siam*, *Polyphemus*, *Prince of Wales* (Norman), *Optimus*, *Claudiana*, a fine rose, *Royal Albert*, *Matilda*, and *Prima Donna*.

HEARTSEASE.

In stands of 24.—There was a number of competitors for the prizes in this class. Mr. Turner, of Chalvey, was first, with *Hale's Diamond*, *Hunt's Tom Pinch* and *Hamlet*, *Collison's Perseus*, *Juno*, and *Daughter of St. Mark*, *Turner's Dido* and *Optimus*, *Thomson's Azurea grandiflora*, *Pizarro*, *Jehu*, and *Regulator*, *Cook's Star*, *King's Hero of Bucks*, *Purple Perfection*, *Seedling*, and *Exquisite*, *Hooper's Mary Jane*, *Attwell's Isabella*, *Brown's Arethusa*, *Jones's Titus*, and *Major's Duke of York* and *Victoria*. Mr. Bragg, of Slough, obtained the second prize with *Constellation*, *Fanny*, *Wellington*, *Negro*, *Mary Jane*, *Bridal Ring*, *Bragg's Goliath*, *Virgil*, *Desirable*, *Regulator*, *Marquis of Lansdowne*, *Curion*, *Napoleon*, *Companion*, *Marginata*, *Diamond*, *Exquisite*, *Hamlet*, *Perseus*, *Mulberry*, *Superb*, *Dido*, *Caractacus*, *Pizarro*, *Marchman*, and *Grotius*. A third prize was given to Mr. Thomson, of Iver; but to these we could find no names attached.

SEEDLINGS.

Pelargoniums.—Of those bloomed the previous season, four were selected by the judges for prizes, viz., *Mount Etna* (Hoyle), and *Beck's Competitor*, *Hebe's Lip*, and *Patrican*, all of which we noticed last month, at p. 176. Amongst the Seedlings of the present year, certificates of merit were given for the following:—To Mr. Hoyle, of Guernsey, for *Queen of Tyre*, purplish rose, with a small clouded spot on the top petals, shaded off to the ground colour at the edge; for *Lord Stanley*, a very even flower, of a purplish tint, and having very dark clouded top petals, with a narrow purple edge; and for *Flora's-flag*, blush, with a dark veiny cloud surrounded by a dash of crimson, with a pale edge, rather uneven; to Mr. Miller, for *Volgius*, an even flesh-coloured flower, with pale centre, and dark veiny cloud edged with rose; and to Mr. E. Beck, for *Compactum*, an even-formed, pinkish flower, with white centre, and dark veiny clouded upper petals. Besides these were *Anti-Bacchus*, from Mr. Hoyle, a fine flower, with rosy pink lower petals, and dark upper ones, belted with pink. Mr. Gaines had *Cassandra*, a bright light red, and there were several others from Messrs. Catleugh, Miller, and Beck.

Calceolarias.—A great number of these were shown; the six which

were selected by the judges for prizes possessed distinct and fine characters. They were named *Masterpiece*, *Emperor*, *Oscar*, *Viscount Hardinge*, *Sir H. Smith*, and *Aurea maculata*; the three former being exhibited by Mr. Kinghorn, of Twickenham, and the latter by Mr. Gaines, of Battersea. The best amongst the others we considered to be Kinghorn's *Marquetry*, Gaines' *Merry Monarch* and *Lady Mason*, *Mount Etna*, *Hon. Mrs. Walroyd*, *Warwickshire Lass*, and *Miss Prettyman*, the latter a very delicate, pretty-looking flower: these five were sent by Mr. Kimberley, of Coventry.

Fuchsias.—The most novel flower amongst these was one named *Corallina*, from Messrs. Lucombe and Pince, of very large size; we could almost fancy, by its appearance, that it was a seedling between *Affinis* and *Exoniensis*; the tube and sepals are bright crimson-red, the corolla deep purple, and, as in the old kinds, this contrast of colours gives that striking appearance of which so many new ones of the present day are void. A second prize was given to Mr. Gaines for a good sized, stout flower, of a red colour, named *Lord Hill*, and a certificate was given to Messrs. Fairburn, for *Predominant*, also a red-coloured flower.

Heartsease.—Several of these were shown, but only one, from Mr. Thompson, of Iver, named *Satirist*, received a certificate. This flower is well shaped, flat, and of good substance, and quite novel in colour; the shield or ground colour, which is generally white or yellow, is of a warm brown, and, the eye, top petals and broad margin round the lower ones, are of a deeper bronzy brown.

Amongst other seedling flowers, we noticed a clear dark blue *Cineraria*, named *Royal Blue*, from Mr. Irwood; an *Azalea*, named *Gledstanesii formosa*, which was pretty, but only slightly differed from the original variety: it was from Mr. Pawley, of Bromley. Mr. Henderson, of Pine Apple-place, Edgeware-road, had a seedling *Erica*, with bright rose-coloured flowers, named *Vestitu eximia*; and two seedlings from *Ventricosa*, named *V. globosa alba*, and *V. nana alba*, were from Mr. Pamplin. Finally, amongst the seedlings we particularly noticed a box of cut blooms of fifty splendid seedling hardy *Azaleas*, from Mr. Waterer of Knaphill, some of them quite novel in colour; an extra prize was deservedly awarded them.

Of the many *miscellaneous subjects* shown we will only observe that the most attractive was the *fancy-flowered Geranium*, *Anais*, of

which Mr. Gaines showed four plants, that presented so gay and beautiful an appearance as to elicit the unrestrained admiration of all beholders.

ARTICLE V.

ON RAISING SEEDLING CARNATIONS AND PICOTEEES.

BY A FLORIST.

THE culture of the Carnation, though elaborately written upon by many with ability and experience, has in one point, and that a very material one, been either totally neglected or slightly or discouragingly mentioned, I mean the progressive improvement of the flower and its subvariety the Picotee, by raising new plants from seed. Hitherto we have been taught that the production of new and fine varieties of either Carnation or Picotee, is an extremely difficult and even arduous undertaking—the proportion being from one to two good flowers to one hundred inferior and worthless plants. With this I perfectly agree, provided that the ordinary mode of obtaining the seed be pursued. We are told that it is a plant that never produces seed in considerable quantities, nor even any at all, unless in very dry and warm summers and under peculiar treatment, and even then with difficulty, arising, as it is stated, “from the extreme doubleness of the flower,” a mistake originating either from ignorance of the natural structure of the flower and its physiology, or from want of sufficient experience in the writer. The Carnation is one of nature’s most brilliant offerings to the flower garden, and although almost universally cultivated and admired for the symmetry and fine colouring of its blossoms, and for its delicate and grateful perfume, it is rarely seen in its fine varieties, some of which are really splendid and admirable, eclipsing all the flowers of its season, and making it pre-eminent as the ornament of the summer, as the *Dahlia* is of the autumnal months.

The scarcity of those fine flowers arises from two causes,—first, from the jealousy of the few florists possessing them, who think them worthy of being exhibited and distributed to the initiated only; and secondly, from the neglect of raising plants from the seed of the best flowers, and from such only. Any florist who has sufficient energy and who wishes to derive more gratification from the culture of his Carnations than he has yet enjoyed, may, by attending to the following

directions, obtain ample amusement and an abundant repayment for his time and trouble, in the production of many valuable and magnificent new flowers.

It is true that nearly all the blossoms of Double Carnations, if unaided by the hand of the gardener, will be unproductive of seed, but they are in very many cases capable of being made fertile. The organs of reproduction are in almost every instance fully developed; from the crowded state of the petals the operations of nature for production are defeated.

Every gardener and florist should know that plants are analogous to animals in their power of multiplying their kind, and require the co-operation of the sexes. In the Carnation, though ever so double, the male part of the flower or stamen is generally found, as is also the pistil of the female portion, together with the ovary, containing the embryo seeds, which may be observed by examining the blossoms of any double Carnations. The sexual distinctions are most easily distinguished. The florist, to be successful in obtaining seed, has but to imitate nature, and by rendering his double flower as similar as possible to the single one facilitate her operations. This is done by extracting with a double-pointed scissors the supernumerary petals, leaving only the outer guard-leaves, taking care, however, not to injure the stamens or ovarium. This should be done before the anthers burst and shed their pollen, in order that the petals may not prevent its falling on and being received by the stigmas, which is the usual cause of abortion in the double blossoms of the Carnation; or the florist, if he pleases, may cut away the stamens, and apply the pollen of some other admired variety to the stigmas of the flower thus deprived of its male organs, and so fertilize the embryo seed, which is the most advantageous way of proceeding, as the variety among the seedling plants will be more marked and beautiful; and curious to say, more like the father plant, or that from which the fertilizing pollen was taken, than the mother parent, or that which produced the seed. Semi-double flowers are more easily managed this way, and may be made fruitful with the pollen of your best double flowers. The production of flowers is often effected through the instrumentality of bees and other insects, when collecting either honey or pollen from the flowers; in such cases the seed is frequently lost by neglecting to protect the blossoms from too much wet, and to extract the decaying

petals, quickly lose their beauty and brilliant colouring, and being no longer needed, wither and die ; they should then be cut away, lest by retaining moisture, they should communicate disease to the base of the ovarium (where the petals had been attached) which is of a spongy and light structure, and very liable to rot, if not preserved in a dry state. The stems should now be loosed from the stakes to which they were fastened, and the plants given as much air as possible. When the pericarpium has attained to half its size, it will be necessary to remove as much of the calyx or cup that contained the flower as can be done without injuring the seed-pods. The plants will now need little further care until the maturing of the seed, when they must be carefully looked over every day, lest the pods should burst and lose their seed. When ripe, the pods should be carefully gathered and preserved unopened, until the following May, which is the most proper time for sowing, or the seeds extracted may be preserved in small well-corked bottles, which is the mode usually adopted.

It has been stated that layering Carnations prevents their flowering as well as if it had not been done, and also prevents their producing seed. This I have found is not the case ; if the plants are layered sufficiently early, the bloom will be stronger, and without doubt they will give more seed in consequence of the increased resources of the plant, each layer becoming rooted, and enabled to support itself, as well as contribute to the strength of the parent plant : they ought not, however, to be detached until the seed is gathered, else a failure of your crop will be the consequence. The seeds that have ripened in the early part of the season may be sown as soon as gathered, in a sheltered part of the garden, and the young plants placed out on a well manured south border, where (with slight protection during the very severe weather of winter) they will become strong blooming plants for the ensuing summer, thus gaining a year, as by the usual culture the plants never show their flowers until the second year from sowing. The late-saved seed is to be sown and the plants treated in the usual way. This process may seem a little troublesome, but it is really not so ; and the gratification arising from the production of very many beautiful flowers, will, I am sure, amply repay the person who pursues it.

PART II.

MISCELLANY

OF

NOTES AND CORRESPONDENCE.

New or Rare Plants.

ALPINIA NUTANS. NODDING-FLOWERED ALPINIA. (Pax. Mag. Bot.) Scitamineæ. Monandria Monogynia. This beautiful stove plant is a native of the East Indies, whence it was brought many years ago by Sir Joseph Banks; it is at present rare in collections. The racemes nodding, about 10 inches long. The flowers are yellow inside, streaked with crimson; outside white, with rose tip. It is a noble and handsome plant, and deserves a place in every collection.

AZALEA OBTUSA. Blunt-leaved Azalea. (Bot. Reg. 37.) Ericaceæ. Decandria Monogynia. This beautiful Chinese Azalea was introduced by Mr. Fortune, in 1844, from Shanghai, in China. The flowers are of a light red, and are produced very abundantly. It is a very pretty dwarf shrub.

BARNADESIA ROSEA. Rose-coloured Barnadesia. (Pax. Mag. Bot.) Compositæ. Syngenesia Polygamia Æqualis. It first flowered at Sion House in the stove. Native place not known. The flowers are like a *Centaurea* in form, and of a beautiful deep rose, about an inch and a half across. It is very handsome, and deserves a place in every stove.

BEGONIA ALBO-COCCINEA. White and scarlet Begonia. (Bot. Reg. 39.) Begoniaceæ. Monœcia Polyandria. This Begonia was raised from seed sent from the East Indies to the Royal Gardens at Kew. The outside of the calyx a vivid scarlet, and the inside pure white. It is similar in growth to most of the tribe.

CATTLEYA LEMONIANA. Sir Charles Lemon's Cattleya. (Bot. Reg. 35.) Orchidaceæ. Gynandria Monandria. This new Cattleya is a native of Brazil; it flowered first at Carclew in the month of September, 1845. It is very handsome; the flowers are about three inches in diameter; sepals white, tinged with pink; petals of a deep pink; tube of the labellum same, and the lip yellowish, edged with pink. It is worthy of a place in every collection.

DAVIESIA PHYODES. Hatchet-leaved Daviesia. (Bot. Mag. 4244.) Leguminosæ. Decandria Monogynia. This interesting little Daviesia was introduced into our greenhouse from the Swan River, by Mr. Cunningham. The flowers are produced in spikes, and are of a rich orange red and yellow. It is an exceedingly handsome shrub, and easily cultivated.

EPACRIS DUBIA. Doubtful Epacris. (Bot. Reg. 38.) Epacridaceæ. Pentandria Monogynia. It is in the possession of Mr. Jackson, of Kingston. The flowers are white, but of no great beauty.

ERIOSTEMON SCABRUM. Rough Eriostemon. (Pax. Mag. Bot.) Rutaceæ. Decandria Monogynia. This beautiful greenhouse plant is a native of Sidney, New South Wales. It has been for some time in the collection at Messrs. Loddiges, of Hackney; it is dwarf in habit, and a very free flowerer. The flowers are produced on the branches in spikes, and are of a light pink, with a yellowish centre. This pretty plant should possess a place in every greenhouse.

FRANCISCEA HYDRANGÆEFORMIS. Hydrangea-like Franciscea. (Pax. Mag. Bot.) Scrophulariaceæ. Didynamia Angiospermia. It is a native of Rio Janeiro and other parts of Brazil, from whence it was introduced in 1837. It is a beautiful stove shrub. The flowers are of a dark blue, with a yellowish centre; each flower about one inch in diameter, and forming a beautiful head.

GESNERIA BULBOSA, VAR. LATERITA. Tuberous-rooted Gesneria. (Bot. Mag. 4240.) Gesneriaceæ. Didynamia Angiospermia. This Gesneria was brought from New Grenada to the Royal Gardens at Kew, by Mr. Purdie, the collector. It first flowered at Sion House. The flowers are similar to *G. Cooperii* in size and shape; their colour is a light brick red. This is a very curious variety, and ought to be found in every stove.

GESNERIA ELLIPTICA, VAR. LUTEA. Elliptic-leaved Gesneria. (Bot. Mag. 4242.) Gesneriaceæ. Didynamia Angiospermia. This Gesneria was also brought from New Grenada by the collector of Kew. The flowers are tubular, of a bright yellow, with purple anthers. This variety is very showy, and makes a very good addition to our stoves.

LIANTHUS UMBELLATUS. Umbellate Lianthus. (Bot. Mag. 4243.) Gentianeæ. Pentandria Monogynia. This plant is a native of Jamaica; it grows erect to the height of about twenty feet. The flowers, of a light green, are produced in a head with long stamens, forming a tuft similar to that of the large double Hypericum.

PITCAIRNIA UNDULATIFOLIA. Broad-waved Pitcairnia. (Bot. Mag. 4241.) Bromeliaceæ. Hexandria Monogynia. Thought to be a native of Brazil; sent to the Royal Gardens, at Kew, by Mr. Shepherd, of Liverpool. The flowers are in spikes; the bractæ large and of a scarlet colour; corolla long and white. This species is very splendid and showy; it attains to the height of about one foot and a half. No stove collection ought to be without this beautiful variety.

ROYENA LUCIDA. Shining Royena. (Bot. Reg. 40.) Ebenaceæ. Decandria Monogynia. This plant was brought from the Cape of Good Hope, as far back as 1690. Its flowers are white, resembling those of the common Arbutus.

SARCOSTEMMA (PHILIBERTIA) CAMPANULATUM. Bell-shaped Sarcostem. (Bot. Reg. 36.) This plant is, probably, a native of Peru. It is a greenhouse climber; the flowers are a yellowish green, with a dark centre, and are produced in spikes having ten or twelve blossoms in each.

THEOPHRASTA JUSSIÆI. Jussæi Theophrasta. (Bot. Mag. 4239.) Theophrastaceæ. Pentandria Monogynia. This stove plant was introduced from St. Domingo; it is somewhat like a Palm in habit. The upper part of the plant is crowned with a tuft of leaves, and in the centre is produced a head of flowers, a sort of dirty white or cream colour. Each flower is about one inch in diameter; it is surrounded towards the top with soft blackish spines.

GRAELLSIA SAXIFRAGÆFOLIA. Saxifrage-leaved Graellsia. Hardy Perennial. (Crucifers.) Persia. A little plant, with long-stalked kidney-shaped or roundish leaves, very coarsely notched, and smelling strongly of garlic. The flower stems are about nine inches high, and bear a compound corymb of small white flowers, resembling those of the common scurvy grass. It grows freely in any good rich garden soil, and is well suited for rockwork. It flowers in July and August, and is increased by dividing the old plants in autumn or spring, or by seeds.—*Journal of the Horticultural Society.*

OPHIPOGON PROLIFER. Proliferous Snake's-beard. Stove perennial. (Lily-worts.) Singapore. This has a slender stem slowly rising by means of roots, which its leavy shoots throw out, in the manner of a screw Pine. The stems are not thicker than a swan's quill, and bear at intervals clusters of bright-green sword-shaped leaves, which curve downwards, and are longer than the flowering stems. The latter are bright purple, and bear in an interrupted manner a few clusters of nearly sessile small, white, obovate flowers, whose texture is between fleshy and spongy. It succeeds in rough, sandy peat. During summer an ample supply of water is necessary; also a very moist atmosphere, at a temperature of not less than 50° by day. In winter it requires to be treated almost like an Orchidaceous plant; if a humid atmosphere is kept up, little or no water will be required for a few weeks.—*Journal of the Horticultural Society.*

AZALEA SQUAMATA. Scaly-stalked Azalea. Greenhouse Shrub. (Heathworts.) China. From the mountains of Hong Kong, whence it was sent by Mr. Fortune, as a fine and distinct species. With the habit common to all the Chinese Azaleas, they present the following peculiarities:—In its natural state it blooms without leaves, producing at the end of every little shoot a large solitary flower of a clear rose colour, distinctly spotted with crimson on one side, and guarded at the base by a large sheath of bright brown scales (whence its name). Its calyx, unlike that of the neighbouring species, is reduced to a mere five-toothed rim. Its ovary, immediately after the fall of the corolla, projects in the form of an oblong body quite covered with coarse brown hairs. The leaves, when young, are somewhat like those of *A. indica*, and have nothing distinctive in their shape or surface; but when old they are oval, sharp at each end, perfectly hairless, and as even on the upper surface as those of *Rhododendron punctatum*. This plant has been long known from dried specimens and drawings sent from China by Mr. Reeves, the latter of which are preserved in the library of the Society; but it has never before been introduced alive. At present its flowers have only been produced by plants out of health, and therefore they have given no just idea of the beauty of the plant, which is one of the finest in cultivation. It will probably prove hardy. In a case, containing several plants, Mr. Fortune sent home a portion of the soil, brown loam, in which this species was found wild, and for the purpose of trying its effects one plant was potted in it; but it has by no means the healthy appearance of those potted in rough sandy peat. It strikes freely from cuttings of young wood under ordinary treatment. The beautiful spotted flowers (although not large) and the neat foliage, together with a dwarf habit, will render this a plant of considerable importance either in a greenhouse or in the shrubbery.

AZALEA OVATA. Hardy Shrub. (Heathworts.) China.—From Chusan, where Mr. Fortune found two varieties; “the one with white, the other with pink or lilac flowers; both spotted and very beautiful.” Among the early despatches from Mr. Fortune was received a drawing of this beautiful shrub, which, according to the Chinese artist, has most delicate pink flowers of the size and form of the Davurian rhododendron. The original plants did not survive the voyage; but a packet of seed has furnished an abundance of young plants, which have been distributed extensively to the Fellows of the Society under the name of “Azalea 274.” The dried specimens received from Mr. Fortune enable the species to be positively determined. It is entirely different in foliage from all the other Chinese Azaleas; for instead of the pale-green colour and abundant hairs which characterise them all, this has perfectly hairless leaves, unless in the seedling state, and they are of a very dark green. Their form, too, is quite distinct; for instead of tapering gradually to the stalk, they are abruptly ovate, or even in some cases almost heart shaped. The plant has been too recently acquired for any knowledge of its true habits to have been acquired; but seedlings in the open air have borne the frost of last autumn, and it was considerable on two occasions, without having suffered in the least; and if, as seems probable, the plant should not be inclined to push early, it will not only be a hardy evergreen, but one of the finest in the country.

ACHIMENES ALBA. A dwarf variety, flowers tubular, dotted with black. The limb only being white. At the Tooting Nursery.

ACHIMENES PATENS. Spreading Achimenes. Greenhouse herbaceous plant from Mexico. One of the first objects to which Mr. Hartweg directed his attention on his return to Mexico, in 1845, was the recovery of this beautiful plant, which he had found in the course of his former researches, but which had not been reared in the garden of the Society. Although the season was so far advanced that herbage had all become withered, he succeeded in discovering some roots, which were immediately sent home by the post, and proved to be this plant. Nor does it disappoint the expectations that had been formed of it; for with the habit and foliage of *A. longiflora* it bears flowers of so intense a violet that no artificial colours can imitate them. This most remarkable tint fades away on the outside of the corolla into a clear bright purple, and is renewed on the tube of the corolla in an intermediate tint. The border of the corolla is slightly notched,

and its tube is extended into a singular blunt horn, which projects beyond the calyx, and is more or less lobed at the sides. The corolla measures about an inch and a half across the flat border, and the tube is rather larger. Achimenes patens, like most of the other kinds, may be treated so as to flower nearly at all seasons of the year, and only requires to be kept in a dormant state and quite dry when at rest. It should be started gradually, and grows best in a soil composed of a small portion of well decomposed cow-dung and half decayed leaf mould, in a very rough state. It is easily increased by the scaly roots, and requires a close atmosphere, but not a very damp or hot one. It is a very handsome kind, being one of the finest both for colour and foliage.

GARDENIA FLORIDA, L.; VAR. FORTUNIANA. Mr. Fortune's Gardenia. Greenhouse shrub from North of China. The common single and double varieties of this plant are known to every one. That which is now noticed differs merely in the extraordinary size of the flowers, which are nearly 4 inches in diameter, and in having fine broad leaves, sometimes as much as 6 inches long. The flowers are pure white, changing to light buff as they go off, and not unlike a very large double Camellia. Their calyx has the long broad lobes of the original species, instead of the narrow lobes, at least twice as short as the tube of the corolla, of *G. radicans*, by which that species is technically known. It is one of the very finest shrubs in cultivation, and ranks on a level with the double white Camellia, which it equals in the beauty of the flowers and leaves, and infinitely excels in its delicious odour.—*Journal of Hort. Society.*

NEW PLANTS EXHIBITED AT THE HORTICULTURAL SHOW AT CHISWICK, ON July 11th.—Messrs. Veitch and Son, of Exeter, sent a handsome, new, and, apparently, free-flowering *Ixora*, having large pale-green leaves, and semi-globular heads of salmon-coloured flowers, something in the way of *I. crocata*. From the same nursery were also *Cuphea cordata*; a new *Æschynanthus pulcher*, and another new form of that handsome genus, with purple-tinged leaves, and dark-red blossoms issuing from a downy chocolate sheath. Associated with these was the same long-spurred Balsam (*B. latifolia*) produced at the June show; and a Clematis, named *glandulosa*, with large heart-shaped leaves, and numerous long-stalked deep chocolate and white flowers. F. Scheer, Esq., of Kew, sent a new Bolivian *Echinopsis*; Messrs. Henderson, of Pine-apple place, their new *Æschynanthus Boschianus*; Mr. Robertson, gardener to Mrs. Lawrence, the handsome *Pavetta Borbonica*; Mr. Jack, *Cuphea miniata*, a pretty species, with opposite hairy leaves, and axillary flowers, having a purplish tipped calyx, and two erect vivid scarlet petals. Along with it was also a small *Mussaenda macrophylla*. From Messrs. Rollisson was a *Hoya*, with clusters of greenish-white blossoms, less handsome than *carcosa*. Mr. Jackson, of Kingston, sent a variety of his Seedling Heath (*E. Jacksoni*), a good addition to this beautiful tribe; and the Chinese *Lycopodium cæsius*. Mr. Fairbairn, of Wandsworth-road, *Polygala Dalmaisiana*; and Mr. Groom, *Calystegia pubescens*.

NEW PLANTS FROM CHINA, &c.—Most of our readers are aware that the Horticultural Society sent a collector of plants (Mr. Fortune) into China. Some very valuable ones have already bloomed in the Society's garden, and high expectations are entertained of many others. A writer in a recent number of the Gardener's Chronicle describes a few which are now in bloom, and knowing our readers will be gratified to know somewhat of them, we extract a portion. "Mr. Fortune's *Indigofera decora*.—This forms a dark-green bush, with somewhat glaucous branches and pinnate leaves, from whose axils are produced racemes of beautiful light rosy flowers; indeed the whole appearance of the plant is very handsome, fully realizing all that has been said of it. Near it was another of Mr. Fortune's plants in bloom in the shape of *Rhynchospermum jasminoides*, a pretty sweet-scented greenhouse twiner, with snow-white flowers something like those of the white jasmine. It will, no doubt, form a valuable addition to this class of plants. On a front shelf was a *Lysimachia*, producing

racemes of small white flowers; if hardy, this may possibly be a good plant for bedding out. It was raised accidentally from seeds which had been deposited among the mould with which Mr. Fortune packed one of his Chinese importations of plants. On the same shelf was *Calandrinia umbellata*, a beautiful object, either for ornamenting the shelves of our greenhouses, or for planting out in patches on rockwork. The flowers are produced in tolerable abundance, and the colour (a deep purple) is the most lovely imaginable. We may here mention a little experiment which has been made on the growth of Cacti in water. On the 11th of June, 1845, a plant of *Mammillaria pulchra* in a 3-inch pot was placed in a 6-inch pot, which, having the hole at the bottom stopped up, has been kept full of water, and, singular as it may appear, the plant is growing very luxuriantly under this anomalous treatment, although it has been constantly kept in the water, from the above date to the present time, and fully exposed to the ever varying temperature of a greenhouse. This being quite the reverse of the treatment such things generally receive, would seem to offer a useful hint to the growers of this interesting tribe, and it further shows that the nature of Cacti under cultivation is but imperfectly understood. In the range of pits in front of this house was Mr. Fortune's last importation of plants from China. They are all in good condition; the *Pæonies* are just beginning to break, the *Camellias* and *Roses* also look well, more especially the *Camellias*, and some *Caprifoliaceous* plants. In the same range was *Achimenes patens*, the lovely new species lately received from Mr. Hartweg; with the habit and foliage of *A. longiflora*, it bears flowers of an exceedingly beautiful violet colour, changing on the outside of the corolla into a clear bright purple. The tube is extended into a singular blunt spur which projects beyond the calyx. It is, perhaps, the most beautiful of all the species yet introduced, fully realizing the high expectations formed of it. In this pit was also an Arabian production like a *Plumeria*, with a large fleshy stem swelling out at the base, and with gnarled *Ceradia*-like branches bare of foliage, except at the ends, where a tuft of tolerably large, shining, dark-green, obtuse ovate leaves surround the flowers. The blossoms themselves are very handsome, something like those of an *Echites*; the tube being about an inch in length, of a pale yellow outside, spreading out into five delicate pink petals, edged with deep rose. Associated with it was the *Naras* fruit, a production about which as yet little is known. It was found growing on little knolls of sand by Captain Sir James Alexander, when he visited the country near Walwich Bay, on the south-west coast of Africa, forming bushes 4 or 5 feet in height, without leaves, and with opposite thorns on the light and dark green striped branches. The fruit is stated to have a coriaceous rind, rough with prickles, and to be twice the size of an Orange; the inside resembling a Melon as to seed and pulp. When ripe it has a sub-acid taste, very agreeable in that hot country; and without it the natives could not remain near the coast. Inhabiting as it does that excessively dry, hot, and barren region, it was considered that the plants would succeed without water; but this is a mistake; for it has been found that out of all the plants that germinated from seeds sown in the garden, those only which have received plenty of water have survived. Two plants in a pot, receiving a copious supply every morning, with a slight shade and a moist heat of about 80°, are now nearly a foot in height, producing spiny-looking stems, rising from between two cotyledons, exactly like those of a Melon or Cucumber. What the result, however, may turn out to be, it is as yet impossible to foretell.

ECHINOCACTI AND MAMMILLARIA.—I cannot omit noticing, for the information of your readers, an ingenious method of propagating such interesting plants:—Mr. Turner, curator of the Botanic Garden, Bury St. Edmund's, received from South America a rare specimen of *Echinocactus*, which was decayed at its base, and would not emit fresh roots; he, therefore, seared it at the top, and cut off the diseased part, which after being healed in a dry stove, produced several small plants on the summit; a second species, which was deemed incurable, was cut transversely and placed on a shelf in the succulent-house, and being fixed on a pot of soil, soon made a strong plant. He has also increased, to a considerable

extent, some of the species of *Mammillaria* by cutting off the protuberances on *Mammillaria*, which, after being dried on sand, produced perfect plants under a bell-glass with bottom-heat.—*N. S. Hodson (Gardeners' Chronicle)*.

BLUE AND WHITE FLOWERED PYRAMIDAL CAMPANULAS.—This plant, when grown to a degree of vigour it is capable of, by a rich soil, and plenty of pot room, with one or more shiftings into larger as required, I find to grow nine feet high, with numerous subordinate spikes, and during some months at the end of summer to make one of the most showy plants in cultivation. As the pots may be purchased at five shillings per dozen, I am induced to send this small notice of the plant, that the readers of the *CABINET* may be enabled to provide and cultivate this truly sweet and splendid flowering plant. When grown in pots, it forms one of the most ornamental plants for a greenhouse-room, or to be placed in a vase on the lawn, or in a flower-garden. Or if grown in the open border in a deep and rich soil, it merits a place in all. I have found that by placing one of the blue flowered kinds in a shady place in the greenhouse or room, the flowers become paler and are of a most beautiful French lilac colour, most strikingly handsome.

AN AMATEUR OF THE METROPOLIS.

LABELS MADE OF GLASS.—The best kind of label for marking plants is a problem that, I think, has not yet been solved. The marks on wood and iron soon become indistinct. The removal of the duty on glass drew my attention to the subject. No. 1 is a tube of glass, half-inch internal diameter, about two inches long from shoulder to bottom; the name of the plant is printed or written on a piece of paper, about one inch and a half square, folded cylindrically, and introduced into the tube. The tube is then corked and sealed with resin, sealing-wax, asphalt, thick paint, or other cement. A piece of very slender copper-wire is twisted round the neck of the tube by which it may be attached to a wooden or metallic support, or to the branch of a shrub or tree. The above will probably be most generally used, as the label can be introduced or changed at pleasure. But No. 2, in which the tube is closed hermetically, will, on account of its neatness and perfection, be preferred by many. When used, the names of the plants must be sent to the glass-blower to be inserted before sealing the tube hermetically.—*Jos. C. Gamble (Gardeners' Chronicle)*.

ON ACHIMENES AROYSTIGMA.—The best way of cultivating this plant is to grow it in masses planted in large pans or pots, as it then produces a multitude of spikes of its pretty delicate looking flowers, which present a graceful, and I think elegant, appearance, that goes far to compensate for any deficiency of those brilliant colours which distinguish its brethren. C.

Floral Operations for August.

PELARGONIUMS.—Plants that have done blooming should soon be cut down, this will induce them to push fresh shoots immediately. When the shoots have pushed two inches long, the old plants should be repotted, shaking off the old soil and replacing with new. This attention to have a supply of strong young shoots before winter, furnishes the vigorous blooming wood for the ensuing spring, and the plants are kept dwarf and bushy. When the young shoots push after being headed down, there are generally many more than necessary to be retained. They should be thinned when an inch long, and the tops now cut off may be inserted in sandy loam, and struck if required.

GREENHOUSE.—The young wood of many kinds of greenhouse plants being sufficiently hardened, if cuttings be immediately put in they will root well before autumn.

CAMELLIAS may be shifted at this period. I consider it an excellent plan to

perform this operation the moment that the flower-bud is decidedly formed. As compost, I would recommend two-thirds of fibrous loam of an unctuous character, and one-third of fibrous heath soil. The more fibrous and lumpy it is the better, and a good sprinkling of charcoal in small masses, with sharp silver sand, should be added. Let the pots be most completely drained, by placing some large crocks in a very hollow position at the bottom; topping these up with a pounded mixture of broken crocks and charcoal, from which all the very small particles have been riddled. Cover this with very fibrous turf in small lumps, before placing the ball, and keep pressing the material (not ramming) close, with the fingers, during the process of filling up, observing to have the compost in a mellow state, rather inclining to dryness. One most material point is, to see that the ball is thoroughly moistened before shifting; if any doubt of this exist, let the ball be steeped in water for a quarter of an hour, previous to potting. When the flower-buds are in clusters, thin them, so as to leave no more than are likely to be perfected. If too many remain they injure the plant, and eventually drop off in spring.

DAHLIAS.—Thin out the branches of those kinds which are introduced for shows, and if it is desired to increase the stock of any new one, cuttings may be selected which will readily strike and form good sized pot-roots: water should be given copiously every evening, during dry weather; a stratum of manure should be laid for three feet around the stem of each plant, which will greatly assist in promoting a vigorous growth, and in the production of fine blooms during the ensuing month.

CALCEOLARIAS.—Cut off the flowering stems, place the pots in a cool frame, shade from hot sun. In a week or ten days repot them. (See Article in July Number.)

AURICULAS AND POLYANTHUSES.—Seedlings raised during spring should now be transplanted into pots for blooming next season. Repot the old stock. (See Articles upon it.)

CARNATIONS.—The blooms are now beginning to fade, and the operation of laying should be performed *without delay*: in doing this, take your seat astride a common form, get the pot before you, and steady the layers with your left hand, resting the back of your right hand upon the edge of the pot and holding the knife upwards between your two fore fingers and thumb, then with a steady hand and correct eye, cut upwards quite through the middle of the second or third joint from the top; the cut may be extended a full quarter of an inch beyond the joints; if the joints are wide apart, always take the second; remove the leaves that ensheath the joints, and shorten the nib just below them; be careful not to break off the layers in pegging them down, and cover the joints three quarters of an inch deep; remove them into the shade, water them with a fine rosed pot, and repeat it afterwards as often as necessary. Never cut off the tips of the leaves.

RANUNCULUSES, TULIPS, ANEMONES, &c.—Roots should now be taken up and gradually and well dried in an airy room.

ROSES.—Budding should be finished as soon as possible.

MIGNONETTE, to bloom during winter, should now be sown in pots.

FLOWER GARDEN.—Heartsease should be propagated by slips, put into a shady border, and kept quite moist till they have taken root, these will form fine strong plants for blooming the spring following. Chrysanthemums should have their shoots stopped to make them branch, and keep them bushy, not later than the middle of this month, as, if done later, the lateral produce would be weak and the blossoms small.

Where the plant has numerous shoots, they should be thinned out to a few, to have them large and showy.

CUTTINGS of Verbenas, Pelargoniums, double Ragwort, Petunias, Heliotropes, Anagallises, Calceolarias, Hemimeris, Salvia, Bouvardias, &c. should immediately be struck where a stock is required for beds next year. If this attention is delayed, the plants will not be so rooted as to be likely to survive the winter.

PINKS.—If pipping, or slips, be well rooted, about the middle of the month, they should be planted in beds, or potted.



1. *TORENIA CORDATA.* 2. *GESNERIA ELLIPTICA, Lutea.*

Floricultural Cabinet.

THE
FLORICULTURAL CABINET,

SEPTEMBER 1st, 1846.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I. EMBELLISHMENTS.

1. TORENIA CORDATA (HEART-SHAPED LEAF.)

ALTHOUGH this new species is inferior in the beauty of its flowers to *T. asiatica* (figured in the CABINET for July), it is, nevertheless, a very pleasing plant, and in growth possessing an advantage over that kind, by being more compact. Our figure was prepared from a specimen bloomed in the Clapton nursery, where it had been received from the London Horticultural Society, under the appellation of "herbaceous plant from China:" and as one of its distinguishing characters is presented in the novel shape of the leaves, we have adopted the specific name above given. The plant appears to grow successfully in a light rich soil, and treated after the ordinary manner of greenhouse plants: we dare say, however, it will ultimately be transferred to the summer flower-garden. We already find *T. asiatica* to flourish there.

2. GESNERIA ELLIPTICA, LUTEA. (ELLIPTIC-LEAVED, YELLOW VARIETY.)

Our drawing of this novel-coloured Gesnerea was made from a plant in bloom at the Kew Botanical Gardens during the early part of the present summer. We are informed it was originally discovered, with several other varieties of the same species, having various intermediate shades to a pale red, by Mr. Purdie, at Santa Martha,

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in New Grenada. To all lovers of the ornamental and particularly interesting tribe of Gesnereas, the present kind has considerable claim, not alone for its distinct and clear colour, but because with that it combines an excellent erect habit, and a disposition to bloom freely. The usual treatment suffices to grow it.

ARTICLE II.

ON THE CULTIVATION OF THE PINK.

BY MR. E. F. FAIRBAIRN, NURSERYMAN, WANDSWORTH ROAD, LONDON.

THE genus *Dianthus* comprehends a family which have long been the pride of the florist, on account, as well of the agreeable fragrance they possess, as the beauty of their flowers; I allude to the Pink, with respect to which the old florists have justly observed, "he who can grow Pinks and Carnations can grow any florists' flower;" and I certainly agree with them in this case; as, from experience, I have found Pinks require more than ordinary care and attention to grow them to perfection. The object, therefore, I have now in view in addressing you, is to impart what knowledge I possess of their cultivation and general properties as show flowers.

In the first place, then, I would advise persons about commencing the cultivation of this most interesting flower to procure from some respectable grower a collection of the best sorts, as early in September as possible; and it is always advisable to have two pairs of each kind, to be able to plant them together, in small squares, thus:—

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The advantage obtained by this method is, that when in bloom they may be so readily covered with shade or glass, as deemed necessary; and it may be done so as to allow plenty of room for top-dressing the plants in spring. The bed should be so situated that it is sheltered from the north, and the composition forming it very rich. If the natural soil where the bed is intended to be formed is already fertile and light, I would recommend merely a good dressing of fresh loam

and rotten manure; but if poor and stiff, I advise such soil to be entirely removed to the depth of eighteen inches, and its place supplied by the top spit from a rich meadow, mixed with well-rotted cow manure, in the proportion of three to one. But before this is placed in the bed, it must be carefully searched, in order to destroy all grubs, which, at the season of the year alluded to, are very numerous and destructive. As a considerable number of plants may be cultivated in a small bed, they will amply reward if more than ordinary trouble is taken to prepare the bed; and in order to do that most suitably, I would recommend four or six inches of stones, or brick rubbish, to be placed at the bottom for drainage, Pinks always suffering more from wet than frost; I would also introduce one or two bushels of charcoal, after being steeped in a strong solution of guano or pigeons' dung. A bed thus prepared would be ready for the reception of the plants, which will be found to do best if planted in September, in the manner I have before described; they will, after this, require no further attention until February, when they must be top-dressed with some choice old manure, such as sheeps' or rotten cow-dung, mixed with a little pigeons' dung. In May, the plants will throw up their stems for bloom, which require particular attention properly to spindle them, as it is termed; that is, to remove all the weak and side blooms, so as to reduce the number left to one, two, three, or four, as the case may be; for instance, to produce an extra fine flower of such kinds as Enchantress, Tom Long, or Duke of Northumberland, there should be but one bloom left to a stem; while, on the other hand, such flowers as Rubens, Great Britain, and Hero of Croydon, require that three or four blooms be left on a stem, in order to weaken the individual bloom, which otherwise would be almost impossible it could expand without bursting the pod. At the time of these operations the stems should be tied to neat sticks, and when this is completed I give the whole bed a top-dressing, in the following manner: I procure a quantity of fresh cow-dung, and place it in a large tub, adding thereto a sufficient quantity of water to reduce it to a fluent substance, of such consistency, that when poured over the bed it disposes itself in a thick crust. The beneficial effect of this application is most distinguishable, and I will here observe, might not the same means be, with the greatest advantage, employed to promote superiority in other tribes of flowers?

As the earliest blooms begin to open, the most diligent attention will be requisite, because, as the pods swell, they must be tied, to prevent unequal expansion ; with bass, or, what is better, rice-bag matting. Some of the thin podded kinds it is only necessary to tie once round, but the stout ones require tying as they swell ; for, if tied too tight at first, they will burst in the sub-calyx. It is remarkable how soon the stout pods will burst, if not tied in time. In order to facilitate their opening, a plan generally adopted, is to ease the divisions of the pod with the point of a knife, which greatly assists them, as it will also to subdivide the calyx, or pod, into ten segments, instead of five.

Immediately a bloom unfolds two or three of the first, or guard petals as they are generally denominated ; it will require to be placed on a card, in the usual manner, taking care that it goes on the pod sufficiently tight to support itself ; in this stage the bloom can be greatly assisted by easing the petals as they are ready to expand with the point of the dresser.

In order to have blooms in the finest order for exhibition, it will be found necessary to shade the early ones to keep them back, and place glasses over such as are later to bring them forward. It is of little consequence what sort of shade is used ; but the most simple is one with a tube in the centre, having a nut and screw attached ; the tube goes on the stick, and the screw fastens it thereto ; the same plan acts well also for glasses, and is a preventative against wind overturning them. Besides this, another admirable plan is now observed by many Pink growers, who use what is termed a table, which consists of a piece of wood something similar in shape to a child's battledore, with a hole in the handle to fasten to a stick going in the ground, or, in other words, to the leg of the table. In this table is a slit three inches long, and large enough to admit the stem of a Pink to its extremity ; after which introduction the slit is filled up with moss or wool, to prevent earwigs or other insects from attacking the flower. In addition, this plan is not only secure, but very convenient ; as a common garden pot placed on the table over the flower protects it as well from sun, wet, dust, wind, or insects. And if it is requisite to bring the flower forward, a small bell-glass, substituted for the pot, answers the purpose, and forces the bloom rapidly.

The usual period appointed when exhibitions of Pinks take place

is from the 18th to the 24th of June; and now it is that the careful grower anticipates his reward. In selecting a stand of blooms for show, he must therefore be cautious to have all the blooms dissimilar and, as much as possible, perfect in arrangement, bright in colour, and regular in lacing. The disqualifications are, a split pod, bass, or any other material being left on the pod, two blooms of a sort, a run petal, or a dropped petal.

To the cultivator, who has paid every possible attention in the management of his plants, the disappointment of gaining a prize by an oversight or misunderstanding is vexatious enough; he cannot therefore be too wary in placing his blooms.

Perhaps the fatal defects enumerated may not be fully understood by the young grower. I will briefly explain then that a split pod is when either division is run down to the sub-calyx; a dropped petal is when the guard petal has been eaten by an insect, or otherwise, so that it will not support itself; and a run petal is when no white is seen in the centre of the petal, or, in other words, when the lacing is run into the ground colour; in addition, as already observed, there must be no bass, card, or anything on the flower, when staged for exhibition.

As the propagation of the Pink by means of pipings is generally so well understood, I need not occupy any portion of this essay thereon; but, as it cannot be denied the various kinds now grown are very capable of improvement, I will observe, with respect to seedlings, for the particular encouragement of raisers, that I have found the plants seed much more freely when allowed to grow without any artificial treatment. It is advisable therefore to plant a bed of the best rose-leaved flowers solely for the purpose of producing seed; allowing them to grow as they like. As soon as the seed-vessel begins to open at the point, it must be gathered, and the seed permitted to remain therein until required for sowing, which should be in the month of March following. I have sown it as soon as ripe, but do not recommend the plan, as the plants seldom flower the following year; and when that is the case, they are exposed a long time without any advantage being gained. I advise the seed to be sown in a cold frame, and then the plants will be sufficiently strong to transplant into beds in May, where they will bloom the following year.

In conclusion, I beg to add a list of the names of the best kinds

with which I am acquainted; remarking by the way, however, that what I have hitherto been advocating is the cultivation of the Pink in the open ground; but there is no reason why they may not be cultivated in pots with advantage, similar to carnations, or even in a No. 12-sized pot six plants might be grown; I consider they would form a pretty feature at our exhibitions, supporting the collections of pot roses with much effect; and I hope the experiment will be tried, and liberal prizes offered by the horticultural societies for their production.

Neville's Enchantress.

———— John Dickson.

———— Aurora.

———— Duke of York.

———— Earl of Warwick.

———— Achates.

Buxton's John Bull.

———— George Allingham.

———— Gem Superb.

Fairbairn's Bob Lawrence.

———— Beauty.

———— Miss Kate.

———— John Buxton.

Henbrey's Rubens.

———— Quercus.

Turner's Masterpiece.

Hale's Queen of England.

Bragg's George Glenny.

Ward's Great Britain.

Wallace's Henry.

Hundsworth's Omega.

Garrett's Alpha.

———— Queen of Roses.

Hodge's Mellona.

———— Gem.

———— Mars.

———— Tom Thumb.

Hasting's Tom Long.

Jones' Miss Jones.

———— Huntsman.

Smith's John Hampden.

Headley's Duke of Northumberland.

Keynes' Colonel Baker.

Bunkle's Queen.

———— Lord Brougham.

Holmes' Coronation.

Kirtland's Gaylad.

———— Dr. Daubeney.

Legg's Prince Albert.

Pinder's Lady Hollywell.

Meade's Susannah.

Brown's Model.

———— Garland.

Otley's Dr. Edwards.

Hartstone's Prince Albert.

Sharp's Splendid.

Agate's Sir Robert Peel.

———— Hero of Croydon.

Cowdrey's Lord Calthorpe.

Cousin's Little Wonder.

———— Coronation.

Robinson's Blackheath Hero.

Ibbett's Triumphant.

Willmer's Elizabeth.

———— Tom Davey.

———— Queen Victoria.

ARTICLE III.

ON BOTANY APPLIED TO HORTICULTURE.

BY MR. TODD, DENTON GARDENS, LINCOLNSHIRE.

To expatiate upon the various ways to which botanical knowledge can be applied to the alleviation of our individual and social wants, or the gratifying of our peculiar tastes and inclinations, would be out of place here, and foreign, indeed, to my intention. Therefore, without dwelling upon the merits of botany as a source of intellectual amusement, as an elegant adjunct to a person's philosophical attainments, as an inducement to take fresh air and exercise, or as a means of creating a taste for rural scenery, by familiarising the mind with what is picturesque and beautiful, I shall pass on and merely treat of it as it can be practically applied to the advancement of horticultural science, and rendered a valuable auxiliary in the higher branches of gardening.

Botany furnishes us with a rich variety of vegetables; horticulture develops in the highest possible degree their peculiar excellences. It is the province of botany to classify and describe the profusion of plants which compose the "vegetable kingdom," to furnish us with information respecting their local distribution on the earth's surface, the nature of the climate, soil, and situation in which they are usually found, with their time of flowering; it treats also of their medical and economical qualities, with the purposes to which they are generally applied by the natives of the countries in which they are indigenous. Thus we see that botany furnishes the scientific gardener with the requisite data upon which he may found a system of treatment most congenial to the local and constitutional peculiarities of any given species, whether indigenous or exotic. If he knows the principal characteristics of any particular order or genus he may not unfrequently form a good idea of its individual members, as regards their adaptation for ornamental, medical, or culinary purposes; and whether they are docile under cultivation, and susceptible of much improvement. Thus, in point of elegance, the natural order Ranunculaceæ far surpasses that of Umbellifera; the members of the former are for the most part highly ornamental, and exhibit, under cultivation, a remarkable tendency to become double, as the beautiful foreign varieties of *Anemone*, *Clematis*, *Ranunculus*, *Pæonia*, &c.,

sufficiently prove, whereas, very few of the latter, though it contains some 800 or 900 species, are adapted for, and scarcely any of them (I believe), with the exception of the Eryugiums and Physospermums, rise above mediocrity as objects of decoration. Dr. Hooker, in his "Botany of the Antarctic Regions," speaks of "two fine kinds of Anisotome," as being indigenous to the Auckland Islands; and one of which (*A. latifolia*) is described as "one of the noblest of umbelliferous plants, attaining the height of six feet, and bearing umbels of rose-coloured or purplish flowers, each compound umbel being as large as the human head."—*Hort. Mag.*, vol. ii. p. 138. So also with respect to geographical distribution. The flora of some extensive regions often exhibit a peculiarity in their organization and external appearance, which, in some measure, points out their appropriate mode of culture. Thus, the majority of the flowering shrubs of New Holland are remarkable for a great delicacy in their roots and leaves, and for their neat and compact habit, as is seen in the Heaths, Pimelias, Eutaxias, Acacias, &c., of that country. The intelligent amateur in their culture therefore takes care to use those kinds of soil as have the least tendency to choke up their effeminate organs. Accordingly, a light sandy compost, and free drainage, with a pure atmosphere and moderate supply of water, is the course of treatment usually adopted. Those of America are for the most part quite the reverse of these; they are characterized by their strong growth and luxuriant foliage, and by a comparative coarseness of outline, as may be seen in some species of Fuchsia, Gesnera, Alamanda, and especially in those of the solanaceous kind, as the Brugmansias; light rich soils and copious watering, therefore, with an atmosphere highly charged with humidity, are the chief constituents in the development of these exuberant features. These must be understood as their usual characteristics and modes of treatment, and not as applicable to every individual case, because the variable surface of every country necessarily produces a corresponding variation in the character of its plants. Indeed, so greatly is the character of all kinds of vegetation modified by soil, aspect, latitude, altitude, meteorological phenomena, &c., that the careful study of these circumstances also becomes indispensable. A plant may have come from a more northern country than our own, and yet be unable to endure the severity of our winters without artificial protection. This

is the case with some of our beautiful Alpines whose winters in their native habitat is passed beneath the snow, and are, therefore, shielded from those sudden, and I may add, injurious changes of heat and cold, which they are necessarily subjected to in a climate so extremely variable as ours. So also a plant may be indigenous to a more southern country than this, and still find the full influence of our summer's sun too much for it. The *Nemophila* will serve as an example. I have seen a bed of *N. insignis* this summer dwindle away in a southern exposure where it last summer grew beautifully. And this is easily accounted for, and might have been prevented had its natural conditions of growth been studied. Every plant is adapted to grow in its own peculiar habitat; that of the *Nemophila* is a moist and shady one. Therefore, if it be compared with that of the bed alluded to, it will be perceived that the failure was no more than might have been anticipated; and the circumstance of its having done well in the same situation the preceding summer was the mere work of chance, resulting from the humid and general sunless character of that season, nearly resembling the character of its native locality.

More examples might be adduced in illustration of the utility of this department of botany (which is termed geographical) to the pursuits of the amateur, but it may be perceived from what has been said, that the careful study of it could not be other than highly advantageous, inasmuch as it would furnish him with a knowledge of those incidental circumstances which, under certain modifications, influence the growth of his plants; and the attentive observance of which would, in a great measure, obviate those failures and disappointments which are too often the only reward of his diligent though misdirected labours.

Should it not be thought inconsistent with the nature of the CABINET, in my next and two succeeding papers, I intend treating of Physiological or Structural Botany, with remarks touching its application to horticulture.

ARTICLE IV.

ATTRACTIONS OF THE ROSE.

BY ROSABELLA.

THIS beautiful flower has long been the admiration of all classes of society, and in every clime where it has displayed its floral beauties.

Sacred and other historians, as well as poets of every age, have lauded its beauties and perfume; and very lately having met with a page or two illustrative thereof, I transcribe them for insertion in the CABINET.

“ Fabulous authors account for the delicious perfume of the rose, by telling us that Love, in a feast of Olympus, in the midst of the gaiety of a light and lively dance, overthrew, with a stroke of his wing, a cup of nectar, which precious liquor falling on the rose, embalmed it with that heavenly fragrance which it still retains.

“ Mythological writers also relate that Rhodante, queen of Corinth, to avoid the pursuit of her lovers, fled to the temple of Diana to conceal herself; but being besieged by lovers, and obliged to appear, she called on the people for assistance, who, on beholding her beauty, threw down the statue of Diana, and declared her to be the goddess of the temple; upon which Apollo changed her into a rose.

“ The first rose ever seen was said to have been given to Harpocrates, the god of silence, to engage him not to divulge the amours of his mother Venus; and from hence the ancients made it a symbol of silence, and it became a custom to place a rose above their heads in their banquetting rooms, in order to banish restraint, as nothing there said would be repeated elsewhere; and from this practice originated the saying, ‘under the rose,’ when anything was to be kept secret.

“ The Turks are great admirers of this beautiful flower, and Musselmans in general believe that it first sprang from the perspiration of Mahomet, on which account they will not suffer a rose leaf to lie on the ground, or permit any one to tread upon this sacred flower.

“ In the luxurious days of the ancients, even the warriors crowned themselves with garlands of roses during their principlal repast; and Pliny tells us, their delicate meats were either covered with the

petals of these fragrant flowers, or sprinkled with its odorous oils. At a feast which Cleopatra gave to Antony, the royal apartments were covered with rose leaves to a considerable depth.

“ The triumvir, when dying, begged of the captivating queen that she would scatter perfumes on his tomb, and cover it with roses.

“ In Turkey, a rose is sculptured on the monument of all ladies that die unmarried; and in Poland they cover the coffins of children with roses, and when the funeral passes the streets, a number of these roses are thrown from the windows. Camden tells us, ‘ There is a classical custom observed, time out of mind, at Oakley, in Surrey, of planting a rose tree on the graves, especially of the young men and maidens who have lost their lovers; so that the churchyard is full of them.’ It is the more remarkable, since it was used anciently both amongst the Greeks and Romans, who were so very religious in it, that we find it often annexed as a codicil to their wills (as appears by an old inscription at Ravenna, and another at Milan), by which they ordered roses to be strewed and planted over their graves.

“ This ancient custom of decorating graves with flowers, the symbols of fleeting mortality, has almost passed from recollection in this country, and is rapidly disappearing in most parts of Wales; but we read in the ‘ Beauties of England,’ that Thomas Stevens, a poor and aged man, who lies buried in the churchyard of the village of Stokenchurch, in Oxfordshire, left a request that his oldest son would annually dress his grave with flowers on the recurrence of the wake of St. Peter’s.

“ The Mexicans, says the Abbé Clavigero, have from time immemorial studied the cultivation of flowers and odorous plants, which they employ in the worship of their gods; and in the temple of the true God the high priest was formerly crowned with roses. The Catholic church has still preserved the use of these flowers in its most sacred ceremonies, as it is always the rose that they strew before the holy sacrament in solemn processions.

“ There is now to be seen at Rome, in the church of St. Susan, an old Mosaic, which represents Charlemagne kneeling, receiving of St. Peter a standard covered with roses. The custom of blessing the rose is still preserved at Rome, and the day is called *Dominica in rosa*. They make in that city artificial rose trees of pure gold,

which are blessed by the Pope on the first Sunday in Lent, while they sing *Lætera Jerusalem*, and which after mass he carries in procession, and then sends it to sovereigns, or presents it to princes who visit his capital; and it was the custom until about these last forty years, for the prince who received this rose tree, to give a sum equal to five hundred pounds to the person who brought him this present from the pope; but the rose tree itself was worth twice that sum.

“Pope Julius the Second sent a consecrated rose of gold, dipped in chrism, and perfumed with musk, to Archbishop Warham, to be presented to Henry the Eighth, at high mass, with the apostolical benediction. The king received the precious rose, and more precious benediction, with profound reverence and excessive joy. But every body knows how soon the remembrance of this rose faded with this capricious monarch.

“Mary Stuart, queen of Scots, sent a magnificent rose tree to Rosnard, the French poet of the sixteenth century, which was valued at two thousand crowns, with this inscription: *Rosnard, l'Apollon de la Source des Muses*.

“Bayle relates an accident which happened at the baptism of Rosnard. In those days it was customary to bring large vases full of rose water and baskets of flowers to christenings; and as the nurse was going to church with the infant bard, she let her flowers fall, and in turning to recover them, she touched the attendant who carried the vase of rose-water, and spilt it on the child; and this, says Bayle, was since regarded as a happy presage of the good odour that would some day scatter his poetry.

“Painters represent St. Dorothy holding a nosegay of roses, because it is told in her life that an angel gave her a bunch of roses; and a prodigy is related of St. Louis the Ninth of France. It is pretended that a rose was seen to come out of his mouth after his death.

In the abbey of St. Croix, at Poitiers, they show a pillar that was raised to commemorate a pretended miracle, and where they tell you a rose tree in full blossom sprung out of the grave of a young man after the day of his interment. It is truly shocking that the teachers of Christianity should countenance such absurd superstitions. We could enumerate many others coupled with the rose;

but we are more anxious to give space for an account of the agreeable use to which this flower was put by St. Medard, who about the year 530, instituted the most affecting prize piety has ever offered to virtue. It was a crown of roses for that villager's daughter who was the most modest, most obedient to her parents, and the most discreet. The first rose tree was his own sister, whom he crowned in the church of Salency.

“ We cannot pass over unnoticed the well-known story of the rose leaf, which shows how fond the Eastern nations were of conveying their thoughts by hieroglyphics.

“ At Amadan there was a famous academy, the rules of which were, that the members of it should think much, write little, and speak as seldom as possible. Zeba, a learned doctor, celebrated all over the east for his great knowledge, hearing of a vacancy in this institution, hastened to the city in order to be elected. Unfortunately he arrived too late, for the place had already been filled by a candidate, who, like many in those times, owed his success more to his power than to his deserts. The president of the academy filled a vase so full of water that an additional drop would make it run over, by which the doctor was to understand that their society was too full to admit of another member.

“ The learned Zeba was retiring sorrowfully, when by chance he perceived a petal of a rose at his feet, which he seized with promptness, and placed so delicately on the top of the water, that it did not disturb it in the least. This ingenious allusion was received by the assembly with the greatest approbation, and the academicians testified by their unanimous applause, their consent to the reception of the illustrious Zeba as a member of their mute society.”

ARTICLE V.

THE METROPOLITAN FLORAL EXHIBITIONS.

ROYAL SOUTH LONDON SOCIETY, *May 21.*

THIS was the second meeting of this society for the present season, and was held in the Surrey Zoological Gardens.

A number of very well grown specimens of stove and greenhouse plants were produced in the various collections; but as we have

already particularized similar specimens at previous exhibitions, our remarks on this occasion will be directed to the florists' flowers, of which a considerable number are generally brought to these shows.

The principal feature in this meeting was the TULIPS, which, bearing the very unfavourable season in mind, we did not anticipate the gratification their inspection gave us. The collection to which the first prize was awarded came from Mr. Hunt, of Wycombe, and surpassed any that we have seen for some time. It was composed of *Bijou des Amateurs*, byb.; *Holmes's King*, byb.; *Catalani*, ro.; *Ulysses*, byb.; *Aglaiia*, ro.; *Asteria*, biz.; *Violet Blondeau*, byb.; *Polyphemus*, biz.; *Princess Charlotte*, byb.; *Vestris*, ro.; *Triomphe Royale*, ro.; and *Fabius*, biz.: the two latter grand blooms. The Hon. and Rev. R. Wilson, of Ashwelthorpe, near Norwich, obtained the second prize, for the stand which the day before received the first prize at the Royal Botanic Society's show, and of which we gave the names in our last. The third prize was given to Mr. Reeves, for *Surpass Polyphemus*, biz.; *Invincible (Franklin's)*, byb.; *Triomphe Royale*, ro.; *Optimus*, biz.; *Rubens*, byb.; *Claudiana*, ro.; *Polyphemus*, biz.; *Albion*, biz.; *Lord Byron (Franklin's)*, biz.; and three others which we did not recognise, and the names were so badly written, we could not make them out. A fourth prize was awarded to Mr. Edwards, of Holloway, whose collection comprised *Roi de Siam*, byb.; *Triomphe Royale*, ro.; *Selim*, biz.; *Platoff*, biz.; *Roscius*, byb.; *Athalia*, ro.; *Alcon*, byb.; *Cato*, biz.; *Washington*, byb.; *Polyphemus*, biz.; *Rose Brillante*, ro.; and *Ponceau très Blanc*, ro. Besides these, three other collections were shown, to which no awards were made. In the nurserymen's class the first prize was given to Mr. Bushel, of Kennington, for *Aglaiia*, ro.; *Reine de Sheba*, byb.; *Polyphemus*, biz.; *Claudiana*, ro.; *Lord Hawke*, byb.; *Platoff*, biz.; *Triomphe Royale*, ro.; *Triomphe de Lisle*, byb.; *Optimus*, biz.; *Van Dajkin*, ro.; *Rubens*, byb.; and *Junius Brutus*, biz.

To Messrs. Norman, of Woolwich, was voted the second prize, for *Royal Albert (Norman's)*, byb.; *Matilda (Mason's)*, ro.; *Lord Bloomfield (Ellis's)*, biz.; *Maria (Goldham's)*, ro.; *Rubens*, byb.; *Charbonier Noir*, biz.; *Prince of Wales (Norman's)*, byb.; *Optimus (Hutton's)*, biz.; *Claudiana*, ro.; *Polyphemus*, biz.; *Triomphe Royale*, ro.; and *Roi de Siam*, byb. The third prize was given to

Mr. Batten; but we saw nothing novel amongst his flowers; the best was a splendid *Triomphe Royale*. There were also many other stands shown, not for competition, which we omit.

The collections of *HEARTSEASE* were numerous. Mr. Turner, of Chalvey, received the first prize in the nurserymen's class, for King's Seedling, Dido, Optimus, Prior, Juno, Euterpe, Novelty, Star, Duke of Wellington, Advancer, Regulator, Isabella, Duke of Beaufort, Subelegans, Azurea, Duke of York, Ne Plus Ultra, Seedling Exquisite, Hero of Bucks, Mary Jane, Perseus, Eliza, Hunt's Wellington, Diamond, Daughter of St. Mark, Delight, President, Eclipse, Jehu, Arethusa, Hannibal, Yellow Defiance, Pitho, Tom Pinch, Imogine, Companion, Victory, Hamlet, Negro, Mary Anne, Seedling, Prince Royal, Caractacus, Pizarro, Titus, Curion, and Pelops. The second prize was obtained by Mr. Thomson, of Iver, with Malibran, Sol, Crimson perfection, Duchess of Rutland (Thomson's), five, Pizarro, Regulator Superb, Queen of the Whites, Sun-set, Alba Perfecta, Juno, Medora, Snowdrop, Cassandra, Isabella, Regulator, Augusta, Constellation, Mulberry Superb, Curion, Sulphurea elegans. Patriarch, Euclid, Jehu, Conquering Hero, Prince Albert, Warwick, Adorner, Caractacus, Pompey, Acme, Conservative, Fair Maid, Goliah, Mary Ann, Sappho, Desdemona, Montem, Dido, Queen Dowager, Queen of Iver, and some seedlings. Stands were also produced by Mr. Cutter, of Slough; Mr. Henbrey, of Croydon; and Mr. Agate.

In the amateurs' division Mr. Hunt, of Wycombe, was first, with Regulator, Victory, Curion, Grotius, Eclipse, Exquisite, Tom Pinch, Hunt's Wellington, Buxton's Ne Plus Ultra, Hamlet, Hooper's Wellington, Purity, Pizarro, Mary Jane, Duke of York, Hero of Bucks, Hannibal, Montem, Mulberry Superb, Isabella, Dido, Plough-boy, Goliah, and Baroness Wenman. Mr. Hall, of Enfield, was second, with Hall's Emperor, Rainbow, Red Rover, Enfield Hero, and Black Drop; Attwell's Princess Royal; Brown's Curion and Arethusa; Collison's Vulcan; King's Exquisite and Mary Ann; Turner's Optimus; Miller's Defiance; Thompson's Montem, Dido, Eclipse, Regulator, and Pizarro; Hooper's Mary Jane; Mountjoy's Victory; Cook's Black Bass, Cloth of Gold, Isabella, and Beauty of Ailesbury. Third and fourth prizes were awarded respectively to Mr. Edwards, of Holloway, and Mr. Hale, of Hillingdon, besides whom there were five or six other competitors.

The exhibition of GERANIUMS was not great, but the plants testified very excellent management. In the amateurs' class the first prize was awarded to R. Hudson, Esq., of Clapham, for eight varieties of finely-grown plants in great perfection: they were Duke of Cornwall, Hebe, Alice Grey, Comte de Paris, Madeline, Marchioness of Lothian, Erectum, and Unit. The second prize was given to Mr. Foster, of Paddington, for Duke of Cornwall, Erectum, Duke of Wellington (Staines), Adonis, Ackbar, Marchioness of Lothian, Sunbeam, and Sir R. Peel. In addition, an additional first prize was given to Mr. Parker, gardener to J. Houghton, Esq., for Comte de Paris, Caroline, Priory Queen, Coronation, Mabel, Superbe, Duke of Cornwall, and Master Humphrey. In the nurserymen's class Mr. Gaines, of Battersea, was first, and Messrs. C. D. Smith and Co., of the same place, second: the former showed fine specimen plants of Pride of Surrey, Albina, Lady J. Douglas, Nymph, Lady Sale, Rising Sun, Una, Erectum, Matilda, Sylph, Excelsa, Pilot, and Ackbar; and the latter had Queen of Beauties, Hebe, Sylph, Coronation, Duke of Cornwall, Cleopatra, Fair Maid of Devon, Queen of the Fairies, Mrs. Stirling, Madeline, Vanguard, and Lady Sale.

Of SEEDLINGS, a first-class certificate of merit was adjudged to a tulip produced by Mr. Scarnell, but to which no name appeared to be given. It has a well-formed cup, with smooth edges; the white is pure, the feathering broad and uniform, and of a bright rich rose colour.

Of Geraniums few were shown, and only two certificates awarded: one for Hoyle's Mount Etna, and second for Miller's Vulgais. Of Heartsease a number were shown, and certificates given to Mr. Thompson, of Iver, for Satirist and Duchess of Rutland; the latter a very distinct variety, the colours being deep lilac and white, and the shape good, the petals being well rounded, firm, and smooth on the edges. Satirist we described last month, in page 206. Mr. Hall, of Enfield, likewise received a certificate for Rainbow, a dark velvety flower, with a deep blue centre, of remarkably smooth and even texture, and excellent shape. Of Fuchsias and Petunias several were exhibited, but none deserving particular attention.

PART II.

MISCELLANY

OF

NOTES AND CORRESPONDENCE.

New or Rare Plants.

ALLOPLECTUS REPENS. THE CREEPING. (Bot. Mag. 4250.) Gesneriaceæ. *Didymia Angiospermia*. Mr. Purdie discovered it in the ascent of the Sierra Nivadi, St. Martha, growing in damp woods. He sent it to the royal gardens of Kew. It is a small shrubby plant with trailing stems. The flowers are tubeformed, an inch long, yellow tinged with red. The limb is four parted, spreading. The calyx is large, green, blotched with purple, and the footstalk, an inch long, is also purple. It is a hothouse plant.

ANGUOLA RUCKERI. Mr. RUCKERS. (Bot. Reg. 41.) Orchidaceæ, *Gynandria Monandria*. Mr. Linden discovered this plant growing in the ground, in low bottoms in the midst of forests in Venezuela. The flowers are large, each being three inches across, yellow spotted numerously with crimson, and having a rich deep crimson lip. It is very interesting and beautiful.

ASYSTACIA COROMANDELIANA. THE COROMANDEL ASYSTACIA. (Bot. Mag. 4248.) (Synonym *Ruellia secunda*, R. obliqua, *Justicia Gangelica*.) A native of India, and has bloomed in the collection of the royal gardens of Kew, in the stove. It is somewhat shrubby, branching. The flowers are produced in racemes of from six to ten flowered. The corolla has a funnel-shaped tube about an inch long, pale green, sprinkled with purple; the limb large, five-parted, deep lilac, with dark spots. The spreading limb is about an inch and a half across. It blooms very profusely in autumn, and is a valuable ornament at that season, well meriting a place in every collection of hothouse plants. It is a very likely plant to flourish even in the greenhouse.

BEAUFORTIA SPLENDENS. THE SPLENDID. (Pax. Mag. Bot.) Myrtaceæ, *Polydelphia Pentandria*. A native of New Holland, an evergreen greenhouse shrub, low, branching. The flowers are produced in short clusters, a rich scarlet, very showy and beautiful. This class of plants, *Beaufortias*, *Melaleucas*, *Calothamnus*, &c. highly merit a place in the greenhouse, being very interesting and beautiful.

CENTROPOGON SURINAMIENSIS. (Pax. Bot. Mag.) Lobeliaceæ, *Pentandria Monogynia*. A native of Surinam. It forms a dwarf compact bush, producing numerous heads of bright rosy-pink coloured flowers, each about two inches long. It is known in some of our collections as *Lobelia surinamensis*, *L. spectabilis*, and *Siphocampylus spectabilis*. It blooms for a long period, and flourishes in a stove or greenhouse.

CLEMATIS HEXASEPALA. SIX-PETALLED VIRGIN'S BOWER. (Bot. Reg. 44.) Ranunculaceæ, *Polyandria Polygynia*. A native of New Zealand, a little twining plant. The flowers are small, pale-green, very sweet-scented and are produced in threes or fours from the axils of the leaves. It is a hardy greenhouse plant, and blooming very freely, also sweet-scented, well deserves to be in every one. It is in the collection of the Horticultural Society at the Chiswick gardens, where it bloomed profusely in the spring.

COLLANIA ANDINAMARCANA. (Bot. Mag. 4247.) Amaryllideæ, *Hexandria Monogynia*. Collected by Mr. Matthews on the lofty mountains of Andinamarca in Peru. It is a tall straggling plant, and no doubt in its native situa-

tion is a climber. The flowers are produced freely, in large drooping umbels, pendant, pale, yellow, tipped with green, and streaked with brown. Each blossom about three inches long.

FRIESIA PEDUNCULARIS. JOINTED—pedicelled. (Bot. Mag. 4246.) Eleocharpa. Dodecandria Monogynia. It is a native of Van Dieman's Land, and requires to be grown in a greenhouse or cool frame. In the warmer parts of England it appears very likely to thrive in the open air. It is a myrtle-like shrub, growing four to five feet high, bearing a profusion of bell-shaped drooping flowers, on erect shoots, white with orange spots at the base. Each flower is about three quarters of an inch across. It is a very neat and pretty plant.

GARDENIA FLORIDA, var. FORTUNE. MR. FORTUNE'S. Mr. Fortune sent this plant from the north of China to the Horticultural Society, and it has bloomed in the Chiswick garden. The flowers are white, double, changing to light buff as they go off. Each blossom is about four inches across, and much like a good sized double white Camellia. They have a delicious fragrance. It is one of the finest shrubs in cultivation.

IXIOLIRION MONTANUM. MOUNTAIN IXIO LILY. (Pax. Mag. Bot.) Amaryllidaceæ. Decandria Monogynia. Bulbs of this beautiful spring-flowering lily have been sent by Colonel Sheill from Teheran, in Persia, where it inhabits the hilly districts. It is a scarce, hardy, bulbous plant, highly ornamental. The flowers are produced in umbels of from six to eight in each. A separate flower is about two inches long and as much across. The six petals are each about a quarter of an inch broad. They are of rich blue colour. It is in the collection of Messrs. Knight and Perry, of the Chelsea Nursery.

ODONTOGLOSSUM CORDATUM. CORDATE-LIPPED. (Pax. Mag. Bot.) Orchidaceæ. Gynandria Monandria. Imported from Mexico by George Barker, Esq., of Birmingham. The flowers are produced in long racemes. Each blossom is near three inches across. Sepals green, with brown stripes. Petals and labelum pale sulphur, with brown stripes.

RUELLIA LILACINA. LILAC-FLOWERED. (Bot. Reg. 45.) Acanthaceæ. Didynamia Angiospermia. The flowers are produced solitary along the shoots. The tube is a dark red. The five-parted limb a pretty rose. Each flower about an inch and a half across.

TROPÆOLUM CRENATIFLORUM. NOTCHED-PETALLED. (Bot. Mag. 4245.) Tropæoleæ. Octandria Monogynia. Sent from Peru by Mr. Lobb to Messrs. Veitch's. It is a long straggling and climbing plant. The flowers are a bright yellow, with a few short dark streaks upon the two upper petals. Each blossom is about an inch and a half across. The plant is hardy during the summer. It is much in the way of *T. Lobbianum* as to habit.

NEW PLANTS SEEN AT NURSERIES, &c.

The Royal Gardens at Kew Palace.—**CUPHEA STRIGOLISSIMA.** The flowers are red and yellow; very neat and pretty.

GLOXINIA CITRINA. The tube outside pretty flesh colour, and a distinct rosy circle around the mouth, margined with white. The inside of the tube is nearly white.

BEGONIA UNDEULATA. The flowers are very pure white, produced in pendant, spreading, branched racemes. The foliage is of a lively green, and the flower stems rise about two or three feet high. It is a lovely species, and well deserves a place in every hot-house.

CHIRITA ZEYLANICA. The flowers are in form and size much like a *Gloxinia*, of about half the usual size. The outside is a pretty violet-purple, and the inside white. It blooms very freely, and well merits cultivation.

ACHIMENES PATENS. The flowers are of a rich rosy-violet, having a whitish centre, with a wide dark crimson throat, and a spur similar to the larkspur. It is very neat and handsome.

ACHIMENES ILLICIFOLIA. HOLLY-LEAVED. We understand this new species has not yet bloomed in this country.

ACHIMENES ATRO-SANGUINEA. This is another very distinct and handsome new species.

ACHIMENES, VAR. FORMOSA. This variety is much in the way of *A. rosea*, but the flowers are of a much higher rose colour. It is likely to have been raised between the *A. rosea* and *A. coccinea*.

GLOXINIA TUBIFLORA ROSEA. The very long-tubed flowers are of a handsome rose colour, and contrasts very beautifully with the pure white ones of *G. tubiflora alba*.

SIPHOCAMPYLUS. A new species not yet bloomed, but highly spoken of.

HOYA PARASITICA and **HOYA MOLLIS.** Both new, not yet bloomed.

GESNERIA HERBERTIANA. Flowers are green and yellow, beautifully freckled. Very interesting, and blooms freely.

BEGONIA FUCHSIODES. This is a very distinct species of this very pretty tribe. Not yet in bloom.

MIMOSA. A new species, which is an aquatic, and will be both in beauty of foliage and flowers, an interesting addition to the water plants.

ECHITES MELALEUCA. Not yet bloomed. The mid-rib of the leaf is very broad, and a distinct clear white, which, in contrast with the dark green, has a pretty effect.

GARDENIA BOWERIANA. A new species not yet bloomed, but highly spoken of.

At Messrs. Low, and Co.—**VERNONIA AXILLARIS.** With fine heads of blue flowers, which afterwards become a very pale colour.

SIPHOCAMPYLUS NITIDA. A new, and said to be a very handsome species.

IPOMÆA. A new species sent from Bornea, by Mr. Low, junior. The flowers are said to be of a rich golden yellow. It is a very valuable addition to this lovely class of plants.

At Mr. Groom's.—**LILIUM SPECIOSUM,** and the varieties, were in most vigorous and profuse bloom. There were many growing in large pots; several bulbs had been planted in one pot, and the flower stems six or seven feet high, each having eight or ten flowers, produced a fine display. The entire stock, consisting of hundreds, was in first rate condition. Mr. Groom had planted out bulbs in the open bed, amongst the common garden lilies, and they have succeeded most admirably, blooming beautiful.

LONDON HORTICULTURAL SOCIETY, REGENT STREET, July 7.—Although the subjects produced on this occasion were not numerous, a circumstance no doubt owing to the proximity of the large exhibition at Chiswick, some of them were not devoid of interest. Foremost among them may be mentioned a cut specimen of the Clove tree (*Caryophyllus aromaticus*), from the garden of the Duke of Northumberland, at Sion. This remarkable tree, on account of the difficulty of keeping it alive, is still comparatively rare in this country. At Sion, however, it is found to succeed well planted in Norwood loam and sand, in which it was mentioned the Mangosteen and Nutmeg likewise thrive. The specimen exhibited bore large shining pale-green leaves, and had on it several of its fragrant coriaceous flower-buds, which are the Cloves of merchandise; the corolla forming a ball or sphere on the top between the teeth of the calyx; thus, with the narrow base or germen tapering downwards, giving the appearance of a nail, and hence in French the name *Clove* from which the English Clove is evidently derived.—From the same garden were also two plants of *Evolvulus*, with pretty blue Anagallis-like flowers, one was named *cœruleus*, the other *purpureo-cœruleus*, the deeper blue of the latter distinguishing it advantageously from the former, which is much paler. They were found by Mr. Purdie on dry rocks near the sea in Jamaica. A Knightian Medal was awarded for the Clove tree.—Messrs. Whitely and Osborn, of Fulham, sent the new *Calystegia pubescens* or double Bindweed, one of Mr. Fortune's valuable importations from China; and Mr. Low, of

Clapton, a rosy-pink flowered *Styloidium*, apparently *S. scandens*.—From Mr. Cuthill, of Camberwell, were cut bunches, and a plant of his Prince of Denmark scarlet Clove Carnation, a brilliant coloured, very fragrant, hardy, border variety, together with bunches of other Picotees and Carnations of less moment.—Very fine boxes of the best sorts of Picotees and Carnations, for which a certificate was awarded, also came from Mr. Norman, of Woolwich.—Messrs. Veitch and Son, of Exeter, sent a small *Hydrangea*, from Java, said to be *Otaksa*, but which, if not identical with *japonica*, did not essentially differ from that species. Of plants from the Society's Garden, were *Epidendrum alatum*; the well-known *Oncidium Wentworthianum*; the lovely new *Achimenes patens*, recently received from Mr. Hartweg; also *A. grandiflora*, from which the former differs in many respects, but especially in the flowers being of a much deeper colour, and in the leaves being smaller and smooth; two species of *Gloxinia*; the useful blue-flowered *Plumbago capensis*; *Chironia floribunda* and *frutescens*; *Sinningia guttata*; and cut specimens of *Buddlea Lindleyana*, one of Mr. Fortune's first importations from China, which, if not altogether hardy, has been proved to be at least as hardy as a *Fuchsia*.

LONDON HORTICULTURAL SOCIETY, August 4.—In consequence of the glass lantern of the meeting room having been destroyed by the hail-storm of Saturday no meeting took place, as was duly advertised in the daily papers; nevertheless several things well deserving of notice, having been sent from the country, we give the following account of some of the most remarkable among them. From Messrs. Veitch and Son, of Exeter, was a cut specimen of a new *Leschenaultia*, which has been named *L. splendens*; but which is, perhaps, *L. laricina*. From the same nursery was also *Pleroma elegans*, a very fine deep purple-flowered greenhouse shrub, with shining evergreen leaves, it had been found on the Organ Mountains, at an elevation of 6000 feet. The flowers continue open for several days.

CARNATIONS AND PICOTEES.—As some of our readers may be desirous, at the approaching season of taking off layers, to add to their collections some first-rate kinds, we insert the list of those shown at the exhibition at the Chiswick Gardens on July 11, and which comprise a superb variety of these beautiful flowers; 4 trays of Carnations, containing 24 blooms each, contributed by Messrs. Turner, Norman, Ward, and Dickson, were perhaps never seen in greater perfection. The Picotees also, which are annually improving, received with the Carnations their meed of admiration from the visitors. For Carnations in pans of 24 distinct varieties, in the Amateurs' Class, a certificate was awarded to Mr. Ellis, of Woolwich. In the Nurserymen's Class, the large Silver Medal was awarded—1st, to Mr. Turner, of Chalvey; 2nd, to Messrs. Norman, of Woolwich. The collection from the former contained Mansley's Shakespear, Keller's Prince Albert, Hufton's Miss Thornton, Young's X. X., Addenbrook's Lydia, Sealey's Princess Royal, Brooks's Flora's Garland, Hepworth's True Briton, Seeding, Puxley's Princess Royal, Barnard's Duke of Roxburgh, Elliot's Rainbow, Hale's Prince Albert, Hale's Lady of the Lake, Ely's Lord Pollington, Mansley's Beauty of Woodhouse, Tomlyne's Briseis, Mansley's Bonny Bess, Ely's Duke of Bedford, Hufton's Rosea, Hogg's Epaminondas, Fletcher's Lord Anson, Puxley's Prince Albert, Brown's Duke of Gloucester. Messrs. Norman's stand showed Tomlyne's Rainbow and Briseis, Willmer's Telemachus, Conquering Hero, and Duchess of Kent, Ely's John Wright, Lord Pollington, Duke of Bedford, Lord Milton, and King of Scarlets, Puxley's Princess Royal, Sharp's Defiance, Pollard's First-rate, Rainford's Game Boy, Jaques' Georgiana, Mansley's Beauty of Woodhouse, Pearson's Lady Loudon, Sealey's Princess Royal, Malpas' Mary Anne, Barnard's Duke of Roxburgh, Elliot's Duke of Sutherland, Brabin's Squire Meynell, Hale's Prince Albert, Mansley's Robert Burns, Silver Knightian: 1st, Mr. Ward, for Wilson's William IV., Fulbrook's Grenadier, Hufton's Rosa, Ely's Duke of Bedford, Lady Ely, Lord Milton, Regulator, and Prince of Nassau; Smith's Mrs. Betts, Brooks's Flora's Garland, Willmer's Conquering Hero, Cartwright's Rainbow, Ward's Lady Sarah Payne,

Calcott's Brutus, Puxley's Princess Royal, Browne's Bishop of Gloucester, Braby's Squire Meynell, Ely's Hugo Meynell, Ward's 188, Beauty of Cradley, and Roi du Capucin; Hodges's Bright Phœbus, Ely's Mango, and Ray's Prima Donna. Mr. Dickson, to whom the same award was given, showed Puxley's Queen of Roses, Ely's Lady Ely, John Wright, and Lovely Ann; Chadwick's Brilliant and Flora, Barrenger's Apollo, Jaques' Georgiana, Maud's Rowton, Franklin's Queen of Hearts, Brooks's Flora's Garland, Iron's Defiance, Tomlyne's Briseis, Strong's Esther and Duke of York, Hale's Prince Albert, Prince de Nassau, Jaques' Iris, Wood's William IV., Hodges's Bright Phœbus, Hughes' Vesta, Elliot's Duke of Sutherland, and Smith's Superb. A certificate was awarded to Mr. Griffin, of Uxbridge, for his collection.

For PICOTEES, in the Amateurs' Class, the large Silver Medal was awarded to G. Edmonds, Esq., of Wandsworth, for a splendid collection of 24 blooms; these consisted of Edmond's Ernest, Augusta, Eliza, Beauty, Mrs. Reeves, and Prince of Wales; Gidden's Teaser, Burroughes's Fair Ellen and Miss Jane, Jessop's Sir William Middleton, Dickson's Mrs. Trahar and Bride, Barraud's Borderer, Wood's Queen Regina, Ely's Mrs. Fenton, Matthews' Enchantress, Mrs. Barnard, Crask's Queen, Cook's Unique, Willmer's Princess Royal, Barraud's Borderer, Kirtland's Princess Royal. The Silver Banksian was awarded to Mr. Ellis, of Woolwich, for his collection. In the Nurserymen's Class the large Silver Medal was taken by Mr. Turner, his tray containing the following 24 varieties: Matthews' Ne Plus Ultra and Enchantress, Burroughes's Mrs. Bevan, President, Lady Alice Peel, and Miss Jane; West's Fair Ellen, Brinkler's Purple Perfection, Crask's Victoria, Crouch's Ivanhoe, Mrs. Barnard, Custer's Matilda, Wood's Princess Alice, Gidden's Miss Desborough, Robinson's Nottingham Hero, Wildman's Isabella, Ely's Favourite, Wilson's Fanny Irby, Green's Victoria, Mansley's Nulli secundus, Tolworthy's Isabella, Sharp's Invincible, Willmer's Princess Royal, and Sharp's Duke of Wellington; 2nd, the Silver Knightian Medal to Messrs. Norman, for Jessop's Sir W. Middleton, Willmer's Agnes and Princess Royal, Kirtland's Camilla, and Princess Augusta of Cambridge, Wildman's Isabella, Crask's Queen Victoria and Prince Albert, Sharp's Gem, Barnard's Mrs. Barnard, Wood's Princess Alice, Cook's President, Barraud's Cornelius, Burroughes's Emma, Miss Jane, Mrs. Bevan, and President; Green's Queen Victoria, Barraud's Borderer, Morris's Madeline, Ely's Mrs. Lily, Crouch's Ivanhoe, Hudson's Emperor of Russia, Bennett's Nonpareil, and Crask's Prince Albert; 3rd, to Mr. Dickson, for Trahar's Matilda and Rosalind, Wilson's Fanny Irby, Dickson's Mrs. Trahar, Mr. Trahar, Ely's Favourite, and Field Marshal, West's Matilda, Edmonds' Prince of Wales, Wildman's Isabella, Burroughes's Duke of Newcastle, Cook's President, Sharp's Hector, Red Rover, and L'Elegant, Gidden's Sir R. Peel, Green's Queen Victoria, John's Prince Albert, Matthews' Enchantress, Brinkler's Lord Althorp, Mrs. Barnard, Crask's Queen Victoria, Willmer's Princess Royal, Wilson's Miss F. Irby, Jessop's Sir W. Middleton; 4th, the Silver Banksian to Mr. Ward for Burroughes's Lady Jane, President, Duke of Newcastle, Mrs. Bevan, and Miss Osborne; Garrat's Lady Dacre, Matthews' Enchantress, Green's Queen Victoria, Crask's Queen Victoria, Musson's Charlotte, Wood's Queen Victoria, Brooks's Duchess of Cambridge, Willmer's Princess Royal and Joan of Arc, Ely's Dr. Horner, Wilson's Fanny Irby, Jessop's Sir W. Middleton, Barraud's Bride, and Cornelius Hudson's Emperor of Russia, Crask's Prince Albert, Hogg's Miss Campbell, Wildman's Isabella, and Burroughes's Mrs. Flower. A tray of yellow-ground Picotees was exhibited by the Messrs. Norman, showing the improvements which are in progress in this class. A certificate was awarded to G. Edmonds, Esq., for a Seedling Picotee, named Mrs. Reeves, a flower of good properties, a heavy-edged rosy red.

ON VINES IN A PLANT STOVE.—A Young Subscriber is desirous to know how he can grow Vines properly and stove plants in the same house. I am afraid the watering of the plants will be prejudicial to the ripening of the fruit, and to suit the fruit by withholding water from the plants would injure them. How should I treat *Ruellia multiflora*, and *Begonia floribunda*, to grow and bloom them successfully.

[The Vines should not be allowed to spread entirely over the plants to the exclusion of the light, but two feet and a half at least up the centre of each sash should be free; this being the case, if the Vines be properly managed, as well as the plants, they will succeed satisfactory. The best and finest crop of grapes we ever saw were produced under similar circumstances. The two plants, having a liberal drainage, and a rich light loamy soil, flourish in a stove with the ordinary treatment. The *Ruellia* is liable to be attacked by the red spider. Dip the head of the plant in strong soap suds occasionally it will remedy that pest.]

TO PRESERVE WALL-NAILS FROM RUSTING.—Heat them quite hot on a fire-shovel (they must not be red-hot), and then drop them into a glazed flower-pot saucer half filled with train-oil. Thus prepared, they never rust, will last for many years, and it is said the effluvium from the oil keeps insects from the trees. The nails should remain some hours in the oil.—*Gardeners' Chronicle*.

ON BUDDING ROSES.—On rose-budding, I repeat, what I wrote and was inserted in a former number, leave a small portion of wood with every bud, or, this dry season especially, the buds will shrivel, without much attention. White worsted is superior to matting for tying up with. The buds succeed far better when so secured. I occasionally have my buds, after being newly inserted, sprinkled over at the evening with soft water. This done for a week or two, is rendered very beneficial.

ROSA.

ON CULTURE OF VERBENAS IN POTS.—Having duplicates of nearly every new variety of Verbenas, I resolved to grow one plant of each, in pot culture, and the others in the open bed. As early this spring as I could obtain the plants, I potted them into well drained pots of two inches, broken pot, and covered that an inch with chopped turf. The compost was turfy loam, obtained last autumn, and had been laid in heap and well mixed with rotten cow manure, the whole turned over twice during winter. To this was added one-third of old rotten manure, and a good sprinkling of white sand. The leading shoot of each plant was stopped at six inches high, to induce the production of laterals. On pushing, the top one was trained upright, and when it had got six inches more topped again, and so proceeded with, till now they are two feet high. As the side shoots extended, I stopped them at each six inches, and they are now half a yard in diameter at the bottom, with the interior well filled up, forming fine bushes. All the ends are now clothed with a show for bloom, and no doubt will produce a mass of bloom. I repotted the plants into a size larger about the middle of May. I had the plants placed in a hot-bed frame, and which afforded me a sufficiency of heat, and I had the opportunity easily to give what air was necessary to prevent them being drawn up weakly. In order, too, to have a due circulation of air around the plants, I placed the pot in which the plant was upon an inverted garden-pot, and thus elevated, the plants grow quite uniform. They are free from red spider, and quite vigorous. I syringed the plants over head three or four times a-week. This attention to pot culture, of so lovely a tribe, will repay me most amply, and a splendid show will be furnished to the end of the season. I placed the plants on my greenhouse stage the first week of July.

Kent, July 21st.

FLORA.

NEW HOLLAND SCENERY.—The extreme uniformity of the vegetation is the most remarkable feature in the landscape of the greater part of New South Wales. Everywhere we have an open woodland, the ground being partly covered with a very thin pasture, with little appearance of verdure. The trees nearly all belong to one family, and mostly have their leaves placed in a vertical, instead of, as in Europe, in a nearly horizontal position: the foliage is scanty, and of a peculiar pale green tint, without any gloss. Hence the woods appear light and shadowless; this, although a loss of comfort to the traveller under the scorching rays of the summer, is of importance to the farmer, as it allows

grass to grow where it otherwise would not. The leaves are not shed periodically; this character appears common to the entire southern hemisphere, namely, South America, Australia, and the Cape of Good Hope. The inhabitants of this hemisphere, and of the intertropical regions, thus lose perhaps one of the most glorious, though to our eyes common spectacles in the world—the first bursting into full foliage of the leafless tree.—*Darwin's Journal of a Voyage round the World.*

ON STRIKING CUTTINGS.—Some excellent directions for increasing exotic plants has appeared in the Cabinet, I am induced to add that propagation by cuttings is one of the most important parts of the gardening profession; and the principles on which it is based should be constantly present to the mind of the operator. Selection of wood may be termed the first point. The wood, as a general principle, should be short jointed, somewhat mature, and for plants in an active state, possessing leaves perfectly developed. The due care of the leaf (on which so much depends), is the next great object; this should never be allowed to flag or droop, from the moment it is taken from the mother plant. Hence the propriety of using striking glasses, which although inclosing a somewhat vitiated atmosphere, prevent any undue perspiration in the leaf; which circumstance is of more importance than the character of the atmosphere. In making cuttings, the more of sound healthy leaves that can be retained the better, provided they can be carefully preserved; but in order to find room for the crowding multitudes of modern plantations, it often becomes absolutely necessary to reduce these organs. In doing this there is no occasion to strip the cutting like a hedge Poplar—every stump of a leaf, and even footstalk that can be left without crowding the adjoining cutting, contributes its quota to the success of the cutting.—*Conservatory.*

Floral Operations for September.

ANNUAL FLOWER SEEDS, as Clarkia, Collinsia, Schizanthuses, Ten Week Stocks, &c., now sown in pots, and kept in a cool frame or greenhouse during winter, will be suitable for planting out in open borders next April. Such plants bloom early and fine, and their flowering season is generally closing when spring-sown plants are coming into bloom. Seeds of many kinds now sown in the open borders endure winter and bloom vigorously early next season.

CAMELLIAS.—Thin the flower buds, which will tend to preserve more certainly those for blooming, and cause them to be vigorous. Place some in the greenhouse early, that are desired to bloom in December, or before, in some cases. Directions for potting, &c., are given in last month's calendar.

CARNATION LAYERS should immediately be potted off.

CHINA ROSE CUTTINGS now strike very freely; buds may still be put in successfully, but do it as early as possible.

DAHLIAS.—Where the laterals are very numerous, they should be thinned out so as to have vigorous blooms. Toward the end of the month collect seeds of the early-blown flowers.

Greenhouse plants will generally require to be taken in by the end of the month. If allowed to remain out much longer the foliage will often turn brown from the effect of cold air. The earlier succulents are the better to save them from wet.

LOBELIAS.—Offsets should be potted off, so as to have them well rooted before winter.

MIGNONETTE may now be sown in pots to bloom in winter.

PELARGONIUMS, cuttings of, may now be put off; plants of which will bloom in May.

If Pelargoniums have not been headed down, they should now be done, the shoots may push a little before repotting for winter. Plants which have been headed down, and have pushed shoots two inches long, should be repotted.

PINKS, pipings of, if struck, may be taken off and planted in the situations intended for blooming in next season, as early as possible.

PLANTS OF HERBACEOUS CALCEOLARIAS should now be divided, taking off offsets and planting them in small pots. Cut off the flower stems of such as have done blooming to induce shoots to be vigorous. See article in July number.

Plants of Chinese *Chrysanthemums* should be repotted if necessary; for if done later the blossom will be small. Use the richest soil. Pinch off the heads to cause the production of laterals, so as to have a head of flowers.

Plants of *Pentstemons* should be divided by taking off offsets, or increased by striking slips. They should be struck in heat.

PANSIES.—The tops and slips of *Pansies* should now be cut off, and be inserted under a hand-glass, or where they can be shaded a little. They will root freely, and be good plants for next season.

POLYANTHUS and **AURICULA** seed should be sown immediately, or otherwise be kept till spring.

ROSES.—Where plants have been provided for the purpose of forcing in autumn or winter, and are plunged in the open ground, twist the pot round to break the roots which may have extended below the pot.

RANUNCULUS beds should now be prepared as follows:—The depth of soil to be two feet and a half, of a rich clayey, friable loam, retentive of moisture; about six or eight inches from the surface to be a rich light loam, of a sandy nature. Remove the whole of the soil with the remains of the dung given last year, and turn up the subsoil a whole spade in depth, breaking it well. If the beds are allowed to remain in this state for a day or two to sweeten the subsoil it will be an advantage. Then place upon the subsoil a layer of cow-dung, at least one year old, four inches thick; then scatter over it the fine powder of new-slaked lime, to correct any acidity and destroy the worms. Then fill up with new light soil, taken from the surface of the old tulip-bed or potato-ground, which has been frequently turned to sweeten it.

SWEET WILLIAM seed immediately sown will soon strike, and the plants bloom next season.

Seeds of many kinds of flowers will be ripe for gathering this month.

Tigridia, *Commellina*, and similar roots, may be taken up about the end of the month. Keep the soil with the *Tigridias* and dry it gradually.

VERBENAS.—Runners of this plant should now be taken off, planting them in small pots half filled with potsherds, and the rest with good loamy soil, then placing them in a shady situation. It should be attended to as early in the month as convenient. When taken into a cold frame or greenhouse for winter protection much of the success depends on being kept near the glass; or sink a box or two, half filled with potsherds, and the other good loamy soil, round the plant, so that the runners, being pegged down to the soil, will soon take root at the joints. When a sufficient number are rooted, separate the stems from the parent plant, and those in the boxes will be well established, and, being removed before frost, are easily preserved in winter, as done with those in pots.

When *Lilies*, *Crown Imperials*, *Narcissuses*, &c., require dividing, take them up now, and replant immediately; also plant *Hyacinths*, *Crocuses*, &c., either in beds, or in pots, for forcing immediately.

When *Petunias*, *Heliotropium*, *Salvias*, *Pelargoniums*, *Ragwort*, *Anagallis*, *Calceolarias*, *Hemimeris*, *Bouvardia*, *Maurandias*, *Antirrhinums*, that have been grown in open borders, and it is desirable to have bushy plants for the same purpose the next year, it is now the proper time to take off slips (select the short and well-ripened ones), and insert a number in a pot; afterwards place them in a hot-bed frame, or other situation having the command of heat. When struck root, they may be placed in a greenhouse or cool frame to preserve them from frost during winter. When divided and planted out the ensuing May in open borders of rich soil, the plants will be stocky, and bloom profusely.



1. BEGONIA ALBO-COCCINEA.

2. PELARGONIUM, "MARY QUEEN OF SCOTS."

Floricultural Cabinet.

THE
FLORICULTURAL CABINET,

OCTOBER 1st, 1846.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I. EMBELLISHMENTS.

1. BEGONIA ALBO-COCCINEA (WHITE AND SCARLET).

Few tribes of plants possess greater interest than that to which the ornamental species we now figure belongs. The delicate and pretty coloured flowers possessed by most of the kinds, the long time they continue in beauty, and the very graceful manner in which they are produced, are alone considerations of sufficient merit for general appreciation; but besides this, they have a further claim in the remarkable and entertaining diversity which exist in their respective construction, and also that they may be very easily grown and multiplied. The present species is a native of India, and was raised from seed in the Royal Botanic Garden at Kew, where our drawing was prepared in June last. The brilliant contrast of colour afforded by the bright scarlet and pure white flowers gives it a very attractive appearance, and it ought to be in the hands of all who admire and are desirous to cultivate this beautiful family. As their proper management is not generally understood, we abridge the following very excellent observations from an article by Mr. James Donald, in the Journal of the Horticultural Society, Part II., and hope it may be a means of facilitating their spread:—

“In regard to their cultivation, I may mention that Begonias are all stove plants, and that they enjoy a humid atmosphere of about

80° in summer, with a slight shade to break the rays of the mid-day sun. In winter, the atmosphere should be kept dry, especially in cloudy weather, and the temperature allowed to fall as low as 58°. Although *B. Evansiana* and others will stand in a greenhouse, still even these species are much benefited by heat and moisture during the early part of the season. As to the soil most congenial to their nature, there appear to be various opinions. From experience, I am satisfied that sandy loam and leaf-mould are the two principal materials; and for the kinds that grow luxuriantly these should be used in equal proportions. For some species, such as *B. coccinea*, which are liable to damp off, the quantity of vegetable matter may be less, and the deficiency made up with silver sand. Damping, however, cannot altogether be attributed to soil, but must be ascribed to bad drainage, or to moisture when the plant does not require it.

“ In preparing the pots, some prefer small potsherds for drainage: this, in my opinion, is almost as bad as using sifted soil, for if the crevices are small they will be the more easily filled up. For an 8-inch pot, which may be taken as an average size for growing a specimen plant, the potsherds should not be less than three inches across; and if laid to the depth of two or three inches, and properly covered with pieces of turf, there will be no danger of the roots suffering from damp, if water is judiciously given.

“ Begonias being in general plants of free growth and delighting in fresh soil, it is necessary to repot them twice in the course of a year, *viz.*, February and August; but this rule, like many more in gardening, is not without an exception: one plant may grow faster than another under the same circumstances, and therefore ought to be repotted when it requires it, nothing being worse for any plant than to cramp its roots.

“ As Begonias are generally intermixed with other plants, and receive a similar supply of water, both in summer and winter, they may well present a sickly appearance. There are few plants that require a more liberal supply during summer than they do; indeed some of the robust growing sorts will flourish with their pots half immersed in water; but, like other plants, they require a season of rest, at which time comparatively little moisture is required. This period is clearly pointed out by nature. In October all the species with which I am acquainted begin to show that water should then be

gradually withheld ; if it is continued, some begin to drop their leaves, others to decay at the root or assume a languid appearance : therefore it is obvious that they should be kept dry from the 1st of November to the 1st of February. During that time, if water is given once or twice a-week it will be sufficient, and the herbaceous sorts may be kept quite dry. Although many species remain green and healthy in winter, the growth they make is but trifling, nor should they be induced to grow, for if they are deprived of the season which nature has provided for their rest, the best of management will no compensate for it in twelve months afterwards.

“ There are some who imagine that a bushy plant cannot be produced, unless it has been cut down in winter or pinched back during the growing season, but this is a mistake. If *B. undulata*, or any of the fibrous-rooted sorts, which require pruning, are cut down in winter, the root will in all probability die, and if pinched back, when are they to flower? To such as *B. Evansiana* the knife is never required, because the stems die down annually ; and it is never necessary to cut such as *B. heracleifolia* : therefore this matter rests with the tall-growing sorts. To explain this it will be necessary to consider what functions such stems perform. Take *B. undulata* for an example : every stem of one year’s growth, notwithstanding its flowering, is a magazine in which secretions are stored for the support, during a certain time, of those which may arise from its base the following season, and thus the stems become analogous to the pseudo-bulbs in Orchids ; were this not the case, suckers would rise as strong without the stem as with it, and they would not be liable to damp off, although it should receive an injury. From this it is evident that all the pruning that is necessary is to cut out all the stems above two years old, and this should be done in spring, when the plant is re-potted in order to give room for the young shoots.

“ As to propagation, perhaps few plants are so easily increased as Begonias. All those from which cuttings can be taken will strike freely under ordinary treatment, and such as *B. Barkeri*, from which cuttings cannot be had, may be abundantly multiplied from seed. The seed should be sown when gathered, in light sandy soil, and placed in a moist situation, where the seedlings may be shaded from the rays of the sun.”

Mr. Donald proceeds to give a descriptive list of each of the species

as are most generally grown, together with their synonymes ; and as confusion too often exists among the names, we purpose to transfer that portion of the article to the pages of our next Number.

2. PELARGONIUM ("MARY, QUEEN OF SCOTS").

This variety will be found an acquisition to the exhibitor's collection, especially in the present dearth of good light flowers. It will be seen on reference to our advertising pages that it is now offered for sale by Mr. Gaines, of Battersea.

ARTICLE II.

THE METROPOLITAN FLORAL EXHIBITIONS.

METROPOLITAN SOCIETY, *September 14.*

THIS was the annual grand Dahlia show, where most of the principal growers throughout the country are exhibitors. It was on this occasion held at the Grecian Saloon, in the City Road, and, considering the season, the number and quality of the flowers displayed much exceeded our expectations. Besides the Dahlias, there were also some very creditable productions in Fuchsias, Verbenas, Heartsease, &c. ; our space, however, necessarily confines these remarks to the chief feature of the meeting—the Dahlias, and therefore we proceed at once to observe that the Nurseryman's section comprised the finest selections of show flowers, amongst which, it will be seen, some of the old favourites still retain their place.

Mr. Turner, florist, of Chalvey, was the exhibitor of the 24 blooms which received the first prize in CLASS I. They were Lady St. Maur, Raphael, Mrs. Anderson, Victory of Sussex, Duchess of Richmond, Captain Warner, Biondetta, Princess Radziwill, Cloth of Gold, Sir J. S. Richardson, Princess Royal (Hudson), Admiral Stopford, Beauty of Sussex, Mrs. Shelley, Nonpareil, Prometheus, Cleopatra, Beeswing, Eximia (Girling), Marquis of Aylesbury, Indispensable, Essex Triomphe, Queen of Roses (Widnall), and Springfield Rival. Mr. Cutter, of Slough, obtained the second prize with Beeswing, Essex Triomphe, Burnham Champion, Blue Bonnet, Vanguard, Lady St. Maur, Duchess of Richmond, Northern Beauty, Indispensable, Cleopatra, Rembrandt, Empress of the Whites, Competitor (Hodge),

Mrs. Shelley, Queen of the Roses, Victory of Sussex, Marquis of Bath, Lady Stopford, Rose d'Amour (Brown), Sir J. S. Richardson, Princess Radziwill, and Nonpareil. Mr. Bragg, florist, Slough, received the third prize for Eclipse (Catlough), Bermondsey Bee, Josephine Eriau, Beeswing, Essex Bride, Nonpareil, Mrs. Shelley, Gloria Mundi, Rose d'Amour (Batteur), Admiral Stopford, Antagonist, Burnham Champion, Marchioness of Cornwallis, Princess Radziwill, Essex Triomphe, Indispensable, Lady St. Maur, Lady Stopford, Dowager Lady Cooper, Marquis of Aylesbury, Lady Sale (Smith), Lady Leicester, Northern Star, and Springfield Rival. The fourth prize was awarded to Mr. Gaines, of Battersea, who showed, Mrs. Shelley, Vivid (Thompson), Matilda (Gaines), Vanguard, Caractacus, Lady Leicester, Dr. Graham, Blooming Girl, Marchioness of Cornwallis, Norfolk Hero (Harrison), Beeswing, the Baron, Queen (Widnall), Beauty of Birmingham (Harrison), Sir J. S. Richardson, Biondetta, Victory of Sussex, Raphael, Goliath, Lady St. Maur, Hope, Mary Ann (Harison), Marquis of Aylesbury, and Cloth of Gold. Mr. Girling, of Stowmarket, obtained the fifth prize with Athletæ, Gloria Mundi, Queen of Perpetuals, Biondetta, Raphael, Princesse de Joinville, Dawn of Day, Competitor (Hodge), Admiral Stopford, Fulwood Hero, Cloth of Gold, Nonpareil, Lady St. Maur, Sir E. Antrobus, Eximia, Shone Erferterun, Bertha von Jena, Rose d'Amour (Batteur), Princess Radziwill, Essex Triomphe, Cleopatra, Rembrandt, and Queen of Roses. Mr. Spary, of Hungerford, received the sixth prize with Bathonia, Indispensable, Nonpareil, Cleopatra, Raphael, Gloria Mundi, Victory of Sussex, Alice Hawthorn, Captain Warner, Lady Leicester, Sir E. Antrobus, Essex Triomphe, Beauty of the Plain, Empress of the Scarlets (Spary), Standard of Perfection, Mrs. Shelley, Marquis of Aylesbury, Optimus, Admiral Stopford, Countess of Bandon (Spary), President of the West, Queen (Widnall), Essex Rosy Lilac, and Beeswing. In addition to these, collections were exhibited by Mr. Keynes, of Salisbury, Mr. Turvill, of Chelmsford, Mr. Kimberley, of Coventry, and Messrs. Smith, of Hackney.

In CLASS II., for 24 blooms, open to nurserymen not competitors in the first class, Mr. Sealey, of Bristol, obtained the first prize with Prometheus (Wildman), Mrs. Shelley, Maria (Wheeler), Beeswing, Alice Hawthorn, Marquis of Aylesbury, Gloria Mundi, Admiral Stopford, Princess Radziwill, Sir J. S. Richardson, Queen, Vivid,

Queen of Perpetuals, Victory of Sussex, Essex Triomphe, Beauty of Sussex, Duchess of Richmond, Biondetta, Eclipse, Nonpareil, Rose d'Amour, Lady Harland, and Sir E. Antrobus. The second prize was awarded to Mr. Oakley of Southampton, for Antler (Keynes), President of the West, Queen of Perpetuals, Beeswing, Princess Royal (Hudson), Essex Triomphe, Athlete, Princess Radziwill, Gloria Mundi, Victory of Sussex, Lady Sale (Smith), Eclipse (Widnall), Mrs. Shelley, Standard of Perfection, Queen of Roses, Alexander, Sir E. Antrobus, La Polka, Queen, Captain Warner, Fulwood Hero, Sir J. S. Richardson, Cleopatra, and Admiral Stopford. Mr. Pearce, of Holloway, received the third prize; and Mr. Whale, of Elcot, the fourth.

The exhibitions by private growers in CLASSES III. and IV., of 12 blooms each, were numerous, and no less than twenty-two prizes awarded. Mr. Howard, of Burnham, produced those which obtained the first prize in 'Class III., viz.—Beauty of Sussex, Competitor (Hodge), Springfield Rival, Indispensable, Antagonist, Raphael, Lady St. Maur, Fulwood Hero, Biondetta, Lady Leicester, Essex Triomphe, and Nonpareil. In Class IV., Mr. Cook, of Notting Hill, received the first prize for Cleopatra, Victory of Sussex, Queen, Bathonia, Optimus, Marchioness of Cornwallis, Antagonist, Sir E. Antrobus, Lady St. Maur, Nonpareil, and Mrs. Shelley.

CLASS V. was limited to the new flowers of the season, exhibited only by private growers. Mr. Ford, of Erith, received the first prize for Marchioness of Cornwallis, Northern Star, Princess Radziwill; Rose d'Amour, Lady Stopford, and Marquis of Aylesbury. Mr. Howard had the second prize with Princess Radziwill, Vanguard, Captain Warner, Essex Rosy Lilac, Magician, and Empress of the Scarlets. In addition to these, several other prizes were awarded, but we did not notice any kinds not shown on other stands.

In the class appropriated exclusively to what have now become termed FANCY FLOWERS, were many specimens evidencing a near approach to the requisite shape of a "show-flower." And although it is probable they will continue to be exhibited in a separate class, there is no doubt varieties will soon be had which shall have attained the highest points of perfection. Several very good acquisitions have this season been made from the continent, where this class has hitherto been more appreciated. In the nurseryman's division (CLASS VI.),

Mr. Bragg, florist, Slough, gained the first prize with *Captivation* (Salter), *Surprise* (Oakley), *Harlequin* (Dod), *Bouquet de Breuil*, *Multicolor admirabilis* (primrose prettily striped with crimson), *Madame de Schwanenfeld*, *Striata formosissima*, *Painted Lady*, *Alba purpurea superba*, *Mimosa* (yellow tipped with white), *Louise* (Messire), and *Le Domino Noir*. Mr. Pearce, of Holloway, was second, with *Erzherzog Stephen*, *Nihil*, *Charivari*, *Tricolor* (Girling), *La Lionne*, *Narcissus* (Harrison), *Vicomte Reesiguiet*, *Harlequin* (Dod), *Alba purpurea superba*, *Ville de Beaune*, *Alba purpurea*, and *Bijou de Dijon*. Mr. Gaines received the third award for *Adonis* (Harrison), *Nihil*, *Zeitgest*, *Alba purpurea*, *Narcissus* (Harrison), *Harlequin* (Dod), *Madame Wallner*, *Eveque de Dijon*, *Miss Watson*, *Madame Schwanenfeld*, *Madame Mortier Bavais*, and *Alba purpurea superba*. Mr. Girling, of Stowmarket, was fourth, with *Madame Dresser*, *Vicomte Reesiguiet*, *Madame Meillez* (Keynes), *Hermione*, *Alba purpurea grandiflora*, *Gaiety*, *Frau Rittmeister*, *Russing*, *Illuminator*, *Mimosa*, *Nouveau Protée*, *Madame Wallner*, and *Erzherzog Stephen*. The fifth prize was given to Mr. Turner, who showed *Mimosa*, *Surprise* (Oakley), *Le Domino Noir*, *Madame Mortier Bavais*, *Louise*, *Bouquet de Breuil*, *Madame Dresser*, *Madame Zehler*, *Harlequin*, *Heroine*, *Essex Goldfinch*, and *Madame Chauvière*. The sixth prize was stated to be given to Mr. Keynes, but no names were attached.

In the amateurs' class of this section, some controversy took place as to the correctness of the awards. The following was, however, the order we found them placed in—1. Mr. Ford, of Erith, for *Bouquet de Breuil*, *Louise*, *Le Domino Noir*, *Harlequin*, *Nihil*, and *Essex Goldfinch*. 2. Mr. Fozard, of Paddington, for *La Lionne*, *Vicomte Reesiguiet*, *Belle du Donk*, *Madame Wallner*, *Essex Goldfinch*, and *Village Maid*. 3. Mr. Parsons, for *Vicomte Reesiguiet*, *Madame Wallner*, *La Vogue*, *Nihil*, and *La Lionne*. 4. Mr. Hunt, Paddington, for *Beauty of England*, *Alba Purpurea*, *Painted Lady*, *Captivation*, *Surprise*, and *Bouquet de Breuil*. 5. Mr. Edwards, Holloway, for *Nihil*, *Alba Purpurea*, *Superba*, *Vicomte Reesiguiet*, *Madame Meillez* (Keynes), *Belle du Donk*, and *Madeline*. 6. Mr. James, Stoke Newington, for *Harlequin* (Dod), *Madame Meillez*, *Modesty*, *Surprise*, *Miss Watson*, and *Vicomte Reesiguiet*.

Proceeding to Classes VIII. and IX., we come to the seedlings of

1845 and 1846 ; we will speak first of the former, of which a great number were shown, and amongst them a few first-raters. Certificates of merit were adjudged to five, but as some of the others to which no award was made will prove very useful in making up a stand, and as some also, it will be easily imagined, were produced, having no claim to rank as show flowers, we give our notes verbatim of all those that came under our observation.

Alexander the Great.—The grower's name not stated. A large light crimson flower, with tolerable outline, and well up in the centre, where, however, it appeared confused, and the eye seemed difficult to close.

Andromeda.—Mr. Collison, of Bath. A novel and rather pleasingly coloured flower, being a very pale amber, with a purple-crimson shade at the ends of the petals. The centre and arrangement good, but the petals being narrowly proportioned, there is a thinness around the eye and the outline is imperfect.

Beauty of the Vale.—Name of grower not stated. Deep rosy-lilac, small size, and very imperfect in arrangement.

Berryer.—Mr. Turner, of Chalvey. An intense dark velvety maroon ; the centre regular and sufficiently elevated ; of great depth and excellent outline ; rather above the medium size, but full. This is unquestionably first rate, and better than either Admiral Stopford or Essex Triomphe. A first-class certificate was awarded.

Cassandra.—Mr. Turner. A good sized flower, of deep red-crimson colour, fine outline, but the eye faulty and not well up.

Essex White.—Mr. Turvill, Chelmsford. In colour rather blush and but a thinly made flower.

Europa.—Shown by the Metropolitan Union. A large, deep lilac, flower ; very confusedly arranged.

Fair Rosamond.—Mr. Bragg, Slough. Blush, shaded with rosy-crimson. Of moderately good properties, as a second-class flower.

Fancy Boy.—Mr. Bragg. A small fancy variety, of inferior quality.

Golden Fleece.—The Metropolitan Union. A novel coloured flower, being bright yellow-nankin, of medium size, good outline, and hemispherical in shape ; a very desirable flower, and ought to be grown.

Hon. Mrs. Herbert.—Mr. Keynes, Salisbury. Pale salmon-red,

of small size, well up in the centre, and good outline, but deficient in arrangement.

Lady of the Lake.—Mr. Keynes. White, with a bright purple lace; of large size, and may do for a back row, but hardly full enough, and the outline is not good.

Louis Philippe.—Mr. Turner. Deep crimson, good size, compactly made, fairish outline, and well up. Some of the petals inclined to notch, still it is a flower that may be had recourse to if required.

Master Edward Clayton.—Mr. Bragg. A fancy kind; white, with dark edges, uneven, irregular, and bad.

Master George Clayton.—Mr. Bragg. This is another fancy flower, of rather better quality; in colour white, edged with crimson-purple, and of good size.

Matchless.—Mr. Whale, of Elcot. Delicate blush, large size, tolerably well up, and good outline. We doubt, however, its being an improvement on Marchioness of Cornwallis.

Metropolitan Queen.—The grower not stated. Blush, laced with purple, large, and very thin.

Middlesex Canary.—No grower named. Light yellow, medium size, and rather compact. The outer petals, however, reflex, and the outline is broken.

Miss Vyse.—Mr. Turner. White, laced with purple, of good size, but thin, and the outline imperfect. A first-class certificate was awarded, but from what we could see of it, it was certainly only second-rate.

Model of Perfection.—Mr. Spary, Hungerford. Bright red, remarkably compact and neat, but so very small we fear it will seldom be got showable.

Mrs. Edwards.—Mr. Bragg. In colour, a kind of salmon-crimson, with sulphur veins; in quality, only second-rate.

Princess Helena.—Mr. Gaines, Battersea. White, the petals very firm, compact, and good in shape, but of small size and inclined to be ribbed.

Queen of Violets.—Mr. Keynes. Rich in colour, well up in the centre, and of considerable depth, but of only indifferent arrangement.

Rising Sun.—Grower not stated. Light red, very compact, re-

markably well up, and regular in arrangement, scarcely of the medium size, but when well grown will be useful.

Robusta.—Mr. Gaines. Red, of moderate qualities.

Scarlet Gem.—Mr. Turner. The colour deep and bright; the shape is first-rate, the eye being well up, the arrangement regular, and the outline perfect. It is a bold large sized flower, without partaking of coarseness, and well merited the certificate awarded.

Star.—Mr. Bragg. Blush white, laced with bright deep crimson, as good as the average in form, and very attractive in appearance. We believe a certificate was awarded for it.

Victorina.—Mr. Bushell, of Kennington. Deep rosy peach colour, good centre, fairish outline and arrangement. A very useful second-class flower.

Yellow Standard.—Mr. Keynes. Not a bright coloured flower, but in shape a decided improvement on all others in the class. A certificate was awarded.

Amongst the present year's seedlings, of which Class IX. was comprised, there were few worth speaking of. Certificates were given for two kinds, named *Mountfitchet* and *Black-and-all-Black*; the former a rosy salmon, bold looking flower, well made, but likely to be coarse. The latter is a seedling of Mr. Turville's, very dark in colour, and of very promising quality; we hardly expect, however, it will equal *Berryer*. Mr. Turville also showed a seedling named *Essex Yellow*, a large-sized flower and very clear in colour. From Mr. Whale, we noticed *Noble Grand* and *Beauty*. The first a large fine made flower, and distinct in colour, being a clear white, broadly laced, with rosy lilac. The other is also a laced flower, but with a deeper colour, and has very good properties. From Mr. Turner, was quite a novel coloured flower named *Eliza Mielles*, the ground being amber-yellow, and the lace very dark crimson. If it comes out in an improved form another season it will be very attractive. The only other kind we noted was named *Richard Cobden*, a small, but compact and promising crimson flower.

ARTICLE III.

ON STOCKS FOR THE TREE ROSE.

BY AN EXTENSIVE PRACTITIONER.

As very considerable interest has been excited in the floricultural class of the community, in consequence of the introduction of the articles on Roses which have appeared in the CABINET; and as no remarks have been inserted on the mode of forming that most ornamental appendage to a shrubbery, the Tree (or, as it is sometimes called, Standard) Rose, I am induced to send some observations upon the formation and culture thereof. They are the result of my own successful practice. An eminent nurseryman, a great Rose cultivator, gave me the first hints on the subject: and I have pursued the same treatment with satisfaction to myself. In the course of experiment I have made some improvement in the practice. I shall, therefore, send, for insertion in the CABINET from time to time, the course of treatment I pursue from first to last.

Selection of Stocks to bud, &c., upon.—Any time from the end of October to the middle of February, plants of the wild English Rose are procured. I find, however, that the earlier the better. There are several varieties of stocks to be had: those I prefer being far the best, and of a very upright growth, making shoots nearly half an inch in diameter, and growing several feet high in one season. The colour of such is either wholly green barked, or green slightly tinged with brown. The ripe fruit of both is of a long oval shape. These kinds are generally to be met with in plantations or woods, and occasionally in hedges. There is a spreading, bushy-growing kind, which has a red bark, and a small roundish fruit: this I find does not answer near so well as the others,—the buds not taken so freely, nor, if they take to uniting at all, do they grow so kindly afterwards.

In getting up the wild stocks, I have always given strict orders to my gardener to get them up with as much length of root as convenience would admit. This attention is necessary in order to get some fibrous roots; and, after all, it will often occur that not a single fibrous root will be found upon the main roots. They are, however, very free to grow under either circumstance; only the former ones afford the advantage of making more and stronger lateral shoots the first season, and also better-placed shoots for budding upon.

Stocks of different sizes and heights are procured, in order to suit a vigorous, or less so, growing kind, to be inserted by budding, and to have some worked from two to five feet high. Care is taken to get such stocks as are free from large knots, some such being found upon the stocks when of several years' growth. It certainly adds to the beauty of the tree, to have a straight free-growing stock.

Having got up the stocks, on a day that is not frosty, I have them brought as soon as convenient, that the tender roots may not be damaged by exposure to a cool air.

In planting them, I select a good soil about a foot deep, and have a portion of well-rotted dung dug into it. The strongest growing kinds of stocks I plant in one piece of ground, and the less so in another. This is easily ascertained by observing what strength the lateral shoots have previously grown, before removal. The necessity of this selection is requisite, because if a very vigorous growing kind were inserted into a small stock, the bud would take all the support, and grow to a single shoot, or form a poor head.

Before planting, I have the stocks dressed, cutting clean away all lateral shoots to the height at which I wish the stock to be kept, and cutting off the head about a quarter of an inch above a bud, in a sloping direction from the bud. Any damaged roots are finished with clean cuts, either by a knife or fine-toothed saw. The top cut of the stock I always cover over with a mixture of bees' wax and pitch, to keep out wet.

The stocks are planted in rows at from two to three feet apart, arranging the tallest in the back row, and the lower ones in the front proportionably. A trench being made, the roots are regularly disposed, and covered from four to six inches deep, treading the soil gently upon the roots, and close up to the stem, to fasten it properly. I then have a stake fixed so as to tie it to its place, and prevent its being shaken with the wind. I have observed in some nurseries a long stick, fixed horizontally at the height of three feet, and to which the stocks were tied; but this does not answer so well as each having a separate stake to keep it in an upright position, the wind driving those secured in the cross-bar manner in a falling direction.

Nothing more is required till the stocks push shoots in March, or early in April. I shall, therefore, reserve the next remarks for the November Number of the CABINET.

ARTICLE IV.

ON USING BROKEN POTSDHERDS IN COMPOST FOR POT PLANTS.

BY MR. WILLIAM CHITTY, OF STAMFORD HILL, NEAR LONDON.

It may be of use to some of the readers of *THE FLORICULTURAL CABINET* to know, that potsherds broken very small with a hammer, so that none of the pieces are larger than a moderate-sized pea, is a very excellent material for mixing with the soil in which plants are potted; in my estimation, very far superior to charcoal. Within the last twelve months I have used it very extensively, and found it to be very beneficial. My first experiment was in the latter part of August, 1845, with a plant of *Pimelea spectabilis*, which required shifting, and which had made poor progress all the previous part of the summer, but immediately on being potted in the broken potmixture took to growing vigorously, and produced a fine head of bloom in the spring. Since that time I have used it to almost everything grown in pots. My *Gloxinias* and *Achimenes* have this summer been unusually fine, in consequence, I presume, of a large admixture of this material with the soil, and the facility it affords their fine roots for permeating every part of the soil. A plant of *Crassula coccinea* has likewise produced much larger heads of bloom, potted in the same mixture. I am so well satisfied with the results, that I would recommend the plan to every person who has the wish to see plants flourish. The material is always at hand where many plants are grown in pots; and on wet days, &c., as much may be broken up as will last for a considerable time.

ARTICLE V.

HINTS ON THE CULTIVATION OF AUTUMNAL ROSES,

BY MESSRS. WILLIAM WOOD AND SON, WOODLANDS NURSERY, MARESFIELD, UCKFIELD, SUSSEX.

PERPETUAL and Bourbon Roses should be planted in a good mixture of turfy loam and half-decomposed manure (at least one wheelbarrow full to each plant); and if standards, they should be carefully staked. The shoots require to be shortened in spring to about three eyes, either in February or March, according to the season. During the

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When the foregoing instructions are carefully attended to, the result will amply compensate the extra labour bestowed; as a proof of which, we have the pleasure of stating that the autumnal Roses at the Woodlands Nursery are at this late period of the season in splendid bloom.

ARTICLE VI.

OBSERVATIONS ON ALLSPICE.

BY HISTORICA.

ALLSPICE or Pimenta is the dried berry of a West Indian species of myrtle (*Myrtus pimenta*) which grows to the height of twenty feet or upwards, and has somewhat oval leaves about four inches long, of a deep shining green colour, and numerous branches of white flowers, each with four small petals. In the whole vegetable kingdom there is scarcely any tree more beautiful or more fragrant than a young Pimenta tree about the month of July, branched on all sides, richly clad with deep green leaves, which are relieved with

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seeds within the berries. They are then packed into ba
heads for the market. When the berries are quite ripe, they
dark purple colour, and filled with a sweet pulp. Pimenta is thou
to resemble nutmegs and cloves, whence it has obtained the name of
all-spice. It is also employed in medicine, as an agreeable aromatic,
and forms the basis of distilled water, a spirit, and essential oil. The
leaves of the Pimenta tree yield, in distillation, an odoriferous oil,
which is not unfrequently used in medicine preparations instead of
the oil of cloves.

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ARTICLE VII.

REMARKS ON THE SENSITIVE PLANT.

BY LUCY.

THE movement of the leaves of the Mimosa pudica have their origin
in certain enlargements, situated at the articulation of the leaflets with
the petiole, and of the petiole with the stem. Those only which are

summer and autumn a plentiful supply of liquid manure will be found highly beneficial; we have used Brain's concentrated liquid Guano, in the proportion of one table-spoonful to a gallon of water, once a-week, with great success.

Among the hybrid, perpetual, and Bourbon Roses, will be found some varieties having a tendency to throw up vigorous shoots, showing little or no disposition to flower; these should be carefully removed during the summer, leaving such only as are of medium growth. These, if shortened to six eyes, will be found to produce abundance of bloom in the autumn.

In order to insure a high state of cultivation, it will be found necessary to stir the surface of the beds annually in November, after which they should be covered with a good dressing of manure; decayed linings, from a cucumber or melon-pit, have been found the most efficacious for this purpose.

In some situations, where the rose-beds are much exposed to view, it will be requisite to fork in the manure at once, as it would otherwise appear unsightly; in other cases, however, it may be allowed to remain on the surface until the plants have received their annual pruning, as recommended in the first paragraph.

If the foregoing instructions are carefully attended to, the result will amply compensate the extra labour bestowed; as a proof of which, we have the pleasure of stating that the autumnal Roses at the Woodlands Nursery are at this late period of the season in splendid bloom.

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an exuberance of white and richly aromatic flowers; it attracts the notice of all who approach it. Pimenta trees grow spontaneously and in great abundance, in many parts of Jamaica; but they cannot be propagated, without great difficulty. The usual mode of making a Pimenta walk, or plantation, is to appropriate for this purpose, a piece of woody ground in the neighbourhood of an already existing walk, or in a part of the country, where the scattered trees are found in a native state. The other trees are cut down, and, in a year or two, young Pimenta plants are found to spring up in all parts, supposed to have been produced from berries dropped there by birds, which eagerly devours them. About the month of September, and not long after the blossoms have fallen, the berries are in a fit state to be gathered. At this time, though not quite ripe, they are full grown, and about the size of pepper-corns. They are gathered by the hand; and one labourer on a tree will strip them off so quickly, as to employ three below to gather them up; and an industrious picker will fill a bag of seventy pounds weight in a day. The berries are then spread on a terrace, in the sun to be dried; but this is an operation which requires great care, from the necessity of keeping them entirely free from moisture. By the drying they lose their green colour, and become of a reddish brown; the process is known to be completed by their change of colour, and by the rotting of the seeds within the berries. They are then packed into bags or hogs-heads for the market. When the berries are quite ripe, they are of a dark purple colour, and filled with a sweet pulp. Pimenta is thought to resemble nutmegs and cloves, whence it has obtained the name of all-spice. It is also employed in medicine, as an agreeable aromatic, and forms the basis of distilled water, a spirit, and essential oil. The leaves of the Pimenta tree yield, in distillation, an odoriferous oil, which is not unfrequently used in medicine preparations instead of the oil of cloves.

ARTICLE VII.

REMARKS ON THE SENSITIVE PLANT.

BY LUCY.

THE movement of the leaves of the *Mimosa pudica* have their origin in certain enlargements, situated at the articulation of the leaflets with the petiole, and of the petiole with the stem. Those only which are

situated in the last articulation are of sufficient size to be submitted to experiment. If, by a longitudinal section, the lower half of this swelling be removed, the petiole will remain depressed, having lost the power of elevating itself: if the superior half be removed, the petiole will remain constantly elevated, having lost the power of depressing itself. These facts prove that the motions of the petiole depend on the alternate turgescence of the upper and lower half of the enlargement, situated at the point of articulation: and that contractibility is not the principle of these motions.

If one part of the plant be irritated, the others will soon sympathise, or bear witness, by the successive falling of their leaves, that they have successively felt the irritation.—Thus, if a leaflet be burnt slightly by a lens, the interior movement which is produced will be propagated successively to the other leaflets of the leaf, and thence to the other leaves on the same stalk. A very clever French experimentalist, Mons. Dutrochet, found,

1st. That this interior movement is transmitted equally well, either ascending or descending.

2nd. That it is equally well transmitted, even though a ring of bark has been removed.

3rd. That it is transmissible, even though the bark and pith be removed so that nothing remain to communicate between the two parts of the skin, except the woody fibres and vessels.

4th. That it is transmissible, even when the two parts communicate merely by a shred of bark.

5th. That it may be transmitted, even when the communication exists by the pith only.

6th. But that it is not transmissible, when the communication exists merely by the cortical parenchyma.

From these very interesting experiments, it results that the interior movement produced by irritation, is propagated by the ligneous fibres and the vessels.

The propagation is more rapid in the petioles than in the body of the stem; in the former it moves through a distance of from three to six tenths of an inch in a second; in the latter, through from eight to twelve hundredths of an inch, during the same portion of time. External temperature does not appear to exert any influence on the rapidity of the movement, but very sensibly affects its extent.

Absence from light, during a certain time, completely destroys the

irritability of the plant. Such change takes place more rapidly when the temperature is elevated, than when it is low. The return of the sun's influence readily restores the plant to its irritable state. It appears, therefore, that it is by the action of light, that the vital properties of vegetables are supported, as it is by the action of oxygen that those of animals are preserved, consequently, etiolation is to the former what asphyxia is to the latter.

PART II.

MISCELLANY

OF

NOTES AND CORRESPONDENCE.

New or Rare Plants.

ACANTHOPHIPPIUM JAVANICUM. THE JAVANESE. (Bot. Reg. 47.) Orchidaceæ. Gynandria Monandria. Discovered in the woods of Mount Salak in Java, and has bloomed in the collection of Messrs. Loddiges. The flowers are pale yellow with a tinge of brown, streaked lines of purple, and the five parted mouth a clear lilac with a blotch of yellow in each. The lip is three lobed. Each flower is bellying, and about an inch and a half long. Singular and pretty. The following are the species hitherto known, viz. :—A. Javanicum, A. striatum; flowers French white striped with duller colour. A. Sythetense; flowers white, scentless. A. bicolor; flowers yellow with crimson and purple tips.

ÆSCHYNANTHUS BOSCHIANUS. VANDEN BOSCH'S. (Pax. Mag. Bot.) Gesneraceæ. Didynamia Angiospermia. An evergreen Epiphyte, from Java, which blooms freely in a stove or greenhouse. The flowers are produced in axillary clusters. Each blossom tubular, nearly three inches long. The calyx is a rich purplish and brown colour an inch long, and the corolla of a very rich deep scarlet, with yellow streaks inside the mouth. It blooms throughout spring and summer. It is in the collection of R. G. Loraine, Esq., and some of the London nurseries.

AMICIA ZIGOMERIS. TWO-JOINTED PODDED. (Pax. Mag. Bot.) Leguminosæ. Monadelphia Decandria. A native of Mexico. It is a shrubby plant and somewhat a climber, thriving in either a stove or greenhouse. It grows freely and blooms plentifully. It does well too in summer in the open air, in a warm situation. The flowers are pea-shaped, an inch and a half across, a rich yellow colour, very showy, and in doors blooms through winter.

CLERODENDRUM SINUATUM. SINUATE-LEAVED. (Bot. Mag. 4255.) Verbenacæ, Didynamia Angiospermia. A native of Sierra Leone. It is a low stove shrub, producing numerous large corymbose heads of white flowers, which are highly fragrant.

DATURA CORNIGERA. HORN-BEARING. (Bot. Mag. 4252.) Solanæ, Pentandria Monogynia. A shrubby plant, blooming freely in the open air in the summer season, and protected in a cool greenhouse the other seasons. This species, Sir William Hooker observes, is known in collections under the name *Brugmansia Knightii*. The flowers are about six inches long, creamy-white,

funnel formed, and the reflexed points of the five parted lobes are long and horn like. It is well deserving a place in a collection of plants, especially for the open air in summer.

DIASTEMA OCHROLEUCA. THE PALE YELLOW. (Bot. Mag. 4254.) Gesneriaceæ, Didynamia Angiospermia. Sent from New Granada to the Royal Gardens of Kew. It is nearly allied to *Achimenes*, probably intermediate between *Achimenes* and *Gesneria*. It is a stove plant. The flowers are produced numerously in paniced heads. Each blossom is about an inch long, the tube cream colour, and the five parted (about the size of *Achimeues coccinea*), mouth white. It is a neat and interesting species.

HOLBOLLIA LATIFOLIA. BROAD-LEAVED. Monœcia Hexandria. (Bot. Reg. 49.) A hardy, or half hardy shrubby climber, a native of Nepal. It has bloomed against the open wall at the residence of L. W. Dillwyn, Esq., of Sketty Hall, near Swansea. The flowers are white, in clusters, small. The fruit, berries, are eatable.

HYDRANGEA JAPONICA; VAR. CÆRULEA. JAPAN HYDRANGEA. (Bot. Mag. 4253.) Dr. Siebold discovered the Japan Hydrangea on the Island of Nipon, and abundantly cultivated by the Japanese. Two varieties are distinguished by him—"Benikaku," with rose-coloured flowers, and "Konkaku" with blue flowers. The one here figured is the blue, and is much handsomer than the rose-coloured. It is a shrub growing three feet high, and succeeds admirably with the same treatment as the common Hydrangea. It deserves a place wherever it can be grown.

LESCHERNAULTIA SPLENDENS. SPLENDID SCARLET FLOWERED. (Bot. Mag. 4256.) Goodenovieæ. Pentandria Monogynia. It has bloomed in the collection of Messrs. Lucombe, Pince, and Co., at Exeter nursery. It is a shrub from one to two feet high, copiously branched. The flowers are produced in *corymbs* of several blossoms. The size of each flower is about the same as *L. biloba*, the blue, but of the richest scarlet, having a pale tube. It is a very splendid flowering plant.

LILIUM SANGUINEUM. BLOOD-RED LILY. (Bot. Reg. 50.) It is said to be of Japan origin. It is a half-hardy species, growing about half a yard high, and blooms in May and June. The fine erect flowers are of a vivid orange-red colour with dark spots, not quite so large as those of the old orange lily of the gardens. Each stem, however, produces but one flower. Mr. Groom possesses a most extensive collection of this species, and other hardy hybrids, &c., which produce a fine display in his garden during summer.

JASMINUM NUDIFLORUM. NAKED-FLOWERED. (Bot. Reg. 48.) Jasminaceæ, Diandria Monogynia. Introduced from China by Mr. Fortune to the London Horticultural Society. It is a shrub with trailing branches. The leaves fall off early in autumn, and at the axils of the leaves which have fallen, the flowers are produced. Each blossom is an inch across, a rich yellow colour. It appears to be a greenhouse plant, and blooms very freely during the winter.

JONOPSIDIUM ACAULE. STEMLESS VIOLET-CRESS. (Bot. Reg. 51.) Synonym, *Cochlearia acaulis*. It is an annual, found wild on the hills near Lisbon. It is a hardy annual, quite dwarf, growing in any rich garden soil, and blooms profusely from April to October. Each blossom is about half an inch across, at first coming out white but turn to a beautiful lilac. It does best in a rather moist and shady situation, admirable for the edging to borders, walks, &c., also does well in a suitable place on rock-work. It has bloomed in the garden of the London Horticultural Society.

TALAUMA CANDOLLI. DE CANDOLLI'S. (Bot. Mag. 4251.) Magnoliaceæ Polyandria Polygynia. (Synonym *Magnolia odoratissima*, M. pumila.) A charming stove shrub, a native of Java. Grown in a pot it becomes about three feet high, in Java fifteen feet. The flowers are produced solitary, terminal, drooping, cream-coloured, fragrant. Each flower about nine petals, and three to four inches across.

LONDON HORTICULTURAL SOCIETY, September 1.—Although the subjects for exhibition on this occasion were not numerous, some of them were far from being devoid of interest. A very fine specimen of the large white-flowered *Dendrobium formosum*, for which a Banksian medal was awarded, came from the nursery of Messrs. Rollinson, of Tooting; and of the same interesting tribe, Messrs. Loddiges, of Hackney, produced a series of plants, consisting of the dingy brown-flowered *Cymbidium giganteum*, a Warrea from Guiana, the delicate blush-flowered *Eulophia guineensis*, a *Galeandra* from Santa Martha, something in the way of, but less handsome than *G. Baueri*, a well-bloomed specimen of which accompanied it, and a variety of *Peristeria elata*. From the same collection was also a *Saccolabium* from Bombay, not strikingly different from *S. guttatum*, together with *Oncidium tetrapetalum*, the green-flowered *Cynoches chlorochilum*, and a handsome variety of the comparatively new *Cattleya granulosa*. Along with these were likewise a lovely specimen of the bright orange-flowered *Dendrobium chrysanthum*, and the larger-flowered variety of *Epidendrum asperum*. A Knightian medal was awarded.—Mr. Glendinning, of the Chiswick Nursery, sent *Torenia concolor*, a lovely blue-flowered species introduced from China by Mr. Fortune. It has a trailing habit, and, in the present instance, was comparatively bare of blossoms; but when the plant shall have become better known, and more care bestowed on its culture, we have no doubt it will prove a worthy associate of the lovely *T. asiatica*, excelling the latter in beauty; for the flowers are nearly of as fine a blue as those of *Salvia patens*.—Messrs Veitch and Son, of Exeter, sent *Aschynanthus radicans*, another handsome addition to that beautiful genus; and a soft-wooded Gesneraceous looking plant, from Java, named *Tromsdorffia speciosa*. It is an erect growing plant, with large opposite obovate leaves, from whose axils spring clusters of *Chirita*-like flowers—pale blush, with the tube shaded with violet; the plant had been grown in a stove, but in a specimen from the greenhouse, sent along with it, the tube was much deeper coloured. The ample and somewhat coarse foliage, however, will always hide much of the beauty of the blossoms. A certificate was awarded. From Messrs. Henderson, of Pine-apple-place, was the pretty bright red tubular flowered *Cuphea platycentra*, a half hardy plant, which answers well for bedding out; and *Satyrium aureum*, a Cape Orchid, which was stated to flower freely in peat in a cool well-aired greenhouse. Of florists' flowers, from the garden of the Society were *Achimenes grandiflora*, and a large mass of the old *A. coccinea*, the useful *Niphæa oblonga* covered with chaste white blossoms, a large *Cuphea pubiflora*, *Mussaenda frondosa*, with singular large white bracts and yellow flowers, *Oncidium microchylum*, the pretty yellow-flowered *Bletia*-like *Spathoglottis Fortuni*, one of the first plants Mr. Fortune met with on the granite mountains of Hong Kong, together with *Lochroma tubulosum*, a half-hardy shrub growing from 4 to 5 feet high, which was found by Mr. Hartweg on the mountains of Yangana, near Loxa. Notwithstanding its somewhat rambling habit and coarse grey downy foliage, it promises to be a plant of much importance, producing clusters of long flowers of a deep porcelain blue colour. From the same collection was also Mr. Fortune's *Abelia rupestris*, a spreading bush, with bright green leaves, and white flowers, surrounded by a slightly-stained rose-coloured calyx; being sweet-scented it will be a valuable autumn-flowering greenhouse plant, if it should not turn out to be hardy, which is probable. Along with it was a new pale yellow blossomed *Clematis* from Chinese Tartary, which, being hardy, will no doubt form a valuable addition to the arboretum wall.

DISTRIBUTION OF PLANTS IN SHRUBBERIES.—In thinning as well as in planting in the shrubbery, much may be done at this season to improve the general aspect of the place. The tasteful gardener must not fail to calculate the effect of height, and also the different kinds of foliage. Here he will have to cause an entire removal; there, displace by others more suited to preserve boldness or agreeableness in a particular direction. The beautiful idea of twilight contained in the lines of Gray,

“ Now fades the glimmering landscape from our sight,”

may be quite realised in the noon of day by a certain adjustment of the various tints required to delineate the distance in perspective. The effects of contrast are also worthy of attention. The light poplar bending over the Portugal laurel; the portly bay or the sturdy holly, overshadowed by the handsome birch; the brawny trunk, overgrown by ivy, standing out in bold relief among foliage of a less decided character; all these, when tastefully distributed, are far more imposing and interesting than when jumbled together without design. The taste that dictates the clipping of holly or fir, box trees, trees and thorns, is of a very questionable kind; and but for regulating the natural habit, no shrub ought to be subjected to the knife or the shears. It is far prettier to see a bush growing unconfined than to see what we are not warranted in looking for, viz., a growing pyramid, a cone, or beehive. Again, strong cutting winds are sure to nip and stunt trees and shrubs of a soft texture; and, therefore, while we endeavour to make the shrubbery interesting, we must bear in mind that our trouble will be much augmented, unless we calculate the probable effects of winter and spring blasts. Some trees and shrubs will thrive and look very well for a time in one situation; but, perhaps, in a year or two we lose sight of them, from their not having kept pace with the others. TRATEX.

ON THE *RANUNCULUS*.—So much has been written on the culture of the *Ranunculus*, that the young florist has ample means of knowing how to manage this lovely flower with the fairest hopes of success; but I apprehend that a few remarks on the habits of this class of plants may not be unacceptable to your readers. From the experience of forty years, I am prepared to say that the *Ranunculus* delights in a moist soil and a rainy season. Last year was the most congenial to this class of plants I ever recollect of. Indeed so prosperous was it that many of the old varieties, such as *Naxara*, *Variat*, *La Tendresse*, *Brelange des Beautés*, and several others, sent up fine pericarps, commonly called eyes, from which, by impregnation, good seed has been saved. The frequent showers of 1843 induced most of the best seedlings which have for some years maintained a high character as good show flowers to yield large seed-vessels, so that many of the flowers were unfit for exhibition; but for this trick of youth they have amply compensated by producing a greater abundance of prime seed. The showing of the eye may be thought by many a great drawback on the value of a flower; yet it should be remembered that no flower shows such a perfect crown as one whose petals are supported by the seed-vessel, though it is well known that they will not do for exhibition after the pericarp is developed. But it is also certain that those that are semidouble will come perfectly double in a few years; and many that produce large seed-vessels in a congenial season will, in a dry spring, be entirely destitute of them, but generally inferior both in size and colour.

There is also in the *Ranunculus* what is by florists called a sportive character; that is, they run from their original colour: though this defect is not so glaring as in the *Tulip* and *Carnation*, yet it causes great disappointment to the ardent florist. Some that have yellow grounds delicately spotted will come plain yellow, and some red and white striped will come plain red; sometimes the colours will mix, and the flowers will become dingy. I have a beautiful modest flower, which some years ago obtained a first seedling prize; I called it "Innocent;" but the year before last it came so foul, that I wrote against it "Guilty." Last year, however, it resumed all the beauty and purity of its youth, which induced me to write against it "Acquitted." Cathcart, when it first bloomed, was a white ground, beautifully mottled with crimson; now it frequently comes with only a crimson spot; but in good seasons it will display all the beauties of its youth. Sometimes the flowers will be as green as the grass of the plants from which they grow. Some of the finest seedlings are weak, and therefore die in a few years, though for a short time they had great renown; such has been the case with *Abbé St. Andrew*, *Quixos*, *Viol le vrai Noir*, *Grand Berger*, and *Rose Incomparable*, and some others of later date. But there are others of first-rate character which are remarkably strong, and increase abundantly, such as *Attractor*, *Felix*, *Saladin*, *Edgar*, *Eureka*, *Victor*, and many others. If the last

season was very propitious for the *Ranunculus*, the present (1844) has been altogether as adverse, especially for the early-planted roots. The frosts by night and the drought by day have done much injury, and many have died. These are circumstances which try the patience and baffle the skill of the ardent florist; but let him persevere through all the diversity of seasons, and his efforts will be sure to be crowned with success. I have, during the last twenty years, raised many thousands of seedlings, out of which I have selected about two hundred; amongst them is one yellow-edged seedling called Edgar, which is so perfect in every respect, that the London florists pronounced it "a model flower," and many others of them have at exhibitions borne away the palm from their far-famed predecessors. I generally grow from twenty to thirty large beds, planted at various seasons; but the best time to secure a good bloom is to plant in the last week in February or the first in March.—*Gardeners' Chronicle*.

BUDDING RHODODENDRONS.—For stocks I layered the lower branches of *Rhododendron ponticum* last year, and they rooted beautifully. About six weeks ago I budded a number of them close to the soil, on the two-year old wood, which I find to work best, and scarcely a bud failed. Early in spring I intended to head the stocks down to within an inch of the bud. By next autumn the plants will be well rooted, and may be cut off from the parent stool and planted in beds or borders. Last March I planted thirty plants of *Rhododendron ponticum* for grafting, in a brick pit covered with glass; being kept close, they were soon excited into growth, when I grafted them close to the surface of the soil with choice hybrid kinds; as soon as I imagined the grafts had united to the stock, I cut the latter down close to the graft, and by keeping the pit rather close all the summer some of them have made three growths, and are now fine bushy plants from a foot to 18 inches in height. A few which did not take I have grafted again to try how autumnal grafting will succeed. I did not tongue the grafts nor clay them; I merely tied the two cuts firmly together, and left them to take care of themselves. They have done well; but I am best pleased with the budding system.—*Gardeners' Chronicle*.

A SELECT LIST OF GREENHOUSE PLANTS.—A correspondent recently asking for a list of a few handsome plants for the greenhouse, I forward the following, which will meet his wishes in all respects, both as to beauty and a continuance of bloom. All of them are cheap, and may be had at most public nursery establishments.

A. Z.

Leschenaultia formosa, scarlet; *Hovea Celsi*, blue; *Pimelia spectabilis*, pink; *P. hispida*, pink; *Aphelaxis spectabilis grandiflora*, crimson; *A. humilis*, rose pink; *Azalea lateritia*, red; *A. exquisita*, variegated; *A. Gledstanesii*, white striped; *Erica depressa*, yellow; *E. aristata major*, crimson and black; *E. Massoni*, green and red; *E. ampullacea*, white and pink; *Gompholobium polymorphum*, crimson; *Tropæolum tricolour*, scarlet, black, and yellow; *T. brachyceras*, yellow; *Sollya linearis*, blue; *Polygala oppositifolia*, purple; *Boronia serrulata*, rose; *B. viminea*, pink; *Chorozeema varium*, yellow; *C. scandens*, yellow; *Acacia pulchella*, yellow; *A. armata*, yellow; *A. verticillata*, pale yellow; *Eriostemon buxifolium*, pink; *Zichya coccinea*, scarlet; *Genista canariensis*, yellow; *Aotus vergata*, yellow; *Boesixa disticha*, yellow; *B. linophylla*, yellow; *Brachysema latifolia*, scarlet; *Corræa speciosa*, red and green; *Dillwynia juniperina*, yellow; *Epacris grandiflora*, white and crimson; *E. impressa*, pink; *E. nivalis*, white; *Mirbelia speciosa*, purple.

ON THE CULTURE OF IXORAS.—Being much pleased with the superior specimens of the scarlet, pink, and orange-coloured *Ixoras*, shown at the Chiswick, Surrey Gardens, and Regents' Park exhibitions, I shall be obliged by any instructions relative to their culture in an early number.

A BEGINNER.

(The following particulars on the cultivation of *Ixora coccinea* (scarlet) was

read at the West Kent Gardeners' Society, and which we extract from the Gardeners' Journal. The same kind of treatment is alike suitable to the other species named above, and we doubt not, but if adopted, will prove successful):—

“Mr. Cooper, of Bromley, read a paper on the cultivation of *Ixora coccinea*. He procured cuttings of the ripened wood about July, and planted them in five-inch or six-inch pots, which are found to be the most convenient size; these are nearly half filled with broken potsherds as drainage; a little rough peat is added, and the remainder is filled up with silver-sand, into which the cuttings are inserted. The pots are plunged in a tan or other bed, where they will have bottom heat, and can be kept close. If the cuttings get too damp, the glasses are to be removed for an hour or two, and then replaced. With a brisk moist heat they will root in about five or six weeks (sometimes sooner), and may then get a little air for two or three days, after which the glasses are to be removed altogether. If they are found to flag after removing the glasses, they must be replaced for a short period. As soon as they will stand without the glasses, they are to be potted singly into three-inch pots, and placed in a frame, hotbed, or stove. If in the latter, they must have a hand-glass put over them until they make fresh roots. The points of the shoots must be nipped off to make them bushy. In selecting cuttings, make choice of those with short joints, as they make the best specimens. If they are rooted in a brisk heat previously to July they may have a shift, but that entirely depends upon circumstances; generally it is best to let them remain in the small pots till the following February, when they may be shifted into six-inch pots, and placed in a light, airy situation, and where they will experience a gentle bottom heat. During the time they are growing they require plenty of heat, air, light, and water. If air is not freely admitted in the growing season they are apt to become weak and spindly; in consequence of which they will either produce weakly blooms or none at all; but with a temperature of from 75 to 80 degrees, with plenty of air, and shifted in February, they will produce short-jointed and well-ripened wood by September; after which they will stand in a temperature of 50 degrees until they are wanted to flower. By attending to this course of treatment, an early and good bloom will be secured. The soil he used was composed of two-thirds turfy peat, one-third turfy loam and Reigate sand, using it as rough as possible; the larger the plants, the rougher the compost is required. Water should be used sparingly in winter, and more freely as the season advances; and a higher temperature is required, which will be about the middle of January. Increase the heat as the season advances. If the plants are wanted for exhibition, and they are advancing too fast, remove them to a cooler place, but this must be done before a single bloom has expanded, the flowers being liable to drop then, on a sudden transition. After the blooming is over they will make their growth, set their blooms, and be prepared for a lower temperature during the winter. With proper attention they may be had in flower at almost any time in the year. He remarked that the one-shift system had proved a failure. His practice was to shift progressively, removing the plants from a three-inch to a six-inch pot, and from that to a nine-inch one, and then to a twelve-inch one, and so on. *Ixoras* are liable to be infested with all kinds of insects, such as the thrip, white and brown scale, mealy bug, green fly, and red spider. If the plants are well syringed at all favourable opportunities, both under the leaves as well as over the top of the plant, and not half done, the insects will be kept travelling, and will never do any mischief. It is when they lie up unmolested that they injure the plants.”

ON THE LILY OF THE VALLEY.—What is the best way of managing the Lily of the Valley at the end of the year, to induce a fine bloom in the spring? Mine were covered down with leaf mould last autumn, the soil being light and rich; they produced abundance of leaves, but the flowers were poor and scanty. The situation is not very exposed, but not under shade.—C. M.

[It blooms very freely when grown in a good loamy soil, having a dry substratum. We had a bed of it that was cultivated in such a soil, and the situation had the morning sun till about eleven o'clock, and they had the shade of some large trees growing at about a dozen yards distance, the remainder of the day. The cover-

ing applied could do no injury in winter, if not so thick as to induce the shoots prematurely to push forth, and this would the more affect them if retained as covering, later than the beginning of March. We saw a bed of them grown in a peat soil, and very few flowers were produced, but a vigorous foliage uniformly. We never covered the roots with any addition in winter, beyond a slight sprinkling of soil when digging the adjoining ground.—CONDUCTOR.]

ON ERANTHEMUM FULCHELLUM.—Blues amongst forced flowers are rare; therefore, this plant is very desirable. Struck from cuttings in the early part of February, and highly cultivated, they will make nice bushes by the early part of August, when they should be removed from the stove to the cool greenhouse, to check further excitement to growth. Introduced to a lively temperature of from 65° to 70° in the early part of November, and if possible to bottom-heat, they will blossom beautifully through December and January; when, if cut down disrooted, and carried through the same routine as the cuttings, they will make better bushes still by the autumn following—having more flowers in proportion to the foliage. These plants delight in abundance of moisture at the root, and are better kept in pans of water when in flower. Soil should be strong loam, peat, and leaf-mould.

ON MIGNONETTE.—Everybody's favourite, and is easily grown, provided good frame or pit room can be secured for it. Two sowings, the one about the first week in August, and the other three weeks later, will furnish plants for both autumn and spring. They may be sown in a small bed, and, when compact plants, may be transferred to 5-inch pots, putting five or six in each pot. They require much care on their removal, and must be placed in a close and moist atmosphere for a week; in fact they should receive cutting treatment. They enjoy abundance of light; no soil or plan will flower them in perfection unless they are near the glass. A back shelf in a pit, or a frame made up specially for them with the glass thoroughly washed, and the pots placed on, or rather plunged in, ashes, is the best situation for them.

It is necessary, in order to make the plants thick and stout, to pinch the terminal bud of each off when they are thoroughly rooted in the pots, and no before. Air must be given abundantly at all times possible. They must be well secured against severe frosts by plenty of covering, and kept somewhat dry at the root during the dark months of November and December. The soil may be two parts of turfy loam, and the third equal parts manure and leaf soil, to which is added coarse sand and charcoal siftings. CLERICUS.

ON FORCING HYACINTHS, &c.—The chief business is to get the root well established before growth commences, otherwise it is impossible to produce an early and strong bloom. Most of the failures are chargeable to the omission of this most important point; and the fault has not unfrequently been charged, most unjustly, on the roots. A soil composed principally of a mellow loam, with the addition of old cow manure and leaf soil, and a sprinkling of sharp sand and fine charcoal dust, will be found excellent material. Secure good drainage, and pot the bulb high—three parts above the level of the rim, taking care that the soil is in a mellow state, neither wet nor dry. They succeed by far the best in a cold frame, and it is most desirable that they should receive no moisture, beyond what the soil contains, until the pot is somewhat filled with roots. Those who have not the convenience of a frame may plunge them in cinder ashes in some sheltered spot, taking care to raise them above the ground level, for fear of water lodging. Take care, and let them be covered with six inches of some mellow material, such as old tan, old leaf soil, sawdust (if not too new), or ashes. Remove them to a warmer temperature as required; a few may be forwarded at a time, and so prolong the blooming season. FLORISTA.

BRAZILIAN SCENERY.—Learned naturalists describe these scenes of the tropics by naming a multitude of objects, and mentioning some characteristic feature of each. To a learned traveller this possibly may communicate some definite ideas; but who else from seeing a plant in an herbarium can imagine its appearance when growing in its native soil? Who from seeing choice plants in a hothouse, can magnify some into the dimensions of forest trees, and crowd others into an entangled jungle? Who, when examining in the cabinet of the entomologist the gay exotic butterflies, and singular cicadas, will associate with these lifeless objects the ceaseless harsh music of the latter, and the lazy flight of the former—the sure accompaniments of the still glowing noonday of the tropics? It is when the sun has attained its greatest height that such scenes should be viewed; then the dense splendid foliage of the Mango hides the ground with its darkest shade, whilst the upper branches are rendered, from the profusion of light, of the most brilliant green. In the temperate zones the case is different; the vegetation there is not so dark or so rich, and hence the rays of the declining sun, tinged of a red, purple, or bright yellow colour, add most to the beauties of those climes.—*Darwin's Journal of a Voyage round the World.*

Floral Operations for October.

All the particulars given in the Calendar in the last number (September) apply to the present also, to which we refer our readers. The following additional attentions will now be required.

In taking up *Tipidias*, &c., let all the soil be retained that will adhere, and allow the bulbs to be preserved therein; it will gradually dry, and the bulbs are preserved perfectly.

HYACINTHS and other bulbs for forcing should immediately be potted, also planted in beds, &c. See articles in former numbers on the mode of operations.

GREENHOUSE PLANTS yet out will require to be taken in by the middle of the month; if allowed to remain out much longer, the foliage will often turn brown from the effects of cold air. Where they are in all air should be admitted by day. The plants should not be watered over head at the close of the day. Water the soil too only in the early part of the day, if not so attended to the leaves will be liable to damp off. Loosen the soil at the surface frequently, it contributes much to health.

CHRYSANTHEMUMS be repotted, pinch off leading stems if not previously done. Large plants grown in the open ground may be taken up and potted, and with due care they will bloom fine.

Any tender plants, as *Lobelias*, &c., which have been grown in the open beds, and require to be protected in the cool frame during winter, should be potted in due time to preserve from injury.

ROSES.—By the middle of the month they may be planted. In purchasing take care to select such as are very firmly united between the rose and the stock, for when slightly united they are easily blown off.

China Rose—Cuttings of, now strike freely.

Tender Roses grown out of doors during summer, and requiring to be protected in winter, should be removed by the end of the month.

SHRUBS.—All kinds may now be planted, watering well at the roots to settle the soil to the small fibrous ones.

TURF may be laid so as to root firmly before frost.

SHRUBS, &c., FOR WINTER BLOOM.—Such as are to bloom early should be prepared gradually, potted if required, and by the middle of the month introduce those to bloom by Christmas into the house or pit. The kinds which are well deserving such attention are *Roses*, *Honeysuckles*, *Jasmines*, *Azaleas*, *Persian Lilacs*, *Carnations*, *Pinks*, (*Anne Boleyn* is the best), *Rhododendrons*, *Aconites*, *Mignonette*, *Primroses*, *Stocks*, *Persian Iris*, *Crocuses*, *Cyclamens*, *Rhodoras*, *Cinerarias*, *Ribes*, *Sweet Violets*, *Hyacinths*, *Lily of the Valley*, *Correas*, *Deutzias*, *Mezereums*, *Hepaticas*, *Gardenias*, *Heliotropes*, *Scarlet Pelargoniums*, *Cactuses*, *Eranthemum Pulchellum*, *Justiceas*, *Gesnerias*, &c.



1. *CUPHEA MINIATA.*

2. *LYCIUM FUCHSTOIDES.*

Floricultural Cabinet.

THE
FLORICULTURAL CABINET,

NOVEMBER 1ST, 1846.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I.

1. CUPHEA MINIATA.

SEVERAL new and fine-flowering species of this beautiful and interesting genus we have noticed in recent numbers of this Magazine, and we now record the present as a very strikingly handsome one. It has lately been introduced into this country from South America, and with us has bloomed in the plant stove; but, we are persuaded, it will be found to flourish well in the greenhouse, and it deserves to be in every one.

2. LYCIUM FUCHSIODES.

A native of the Azoques, in the Quintian Andes. It is a shrub much employed by the natives for hedges. It has flowered beautifully in the splendid collection in the Royal Gardens at Kew. The plant is four feet high, branching freely, and blooming liberally, producing through the entire season a fine display. It appears likely to do well in either plant stove, conservatory, or greenhouse, and none ought to be without it.

ARTICLE II.

DESCRIPTIVE LIST OF BEGONIAS,

BY MR. DONALD.

(Extracted from the *Journal of the Horticultural Society, Part II.*, and being a continuation of Article I., page 241.)

A. *Stems none.*

1. *B. rubricaulis.* Leaves all from the root, heart shaped, about five inches in breadth, of a dark green colour, and hairy on both sides. Flowers few, but beautiful, closely set together on the top of a footstalk of from eight to ten inches in length, covered with fine white hairs. This species, in some respects, resembles *B. albococcinea*, especially in the purple sepals and almost white petals, and, like it, blooms in autumn, and probably at other seasons.

B. *Stems creeping.*

a. Leaves palmate, equal at the base.

2. *B. heracleifolia.* Stems short and creeping. Leaves palmate, from fourteen to sixteen inches across, of a dark green colour, and hairy on both sides. The most remarkable feature in this species is the footstalks which support the leaves; they are generally about two feet in height, and covered with strong white hairs rising from crimson spots, which, along with numerous short bright green streaks, give the plant altogether a singular appearance. Flowers pink, in loose panicles, elevated on hairy footstalks about three feet in height. It blooms in spring.—*Mexico.*

3. *B. crassicaulis.* Stems rather short, thick, and fleshy, inclining to creep, of a dull green colour; when young, thickly set with strong black hairs, having all their points turned upwards. Leaves palmate, measuring about 10 inches across, of a bright green colour, and partially covered with a soft brown substance beneath. Flowers white, produced in great profusion all over the stems. A deciduous species, flowering in spring before the leaves appear.—*Guatemala.*

b. Leaves ovate, equal at the base.

4. *B. fagifolia,* entirely covered with soft white hairs. Stems creeping, short jointed, and of a dull crimson colour. Leaves ovate, about two inches in length, remaining long on the stem. Flowers white, rather small, but produced in great profusion, and remaining

in perfection about two months. This, although it only blooms in spring, makes a beautiful object when grown on a trellis. Syn. *B. pendula*, *B. repens*.—*Brazil*.

c. Leaves oblique, ovate, acute.

5. *B. manicata*. Stems rather short, inclining to trail, green when young, and marked with a few white streaks. Leaves oblique, fringed at the margin, of a bright green colour, smooth on the surface, but remarkable for the depressed crimson scales, which are suspended from the veins beneath, increasing in size and number towards the footstalk, and forming a ruff where they unite. Flowers pink, in loose panicles rising about a foot above the leaves. It blooms in spring.—*Brazil*.

d. Leaves oblique, obtuse, often round.

6. *B. stigmosa*. Stems short, inclining to creep. Leaves oblique, sometimes nearly round, from six to eight inches in breadth, curiously fringed at the margins, of a pale green colour, smooth on the surface, and beautifully marked with dark purple spots. The veins on the under sides, as well as the long footstalks, are covered with soft chaffy-looking scales, giving the plant altogether a very mottled appearance. Flowers greenish-white, in loose panicles, rising six or eight inches above the leaves.

7. *B. Barkeri*. Stems very short and strong, lying close on the soil. Leaves unusually large, often a foot and a half across, and in form resembling a rhubarb leaf; smooth and shining on the upper surface, downy beneath, and supported by strong footstalks densely covered with dull green scales. Flowers white, produced in a huge mass on a footstalk upwards of four feet in height. It blooms in autumn, and at other seasons.—*Mexico*.

8. *B. ramentacea*. Stems short, and covered with depressed scales, which give them a very singular appearance. Leaves oblique, sometimes nearly round, from six to seven inches in breadth, dark green, and shining on the surface; crimson beneath, and covered with short forked hairs, gradually depressed towards the footstalks, which are covered in the same manner as the stems. Flowers pink, in loose panicles, consisting of twenty or thirty blooms. A handsome species, and one that appears to flower several times in the season.—*Brazil*.

9. *B. hydrocotylifolia*. Stems short, creeping on the soil in a congregated mass. Leaves about two inches in breadth, almost round, dark green, and shining above, crimson beneath, and covered with soft brown hairs, which gradually disappear as the leaves become old. Flowers pink, on loose panicles, rising six or eight inches above the leaves. A very pretty species, flowering in spring, and remaining for a length of time in bloom.

e. Leaves oblique, peltate.

10. *B. albo-coccinea*. Stems short, inclining to creep. Leaves peltate, oblong, of a dark green colour, covered when young with soft brown hairs which soon drop off, leaving them quite smooth on both sides; but still a soft substance clings to their footstalks, and gives them a rust-like appearance. Flowers in loose panicles of from thirty to forty blooms, elevated on footstalks about a foot and a half in height; petals pure white, contrasting well with the sepals, which are bright scarlet, especially on the outside.—*East Indies*.

C. *Stems erect, seldom branching.*

a. Leaves digitate, equal at the base.

11. *B. muricata*. Stems rough, from three to four feet in height, and of a dull green colour. Leaves digitate, consisting of from six to eight leaflets, three or four inches in length, hairy on both sides. Flowers white, rather small, but numerous, forming a close panicle, elevated on a footstalk about eight inches in height, which, like the stem, is also covered with a rough hairy substance. It blooms in autumn, and probably at other seasons. Syn. *B. digitata*.—*Brazil*.

12. *B. digitata* in some respects resembles the preceding. Stems erect, about three feet in height, of a dull crimson colour when young, and thinly covered with soft white hairs. Leaves digitate, consisting of from four to eight leaflets, or sometimes entire, assuming the usual oblique form, smooth, and dark green above, bright crimson beneath, and scattered over with a few white hairs. Flowers white, scarcely different from those of *B. muricata*. It blooms in summer.—*Brazil*.

b. Leaves oblique, partially lobed.

13. *B. dichotoma*. Stems strong, from four to five feet in height, inclining to branch, rough and channelled. Leaves large, sometimes measuring ten inches across, unequally toothed, of a dark green colour,

shining above, and smooth on both sides. Flowers white, in large clusters, suspended by long footstalks. Syn. *B. longipes*, *B. macrophylla*.—*Caraccas*.

14. *B. longipes*. Stems about five feet in height, very stout, becoming brown when old, and singularly dotted over with bright green spots. Leaves large, sometimes a foot in breadth, serrated, unequally lobed, of a dull green colour, and covered with short down-like hairs, especially on the under sides. Flowers white, in clusters, suspended by very long footstalks, generally from the upper portion of the stem. Syn. *B. macrophylla*, *B. odorata*.—*Mexico*.

c. Leaves oblique, ovate.

15. *B. papillosa*. Stems about four feet in height, thinly covered with white bristle-like hairs, which, as the wood becomes hard, drop off, leaving the latter beautifully marked with short white streaks. Leaves oblique, about four inches in length, gradually tapering to a point, very rough, and of a dark green colour, thinly set with short ridged hairs on both sides. Flowers rose-coloured, produced in rather large clusters, hanging on slender footstalks from the upper portion of the stems. This species blooms occasionally in the course of the season, but never in great abundance.—*Brazil*.

16. *B. dipetala*. Stems erect, rather stout, about four feet in height, of a dull green colour, and singularly marked with small scarlet spots. Leaves oblique, about six inches in length, thinly set with short hairs on both sides, dark green, except the veins which, like the footstalks, are crimson. Flowers pink, in graceful clusters, suspended on footstalks from three to four inches in length. This, with the two preceding, blooms during the spring and summer months.—*East Indies*.

17. *B. Meyerii*. Stems hard and woody, about four feet in height, beautifully coated with soft brown hairs. Leaves oblique, from six to eight inches in length, very soft and woolly on both sides. Flowers white, produced in rather dense clusters, suspended by footstalks six or eight inches in length, which are covered with a brown substance similar to that on the stems. It blooms during the spring months.—*Brazil*.

d. Leaves oblique, ovate, peltate.

18. *B. peltifolia* grows about three feet in height, stems rather woody, and these with the leaves are thickly covered with a white

woolly substance, giving the plant a very hoary appearance. Leaves peltate, about ten inches in length, very thick, and easily broken. Flowers white, in large clusters, suspended by footstalks generally more than a foot in length. Syn. *B. pauciflora*, *B. acida*, *B. peltata*.—*Brazil*.

19. *B. vitifolia*. Stems strong, from three to four feet in height, seldom branched, of a dull green colour, and covered with a brown woolly substance which falls off as the wood becomes hard. Leaves peltate, about eight inches in breadth, generally concave, unequally toothed, and slightly woolly, especially on the lower side. Flowers white, hanging in large clusters from the upper portion of the stem. This, with the former, blooms during the spring months.—*Brazil*.

D. Stems erect, branching, fleshy at the base.

20. *B. homonyma*. Stems from two to three feet in height, enlarged at the joints, and forming a large fleshy base, from which the young shoots spring. Leaves oblique, about three inches in length, inclining to divide into four unequal lobes, smooth on both sides, and generally of a dark green colour. Flowers pure white, generally in threes. This resembles *B. parvifolia* in habit, but may be at once distinguished from that species by its much larger leaves, which are always of a very dark colour. It blooms during summer and autumn. Syn. *B. sinuata*.—*Brazil*.

21. *B. parvifolia*. This species in almost every respect resembles the preceding, except that the stems grow somewhat more erect and are less disposed to branch. The leaves are of the same form and colour, and only differ in being about one-third larger. The flowers individually are similar both in size and colour, suspended in little clusters varying in number from three to five blooms. This, with the former, may be kept in flower during the greater part of the year. Syn. *B. floribunda*, *B. semperflorens*.—*Cape of Good Hope*.

22. *B. dregei* grows from two to three feet in height, much branched and swollen at the joints, especially towards the base. Leaves oblique, about an inch in length, very unequally toothed, quite smooth on both sides, and of a delicate green colour, passing gradually into a purple towards the margin. Flowers white, generally in pairs, and large in proportion to the size of the leaves. Syn. *B. parvifolia*, *B. floribunda*, *B. semperflorens*.—*Cape of Good Hope*.

*E. Stems erect, branching, not fleshy at the base.**a. Leaves oblique, ovate, acute.*

23. *B. Fischeri*. Stems branched, from two to three feet in height, dark crimson, and marked with a few small white spots. Leaves oblique, about two inches in length, slightly toothed, dark green above, quite smooth, presenting a very silky appearance, bright crimson beneath, and singularly crossed with large green veins. Flowers blush coloured, very small, and generally in threes. It blooms in spring.—*Brazil*.

24. *B. rupestris*. Stems from two to three feet in height, small, but strong, of a brown colour when young, gradually becoming black, and resembling a bamboo in appearance. Leaves oblique, about three inches in length, waved at the margins, of a dark green colour, and beautifully marked on the surface with white silvery-looking spots. Flowers pink, generally produced in spring.—*Brazil*.

25. *B. acuminata*. Stems somewhat slender, from three to four feet in height, rising in great profusion from the bottom, quite smooth, and very little swollen at the joints. Leaves oblique, about three inches in length, rather narrow, and very unequally serrated. In general they are of a lively green colour, tinged with crimson, especially the veins beneath, which are thinly covered with white hairs, extending down the footstalks. Flowers pink, in clusters of from eight to twelve blooms, springing from the axils of the leaves, or the upper part of the stems. It continues to bloom through the whole year.—*Jamaica*.

26. *B. hirtella* resembles *B. acuminata* in habit. Stems from three to four feet in height, quite smooth, and slightly striated. Leaves oblique, serrate, from two to three inches in length, of a shining pale green colour, and hairy on both sides. Flowers almost white, in small clusters, generally produced towards the top of the stems. It blooms during the summer months. Syn. *B. acuminata*.—*West Indies*.

27. *B. Martiana*. Stems herbaceous, from three to four feet in height, a little swollen at the joints, of a pale green colour, and marked with a few short white streaks. Leaves oblique, from two to three inches in length, unequally toothed, and covered with a glaucous bloom. Flowers pink, generally in pairs, but in great

profusion. This very showy species blooms during the summer and autumn months. Syn. *B. diversifolia*.

28. *B. incarnata*. Stems about four feet in height, swollen at the joints, quite smooth, and marked with a few short white streaks. Leaves oblique, about six inches in length, dark green, waved at the edges, and thinly set with short hairs on the surface and margins. Flowers pink, in clusters of about sixteen blossoms, suspended on footstalks about four inches in length. Blossoms throughout the season.—*Mexico*.

29. *B. zebrina*. Stems strong, from three to four feet in height, channelled, of a dull crimson colour when young, and marked with a few pale green streaks. Leaves oblique, about six inches in length, bright green on the surface, beautifully marked with dark green shades underside; smooth and shining. Flowers pink, in clusters, suspended by rather short footstalks. Syn. *B. undulata*.—*Brazil*.

30. *B. Evansiana*. Stems herbaceous, from three to four feet in height, enlarged at the joints, which are of a bright crimson, in other parts they are of a pale green colour. Leaves oblique, from five to six inches in length, dark green on the surface, and red beneath. Flowers pink, produced in loose panicles, which continue in beauty from May to September. A common species often to be found in great perfection in the window of the cottager. Syn. *B. bulbifera*, *B. discolor*.—*China*.

31. *B. undulata*. Stems about three feet in height, gradually tapering towards the top, seldom branching the first year, of a pale green colour, quite smooth, and marked with short white streaks. Leaves oblong, from four to five inches in length, waved at the edges, pale green, smooth and shining on both sides. Flowers white, in large clusters, hanging down from the upper portion of the stems. It blooms in autumn.—*Brazil*.

32. *B. argyrostigma*. Stems from three to four feet in height, of a dull green colour, quite smooth, and marked with numerous narrow white streaks. Leaves oblique, about eight inches in length, dark green, quite smooth, and singularly blotched on the surface with silvery spots. Flowers almost white, produced in loose clusters, suspended by rather slender footstalks, generally from four to five inches in length. It blooms in spring and summer. Syn. *B. maculata*, *B. punctata*.—*South America*.

33. *B. odorata*. Stems about three feet in height, of a pale green colour, faintly striated, and tinged with crimson at the joints. Leaves oblique, about eight inches in length, bright green, quite smooth and shining, especially on the under side. Flowers pure white, in large clusters, suspended on rather slender footstalks, generally on the upper portion of the stems. Syn. *B. suaveolens*, *B. sinuata*. It blooms during the spring months.—*South America*.

34. *B. sinuata*. This is closely allied to *B. odorata*; the stem, leaves, and even the flowers appear to be very much alike in both species, and both bloom at the same season, but it differs from *odorata* in having the veins on the under sides of the leaves, and also a portion of the footstalks, slightly hairy. Syn. *B. odorata*.—*South America*.

35. *B. nitida*. Stems woody, long, and straggling, requiring a trellis to keep them up, and generally becoming bare at the bottom. Leaves oblique, from five to six inches in length, of a bright green colour, and smooth on both sides. Flowers pink, in clusters of from twenty to thirty blooms, suspended by footstalks about ten inches in length.—*Penang*.

36. *B. aptera*. Very like *B. odorata*, except in the stems, which are quite green, and apparently more disposed to branch. Leaves oblique, about six inches in length, quite flat and rather long pointed; of a bright green colour, smooth and shining. Flowers white, and produced in graceful clusters, similar to those of *B. odorata*. Like the preceding it blooms during summer and autumn.

37. *B. laurina*. Stems very strong, about four feet in height, branching, green when young, and marked with a few white spots. Leaves oblique, about two inches in length, beautifully serrated, dark green, and smooth on both sides. Flowers pink, in rather small clusters, but suspended in a graceful manner from the lateral branches. This, with the two preceding, blooms during the summer months.

38. *B. sanguinea*. Stems about three feet in height, of a dull crimson colour, and quite smooth. Leaves oblique, about six inches in length, dark green above, bright crimson beneath, and smooth on both sides. Flowers almost white, produced in clusters of from twenty to thirty blooms, suspended on footstalks from four to six inches in length. It blooms in summer and autumn.—*Brazil*.

39. *B. coccinea*. Stems from two to three feet in height, quite smooth, of a dull crimson colour, and marked with a few pale green streaks. Leaves oblique, about six inches in length, glaucous, and green on both sides. Stipules large, of a pale green colour, and membranaceous. Flowers bright scarlet, in loose panicles, rising from the axils of the leaves towards the top of the stem. Syn. *B. rubra*.—*Brazil*.

40. *B. ulmifolia* grows about three feet in height, branched, of a pale green colour, and thinly covered with short hairs. Leaves ovate, about three inches in length, serrate, pale green, and hairy on both sides. Flowers bluish coloured, in little clusters, suspended by short footstalks from the upper portion of the stem. It blooms during summer and autumn.—*South America*.

41. *B. castaneæfolia*. Stems branched, slender, somewhat swollen at the joints, of a dull green colour. Leaves ovate, about an inch and a half in length, serrate, pale green, and smooth on both sides. Flowers bluish coloured, borne on short spurs which are produced in autumn. Although this species flowers only in spring, and then not in such profusion as many others, still it possesses a neat habit, which renders it a desirable addition even to a small collection.—*Brazil*.

b. Leaves ovate, obtuse, often equal at the base.

42. *B. semperflorens*. Stems almost herbaceous, of a pale green colour, and between two and three feet in height. Leaves about two inches in breadth, nearly round, differing very much from the usual oblique form, bright green, smooth and shining on both sides. Stipules rather large, often adhering to the stem after the leaves have dropped off. Flowers pure white, in short panicles, rising from the axils of the young leaves. This is a very pretty species. Syn. *B. Hookeri*, *B. spathulata*, *B. grandiflora*.—*Mexico*.

43. *B. cucullata*. Stems from two to three feet in height, smooth, of a dark green colour, and slightly tinged with purple at the joints. Leaves oblique, quite blunt, from three to four inches in length, dark green, and smooth on both sides. Stipules very large, fringed, and of a pale green colour. Flowers resemble those of the preceding species, and it also keeps in bloom the greater part of the year. Syn. *B. spathulata*, *B. semperflorens*, *B. grandiflora*.—*Brazil*.

ARTICLE III.

ON VEGETABLE PHYSIOLOGY.

By J. TODD, DENTON GARDENS, LINCOLNSHIRE.

1. *The Roots of Plants.*

VEGETABLE physiology is that department of natural science which treats of the structure and constitution of plants. It considers every species of vegetable as an aggregation of nicely adjusted organs, each of which is designed for a particular function; and the changes produced by their mutual action, constitute what we call the vital principle, or life of the plant. Thus, for example, the root, stem, and leaves, are the chief organs of nutrition, and the flowers those of fructification; and so long as they remain subservient in the performance of their appropriate functions, the individual will continue to live, and possess the power of propagating its kind. Now as all plants that flourish beneath the gardener's fostering hand, are but so many beautiful combinations of these exquisitely-constructed parts, it follows that some acquaintance with VEGETABLE PHYSIOLOGY will prove of the greatest utility to every one concerned in the culture of a garden; as it furnishes correct knowledge of the structure of these several parts, and of their adaptation to certain definite purposes, as well as of their relative influence over each other, and of the influence of various modifying causes over the whole system.

Having made these prefatory remarks on this beautiful and interesting science, it now remains to detail its leading principles, and the method of reducing them to practice, and rendering them subservient in the ordinary management of a garden.

As the roots of plants are the chief medium through which they receive nourishment, some account of their structure, and of the curious and simple mode by which they effect their object, will occupy the remainder of this paper. The root may be defined to be, that portion of a plant which grows in an opposite direction to the stem; and differing from the latter in its remarkable downward tendency, and from its disposition to shun the light of day. So powerful, indeed, is this tendency to descend, "that no known force is sufficient to overcome it." The chief object of the root appears to be that of fixing the plant firmly in the earth, and of taking up a supply of moisture from the humid medium by which it is surrounded. It usually con-

sists of several ramifications, from the sides and extremities of which, without any apparent order or regularity, proceed an indefinite number of delicate fibrils with spongy points. Now these fibrils are the only true roots, and to their soft extremities (spongelets) is consigned the whole office of absorbing fluid; the more woody portions of the root merely serving as canals, to convey the fluid thus obtained to the upper parts of the plant. The roots generally pierce the soil in a downward or horizontal direction, according to the individual habit, but more especially in that course which offers the least resistance, and yields the greatest quantity of soluble food. Hence the propriety of *mulching* is by some gardeners called into question, because the richness of the mulching material, and the warmth produced by its fermentation, has a tendency to attract to the surface the young fibrils. And then upon the removal of the manure employed in the operation, their extremely succulent and tender tips become exposed to the influence of draught, &c., than which nothing can be more injurious, as it quickly destroys their absorbing power, and thus deprives the plant of its chief source of nourishment. It has been said that the fibrils are the only true roots, and that the feeding function is chiefly consigned to the lax tissue of their extreme points. That this is really the case, there can be no reasonable cause to doubt, or why should the success of planting depend so materially upon their preservation? it being a well-known fact, that subjects of any size, such as fruit trees, are invariably less prolific the first season after transplantation, than on the previous and ensuing years. Why these little spongelets should possess the power of absorbing moisture with great force, and of transmitting it to every part of the plant, is a curious question, and has given rise to many ingenious conjectures. But it has at length been satisfactorily answered by that clever French author, M. Dutrochet. If a small glass tube, having its end covered with a piece of bladder, be partially filled with gum-water, and then plunged into simple water, sufficient to wet the outside of the bladder, the latter will be permeated by the water, and the volume within the tube will continue to increase, so long as the density of the fluids on each side of the intervening membrane remains unequal. "But there is also a contrary current to less amount,—the interior fluid passing out to mix with the surrounding water." The first and more powerful of these currents is called endosmose (flow inwards), and the second and less

powerful, exosmose (flow outwards). The cause of their motion was by Dutrochet referred to galvanism; but it is now more generally believed to arise from "the attraction exerted between the particles of the different fluids employed, as they meet in the porous membrane." (Dr. Reid.)

"Now the conditions requisite for this action, are two fluids of different densities, separated by a septum or partition of a porous character. This we find in the roots. The fluid in their interior is rendered denser than the water around by an admixture of the descending sap; and the spongeole (or spongelet) supplies the place of a partition. Thus then, as long as this difference of density is maintained, the absorption of fluid may continue. But if the rise of the sap is due to the action of endosmose, there ought also to be an exosmose. This is found to take place; for if a plant is grown with its roots in water, the fluid surrounding them is soon found to contain some of the peculiar substances they form, and which are contained in the descending sap: thus a pea or bean would disengage a gummy matter; a poppy would communicate to the water an opiate impregnation, and a spurge would give it an acrid taste.

"Thus we see how beautifully and how simply this action, extraordinary as it seems, is accounted for, when its whole history is known, on principles which operate in other departments of nature." (Dr. Carpenter.)

From this it must appear obvious to every one, that to keep plants in a healthy state, the conditions of endosmose and exosmose must be carefully maintained. Thus in the case of bulbs, maturing and at rest, and of plants cut down in the autumn, such as Pelargoniums and Fuchsias, the actions of the leaves being destroyed, the fluid, rising by the force of endosmose, must gradually subside, and the plants languish into a state of semi-vitality, till such time as genial warmth shall expund the fluid within their latent buds, and cause them to open and put forth new leaves. This is the reason why the application of water to plants thus circumstanced should be carefully avoided, excepting indeed a few special subjects, whose succulency is not sufficient to keep them from being shrivelled up.

ARTICLE V.

REMARKS ON OBTAINING DWARF BLOOMING PLANTS OF
NERIUM SPLENDENS.

BY A LADY FLORIST.

DURING the past summer, I flowered a few dwarf plants of *Nerium splendens*, by the following method :—In April I looked over my old plants, and discovered those shoots which had a leading bud of blossom; I then took a small garden-pot, knocked the bottom out, and carefully drew the shoot through, at about six inches below its crown; I notched the stem like a Carnation, putting a bit of soil to keep the tongue open. I then tied a piece of sheet-lead under the pot, to enable me to fill it with fine rich soil. I pressed the soil tight, and placed the plant in a hothouse for a month; the layers rooted speedily. I then cut it off the parent, re-potted into a larger pot, kept in the hothouse a fortnight longer, which was then the first week in June, and a most beautiful bloom succeeded upon all the plants, and they not more than a foot high. A free supply of water was given, whilst striking root, as well as subsequently. I beg to assure the readers of the CABINET that the plan is worth trying. I should be glad for this to be inserted in your next Number.

REVIEW.

Practical Hints on the Culture and General Management of Alpine or Rock Plants. By James Lothian, Gardener to W. A. Campbell, Esq., of Ormsary. To which is also appended a list of Alpines, Ferns, Marsh, and Aquatic Plants, &c. Illustrated with Coloured Plates.

THIS neat little book supplies a vacancy which it was very desirable should be occupied. The author has very judiciously given practical and useful instruction on the subject he treats upon, and the work is well worth possessing. We extract the following as a specimen :—

“*Situation.*—In treating of situation (the first thing to be observed in choosing a locality for the formation of the Rockery), one must be to a certain extent guided by the nature and style of the place, besides the taste of the proprietor. But again regarding the selection of a situation to suit the plants, it is on this account neces-

sary, that the site be neither shaded, nor yet too much exposed. Let it be an open, airy, but, at the same time, a sheltered place. It may adjoin the flower-garden, or be in the vicinity of the shrubberies and kitchen-garden, and should a suitable situation present itself along the walks or drives leading through the woods or pleasure-grounds it might form as desirable a site as any. It is, however, to be understood, that it is not meant to be exactly along the margin. A little off the walk would be more desirable, with a path leading to the Rockery.

“Perhaps too much attention cannot be paid to the choice of a proper situation ; for though these plants are natives of high bleak localities, where they enjoy the purest atmosphere ; and though in their native habitats, they endure a great degree of cold, still, when introduced into our gardens, and planted upon a Rockery, many of them will neither stand the winter frosts, nor yet bear the strong and sharp gusts of wind. The former, alternating with mild weather, keep a degree of vitality in their system, which they do not experience in their Alpine abodes, and thus they are more exposed to injuries from the latter.

“*The Rockery.*—In the formation of the Rockery, there are other objects to be attained besides the imitation of nature. The rock-work must be so constructed as to insure the preservation and successful growth of the plants. It may be made any size the projector chooses, and various forms may be adopted and indulged in ; but the plainer these are the better. And it should always be kept in view, to make it of the most fanciful structure, so as to show off the different kinds of plants, by which means it has the most effective display and appearance.

“There is no great difficulty, nor need any great expense be incurred in the formation of the Rockery, when the locality is near the sea-shore, as abundance of materials for this purpose are quite at hand, such as stones worn into different shapes by the waves, and some containing cavities, the use intended for which will be described hereafter.

“In making up the Rockery, the space it is to occupy in the first place, must be cleared of any rubbish thereon, the ground then levelled, and the ground figure properly marked out. Then the earth taken out of the pond may be laid down where marked ; but should this soil not be of a kindly nature for the plants, that is, should it be

of a cold clayey kind, when coming near the desired height, it will be well to mix up some good soil, and lay a thick stratum of it on the surface. The kinds of soil requisite will be presently described. Then proceed with laying the stones on properly and tastefully. Let a good many of those above referred to, as containing holes or cavities, be placed on the north side of the Rockery, for mosses, ferns, &c., while, at the same time, a good many of them may be distributed over the whole for *Sedum*, *Sempervivum*, *Saxifrage*, *Mesembryanthemum*, &c. Then let the crevices between the stones have some earth put in. The soils may be distributed as follows:—

“*On the North Side of the Rockery.*—On one part a mixture of black peat or bog-mould, leaf-mould, and sandy loam; in another, red gravelly or ferruginous soil; and along the base on this side, an adhesive or clayey kind. Perhaps the soil from the pond, and placed here in the formation, may be sufficient. In these varieties of soil, the larger ferns, *Osmunda regalis*, and Alpines, *Adoxa*, *Chrysosplenium*, *Marchantia*, &c., can be grown.

“*On the South and two ends.*—A mixture of light sandy loam and peat, containing a good deal of white sand, for, *Helianthemum*, *Iberis*, *Stachys corsica*, *Achillea tomentosa*, *Saxifraga*, &c.

“*On the top of the Rock-work.*—Very light loam, and a little peat and white sand, for such as *Thymus serpyllum*, *Saxifrage oppositifolia*, *Rhodiola rosea*, &c. The latter is common in various Alpine districts, and is found abundantly among the rocks on the south-west coast of Argyleshire.

“Along the margin of the pond, and on the Rockery, soil composed of sandy loam and a good deal of gravel (not too coarse); or, what suits better, where it can be had, stone, or rather slate crumbled away into a resemblance of soil. It is found plentifully on the banks of mountain streams. As to the soil suitable for the cavities in the stones, it will be described under the head Arrangement.

“After having distributed the soil, &c., petrifications, marcasite, or any other curious or rare specimens of minerals, may be placed here and there among the stones, wherever suitable; but at the same time, it is necessary not to interfere with the plants, or the situations they are to occupy.

“It is further desirable that around part of the rock-work (at the base) a border should be formed. Should your locality permit, per-

haps the south-west side may be as desirable as any. This border should be made up with peat, containing abundance of white sand and small white stones, for some of the *Erica* tribe, *Azalea procumbens*, *Arbutus alpina*, &c. These thrive most luxuriantly in this kind of soil. We have observed them half-way up Ben Nevis, and found there specimens of the latter plant in full fructification. Another portion of this border should be composed of sea-sand and gravel, with the addition of some peat well incorporated, for such as *Lithospermum maritimum*, *Glaux maritima*, &c., which are not by any means easily preserved, or cultivated in any other soil. Some large and curious stones may be placed here and there along the border.”

PART II.

MISCELLANY

OF

NOTES AND CORRESPONDENCE.

New or Rare Plants.

ABELIA RUPESTIS. A deciduous shrub, which has bloomed in the greenhouse at the Horticultural Gardens, but it is supposed to be hardy. The flowers are small, white, funnel-shaped, very sweet, and borne in racemes. The calyx is rose coloured.

ACHIMENES ILLICIFOLIA. We have bloomed this, and apprehend it to be a variety of *A. longiflora*, from which it differs in the darker colour of its flowers, and the broader ray of white around their centre. The under surface of the leaves too, are of a deep sanguineous hue, and their edges more deeply serrated.

ADENIUM HONGHEL. THE HONGHEL BUSH. Apocynæ. Pentandria Monogynia. (Bot. Reg. 54.) It is a hothouse shrubby plant, a native of the East Indies, found at Wallo and Senegambia, Delgoa Bay, &c. It forms one or two fleshy stems like those of a *Plumiera*, or some of the *Euphorbias*. It is a slow growing plant. The flowers are produced in heads at the ends of the shoots. Each blossom is an inch and a half across, flesh coloured with bright crimson edges, and a yellow eye. They are very handsome.

ÆSCHINANTHUS LOBBIANUS. MR. LOBB'S ÆSCHINANTHUS. Cyrtandracea. Didynamia Angiospermia. (Bot. Mag. 4260.) A native of Java, sent by Mr. Lobb to Messrs. Veitch's. It is a straggling branching shrubby plant, the stem and branches a deep purple colour. The flowers are produced in terminal corymbose heads. The calyx is one inch long, a rich shining purplish-black colour. The corolla is about an inch and a half longer than the calyx, of a brilliant scarlet, and the contrast with the dark calyx is strikingly beautiful. It is a most desirable plant, deserving to be in every hothouse.

ÆSCHINANTHUS RADICANS. A stove plant. The flowers grow in terminal clusters, tube-shaped. A dull red colour, with the limbs whitish, streaked with purple inside. It is an abundant bloomer, very showy. It is in Messrs. Veitch's collection.

AGNOSTUS SINUATA. A handsome evergreen woody erect plant, a native of New Holland. The leaves are usually about six to eight inches long, oblong. The flowers are produced in large panicles of twelve or more in each. A separate blossom is an inch long. Their prevailing colour is, when open, the most vivid orange scarlet; the segments are pale yellow at the tips and a shining black or brown colour at the base. The flowers are peculiarly singular in form and colour, very handsome, borne in profusion, and render it one of the most splendid plants that has been introduced. It is a greenhouse plant, and where a plant of its dimensions, three or four feet high at least, can be grown, it ought to be therein. It has been in this country several years, and in several collections, but appears only just now bloomed for the first time. It may be procured at a very reasonable price.

BARKERIA LINDLEYANA. DR. LINDLEY'S. Orchidaceæ. Gynandria Monandria. (Pax. Mag. Bot.) The flowers are produced in long spikes. Each blossom two inches in diameter. Sepals and petals a beautiful rosy-crimson. Labellum oblong, a little more than an inch long. The upper half rosy-crimson, with a striking white spot in the centre; the lower half is a deep crimson. It is very handsome.

BRASSAVOLA DIGBYANA. MR. DIGBY'S. Orchidaceæ. Gynandria Monandria. From Honduras, and has bloomed in the collection of E. V. Digby, Esq., at Minsterne, in Dorsetshire. The flowers are very large, sepals and petals five inches across, greenish yellow. Lip about three inches across, much fringed, yellowish-white. They are peculiarly sweet. It well merits a place in the stove.

CALYCOTOME SPINOSA. THE SPINY. Fabacæ. Monadelphia Decandria. (Bot. Reg. 55.) Synonyme *Cytisus Spinosa*. A pretty shrub, will stand the usual winters. It blooms most profuse, flowers a rich yellow. Has bloomed in the Horticultural Society's Garden.

CHIRITA MOONII. A new species raised from seed in the Kew Gardens, it has not yet bloomed, but in habit appears to resemble *C. Zeylanica*, and has obvate-acute leaves, about the size of those of that kind.

CLEMATIS SMILACIFOLIA. SMILAX-LEAVED. (Bot. Mag. 4259.) Introduced by Messrs. Veitch's from Java. The plant is a climber, extending to a great length. The leaves are large, each eight or nine inches long, and five broad. The flowers are produced in paniced terminal racemes, they are about an inch long; sepals reflexing quite back, they are of a glossy black; the numerous pistils are white and silky. It will make a fine conservatory or greenhouse climber.

COCHLEARIA ACAULIS. Found wild, according to Brotero, on the basaltic hills near Lisbon, and occasionally on the limestone formation of Estramadura. Desfontaines also met with it in Barbary. A beautiful rock plant for shady situations; its flowers are of a clear lilac, and the foliage is of a delicate green colour. It propagates itself by seeds, and by runners which throw out roots abundantly into the damp soil. It is a hardy little annual, growing in any rich garden soil, and blooming from April to October. It requires rather a moist situation.—*Hort. Soc. Jour.*

CYPRIPEDIUM IRAPEANUM. Irapean. LADY'S SLIPPER. Cyripedæ. Gynandria Monandria. The flower is a rich yellow, with slight spots, and two red blotches on the labellum. The figure here given is four inches across, but the flower usually grows to double the size. The plant is at present in the garden of the Horticultural Society. It is a noble species. Mr. Linden has discovered in Caraccas a species that has flowers from fifteen to twenty inches long; the petals are drawn out into narrow straps of such length.

DAPHNE FORTUNI. A small downy-branched shrub, sent by Mr. Fortune

from the Chusan Hills, Ningpo and Shanghai, and stated to be used by the Chinese in the same manner as the *Mezereum* in Europe. The flowers are pale bluish lilac, arranged in clusters of four upon branches scarcely beginning to put forth their leaves. They are rather more than an inch long, covered externally with soft, closely-pressed hairs, and divided in the border into four roundish, oblong, obtuse, uneven lobes. No species yet described approaches very nearly to this, which has been named after its enterprising discoverer. The seeds being unknown, it can only be conjectured that it belongs to the *Mezereum* division of the genus. It is a greenhouse, or perhaps half-hardy shrub, and grows freely in a mixture of sandy loam and peat. During summer an ample supply of water should be given, and air at all times when the weather is favourable. In winter it must be kept quite cool, in an airy part of the house; and being deciduous, very little water will be required during the absence of its leaves. It may be propagated by cuttings of half ripe wood under ordinary treatment. It is a charming addition to our greenhouse plants, more especially since it appears to be well adapted for forcing.—*Hort. Soc. Jour.*

GARDENIA DEVONIANA. A native of Sierra Leone. It is a vigorous shrubby hothouse plant, much in the way of *G. Stanleyana*. The flowers are produced solitary, and before expansion are ten inches long, pure white at first, but gradually change to a pale yellow. At first they have much the resemblance of a long-tubed white lily. It has bloomed in Mr. Glendinning's collection at Chiswick.

GOMPHOLOBIUM VENUSTUM. GRACEFUL Leguminosæ. Decandria Monogynia. (Bot. Mag. 4258.) A native of South Australia. A dwarf shrubby plant, branching freely, and blooming profusely. The flowers are produced in terminal corymbose heads, of a very rich rosy-purple colour. It is a most lovely plant, deserving to be in every greenhouse. It is in the collection of Messrs. Lucombe and Pince, of Exeter.

LYCHNIS, spec. Sent to the Horticultural Society by their collector when in China. It possesses an upright shrubby habit, and produces a branching spike of flowers about two feet high. Each bloom is about an inch and half across, of a delicate bluish colour, and the petals being irregularly lacerated at the ends, gives it a pretty appearance.

NIPHEA RUBIDA. An interesting plant with oval crenate leaves, the ribs underneath, and stalks of which are densely covered with deep red hairs, whilst the upper surface is hoary. The flowers are white. It has bloomed in our collection.

NYMPHÆA DENTATA. TOOTH-LEAVED LOTUS. Nymphæaceæ. Polyandria Monogynia. Introduced from Sierra Leone by Messrs. Lucombe and Pince. It is a very fine stove aquatic. Calyx green with white streaks. Petals white. Stamens and stigma rich yellow. Each flower is six inches across. It is a very noble species.

PILUMNA LAXA. LOOSE-FLOWERED. Orchidæ. Gynandria Monandria. (Bot. Reg. 57.) Mr. Hartweg found it in the woods of Popayan. It has bloomed in the collection of the Horticultural Society. The flowers are produced in loose racemes. Each blossom two inches across. Sepals and petals pink, green, and white in stripes. Labellum white. A new genus, very interesting.

PLATYLOBIUM FORMOSUM. BEAUTIFUL FLAT PEA. Leguminosæ. Diadelphica Decandria. A native of New Holland. It is a very handsome flowering greenhouse shrubby plant. The flowers are produced in profusion; each blossom an inch across, a rich deep yellow with a red eye. The back part of the petal is margined with deep crimson. It blooms through spring and summer, and ought to be in every greenhouse.

PLEROMA ELEGANS. THE ELEGANT. Melastomaceæ. Decandria Monogynia. (Bot. Mag. 4262.) Sent from the Organ mountains by Mr. Lobb to Messrs. Veitch's. A stove shrub, four feet high. Flowers freely, produced terminal. Each blossom $2\frac{1}{2}$ inches across, a most rich velvety-purple. A very splendid flowering species. A valuable acquisition to any hothouse.

PLUMBAGO ZEYLANICA. Received from Sir Henry Fletcher, and collected in the neighbourhood of Jellallabad in 1843. A twining plant, with dull green striated branches; in no apparent circumstance different from the Ceylon Leadwort or from the climbing Leadwort of South America, neither of which seems to be distinguishable. The flowers are pure white, with a little point at the end of the lobes of their corolla. Its northern station appears, however, to indicate some constitutional difference, and this in fact occurs; for, as far as the experience has gone, the plant is probably hardy enough to withstand the winter if planted against a south wall. It is rather pretty, likely to bloom freely, and prove hardy, or nearly so.—*Hort. Soc. Jour.*

SCUTELLARIA, spec. In the Kew Gardens has just bloomed this new species, which exceeds in the rich colour of its flowers even *S. splendens*. It is a very brilliant plant, and will probably be called *S. coccinea*.

NEW PLANTS NOTICED AT KEW GARDENS, &c.

The Royal Gardens at Kew Palace.—**GLOXINIA TUBIFLORA ROSEA.** This is a valuable contrast with the white one, both bloomed beautifully.

BEGONIA FUCHSIODES. Quite new, not yet bloomed.

GARDENIA BOWEIANA. Quite new, not yet bloomed.

HOYA MOLIB. Quite new, not bloomed.

ECHITES MELALEUCA. Quite new, not bloomed. The leaves have pure white midribs.

VERNONIA AXILLARIS. The flowers are produced in corymbose heads, blue at first, changing to nearly white.

ABUTILON GIGANTEA. Not bloomed; said to be fine.

GLOXINIA CITRINA. Tube flesh colour outside and nearly white inside; the mouth having a beautiful rosy circle. Very pretty.

BEGONIA RAMENTACEA. Not bloomed.

BEGONIA UNDULATA. Flowers pure white, hanging, in pendent spreading panicles. Very pretty.

CHIRITA ZEYLANICA. The flower in form much like a Gloxinia, and about half the size of one. Outside of the tube and mouth blue, inside the tube white. Very pretty.

ACHIMENES ILLICIFOLIA. Holly leaved. A new sort, not bloomed.

At Mr. Low's, of Clapton Nursery.—**SIPHOCAMPYLUS NITIDA.** New, not bloomed.

TORENIA. A new species. Flower $1\frac{1}{2}$ inch across; a deep blue.

LONDON HORTICULTURAL SOCIETY, Oct. 6.—Of Orchids there were several collections. Mr. Rae, gardener to J. J. Blandy, Esq., of Reading, sent the lovely lilac-flowered *Lælia Perrinii*, with deep purple-edged lip; *Cattleya Loddigesii*, and the rare *C. Aclandæ*, a beautiful species, but whose flowers are rather scantily produced; also the white-blossomed *Dendrobium formosum*, together with *Lycaste cruenta*, and the pretty little chocolate spotted, buff-flowered *Maxillaria Rollinsonii*. From the same collection were also *Miltonia candida*; the white-lipped *Zygopetalum rostratum*; the small white-blossomed *Epidendrum multiflorum*; *Oncidium papilio*; the white-lipped *Trichocentron fuscum*, and the chaste white-flowered *Phalænopsis amabilis*; a large silver medal was awarded. Another remarkable group came from Messrs. Rollisson, of Tooting. It comprised the bright orange-blossomed *Epidendrum vitellinum*, the rare *Warrea bidentata*, a species something resembling *W. tricolor*; *Camaridium ochroleucum*; the rather sought-for, but not very handsome, *Galeandra Baueri*; the red variety of *Rodriguezia secunda*; *Miltonia candida*; and a variety of *M. Clowesii*; *Phalænopsis amabilis*; the scarce *Oncidium ciliatum*; and the pretty *Demerara* plant, *Aganisia pulchella*; a Knightian medal was awarded. Other Orchids came from Messrs. Loddiges and Sons, consisting of *Miltonia candida*; the scarce *Stanhopea bucephalus*, which emits a pleasant odour something like *Friars' Balsam*; and the scarce *Dendrobium rhombeum*, a pretty species, having much general resemblance to *D. aureum*, but with smaller blossoms. The collection also contained a species of *Dendrobium* from Java, re-

sembling *D. Heyneanum*; the rare *Angræcum bilobum*, a pretty epiphyte with long pendulous racemes of white flowers, which are slightly perfumed; and *Oncidium incurvum*; a Banksian medal was awarded. From Mr. Redding, gardener to Mrs. Marryat, was a beautifully-bloomed *Odontoglossum grande*, for which a Banksian medal was awarded; and with it some heads of sweet Indian corn, for the production of which the late hot summer has been favourable. They make a very excellent article of food, boiled and dressed. From C. B. Warner, Esq., was a tall *Oncidium unguiculatum*, a new and distinct species, not showy, but having the merit of remaining long in flower, which was rewarded by a Banksian medal; and along with it a pot of Ginger, with reed-like stems, and oblong heads of flowers. Mr. Don, gardener to F. G. Cox, Esq., sent a group of Orchids, in which were *Gongora maculata*, with long drooping spikes of brown-spotted blossoms; the rare *Cattleya bicolor*, whose sepals and petals, being of a dull olive green, contrast well with the beautiful deep violet lip; *Trichocentron fuscum*; *Epidendrum lancifolium*, a species much resembling *E. cochleatum*, but readily known by its purple-lined regularly ovate sharp-pointed lip; *Angræcum caudatum*; and the rare, warm, brown-coloured *Houlletia Brocklehurstiana*, for which a Banksian medal was awarded. Mr. Dobson, foreman to Mr. Beck, sent a nice specimen of *Oncidium leucochilum*, *Galeandra Baueri*, and a lovely dwarf specimen of *Achimenes patens*, concerning which it was mentioned that it had been struck from leaves inserted in sand in June, potted off into small pots in July, and, after being well rooted, put into slate pans in August, thus offering a ready means of obtaining nice dwarf plants at this season; a certificate was awarded for the *Oncidium*. Messrs. Veitch and Son, of Exeter, received a Banksian medal for a new *Hoya*, named *campanulata*, producing a bunch of some 16 or 20 bell-shaped, waxy, cream-coloured flowers about the size of a shilling; although not to be compared with the old *H. carnosa*, as regards beauty, yet it forms a very excellent and pleasing variety. It was stated to have been sent from Java by Mr. Lobbs. The same nurserymen also received a Banksian medal for a fine specimen of *Æschynanthus Lobbianus*—the same plant which was exhibited at the Society's Garden Exhibition in July. Thus, in addition to its intrinsic beauty, it has the merit of remaining long in bloom. It was mentioned that bottom-heat had been found beneficial to this genus. Accompanying these was also a specimen of *Fuchsia serratifolia*. The species having got the name of being a shy bloomer, this plant was sent to prove that, under proper treatment, it may be induced to flower well—as the plant exhibited certainly proved; although somewhat shaken by travelling. Messrs. Veitch attribute its not flowering well with some to arise from their growing it too freely, by putting it in too rich soil, and giving it too much pot-room, and also to giving it too much heat. It has been proved that small pots, common garden soil, and exposure to the open air from May is the best mode of growing it. It also is said to thrive and flower well planted out in the common soil of the garden. Of Dahlias there were beautiful collections from Mr. Cutter, of Slough, and Mr. Turner, of Chalvey, in whose group were several seedlings of 1845. A seedling of the same year, named *Demosthenes*, was also sent by Mr. Maher, of Fifield, Berkshire; and, finally, a beautiful collection of autumnal Roses was produced from the nursery of Messrs. Paul and Son, of Cheshunt. Specimens of potatoes were sent by Mr. Barnes, of Bicton, to prove that insects are the cause of the prevailing disease; and Mr. Ayres, of Brooklands, again showed a sample of his new bast from Cuba.—From the garden of the Society were *Epidendrum ceratistes*, a species introduced by Mr. Hartweg; the flowers are very like those of *E. selligerum*, and are rather sweet-scented; *Oncidium leucochilum*; immense masses of the old *Achimenes coccinea*; and *Sedum Sieboldii*, the latter of which is always brought at this season. From the same collection was also a plant of *Batatas Jalapa*, a Mexican perennial, having a great tuberous root, which appears to be one of the kinds of *Jalap* formerly used in medicine, and quite distinct from the *Ipomœa macrorhiza*, of Michaux, which has been confounded with it, and whose root, which weighs, it is said, 50 or 60 lbs., is eatable. It is a climbing plant, like a *Convolvulus*, with handsome large rose-coloured flowers and deep green leaves. It has been long lost to our gardens, and as it is an object of considerable beauty, its re-introduction is a matter of

some importance. From the same collection were also cut flowers of *Buddlea Lindleyana*, one of the first things Mr. Fortune met with in the Island of Chusan, and which was thus proved to be a really handsome object. It has, however, hitherto hardly realised the expectations formed of it, which may be partly owing to two circumstances; it has been treated much too kindly—too much heat and rich soil causing it to grow over luxuriantly, and consequently to produce few flowers. It has been found that the plant requires age to flower well, and with these two requisites, age and rather poor soil, we imagine it will prove itself to be (as it has certainly done in the Society's garden) one of the very best autumn flowering shrubs we possess; for its large racemes of deep lilac flowers are very handsome, and, produced in sufficient abundance, produce a magnificent display. Along with it were blooms of Mr. Fortune's *Anemone japonica*, from the open border, to which the plant promises to become a very important addition, for at this season, when our autumn flowers begin to disappear, this is just coming into beauty. Blooms of *Torenia concolor* (another of Mr. Fortune's plants) were also exhibited, whose lovely blue colour renders the plant a very charming object. Being a native of marshes, it will, however, probably not succeed well in a dry situation.

ON HARDY HEATHS.—Observing that a correspondent requests a list of those kinds of Heaths that will flourish in the open air in this country, and being an equal admirer of that very interesting and beautiful genus of plants, I forward you the list of those I cultivate, most of which I have grown for several years. The only mode of treatment I find they require is, to give a sandy peat and loamy soil, well broken, and to plant them in some place where they may be protected from strong winds, some of the kinds being very brittle. I am not aware where the whole of the kinds may be procured, but if not to be found in any single nursery, a nurseryman will generally apply to others to furnish him with what he is deficient in. I have procured mine by noticing the sorts grown in the gardens and nurseries which I occasionally visit, and ordering them at the time; and I always, when the season was suitable, had them taken up in my presence, by which I secured the sorts correctly. I have planted my stock, amounting to upwards of 500 plants, upon a sloping bank, and in one general mass, and it has a very pretty appearance at all seasons, but particularly so when in blossom. Some of the plants form bushes a yard in diameter. I am very desirous to see this pretty tribe of plants more generally cultivated, particularly in masses. I am sure it will give the greatest satisfaction to those who adopt it.

HARDY HEATHS.

Erica arborea	Erica tetralix alba
— — stylosa	— — carnea
— — australis	— — umbellata
— — — superba	— — vagans
— — carnea	— — — alba
— — — præcox	— — — pallida
— — ciliaris	— — — tenella
— — cinerea	— — — viridipurpurea
— — — alba	— — — vulgaris (calluna)
— — — atrosanguinea	— — — — alba
— — — carnea	— — — — aurea
— — — monstrosa	— — — — coccinea
— — — rubra	— — — — decumbens
— — mediterranea	— — — — flore pleno
— — minima	— — — — spicata
— — multiflora	— — — — spuria
— — ramulosa	— — — — tomentosa
— — stricta	— — — — variegata
— — tetralix	

CLERICUS.

ON *DAPHNE CNEORUM*.—This pretty little hardy shrub, growing from six to eight inches high, is an excellent one for forcing during winter. It blooms very profusely, and its lovely rosy-pink flowers are very beautiful. Plants can be had very cheap. Several of the *Andromedas*, white and pink species, are also very suitable and beautiful. The *Gaultheria procumbens*, a little dwarf shrub, with its lovely pendent flowers, is also very interesting and pretty. To these the *Kalmias* ought to be added.

ON GARDENING IN SWEDEN.—The taste for gardening is much on the increase in Sweden; and the gardens are improving, notwithstanding the drawbacks occasioned as well by the climate as by the want of communication and difficulty in procuring novelties, which they can scarcely obtain but from Booth's, of Flottbeck. In the neighbourhood of Gottenburgh several neatly kept and pretty gardens, especially at the pretty village of Oergrüder, are among the many indications of the increasing prosperity of the town; and the space covered by the soil taken from a new canal making in the town has been laid out in public promenades with clumps of flowering shrubs. On our way here, and in the excursions we have made, many of the country seats we have passed appeared to have gardens of some extent, often with green and hot-houses, and generally with gravel walks made in the woods. Many of these seats or chateaux, in which the upper classes in Sweden generally spend their summer, are beautifully situated, and the variety of forms assumed by the low-wooded granite rocks, and the great abundance of lakes of all sizes and shapes, give great scope for laying out picturesque grounds; although to a traveller, after seeing hundreds of miles of the granite rocks and Pine woods, the country has rather too much of sameness. At Upsala we saw the house and garden where Linnæus lived and grew the plants marked in his herbarium as H. U., or Hortus Upsalensis, but it no longer belongs to the family; the old greenhouses, stone buildings with large windows, are converted to other purposes, and the only relics of Linnæus there consist of some trees, especially a black Poplar known to have been planted by his own hands. The present Botanic Garden, surrounding the Museum of Natural History at the back of the governor's palace, just out of the town, was laid out shortly after the younger Linnæus's death. The outer garden is pretty well kept, and is laid out as an ornamental promenade, with thick shaded walks, flowering shrubs, &c. The great vigour of vegetation shows the richness of the soil, although neither that nor the climate are said to be near so good as on the other side of Upsala. The tall Larkspur (*Delphinium elatum*, I believe, or *exaltatum*) looks more like a bush than a herbaceous plant, and forms tufts 7 or 8 feet high, with at least 20 to 30 of its handsome spikes in flower at once. *Gaillardias* were much finer than with us. *Tagetes sinuata* (Bartl.), a plant not cultivated I believe in England, is a pretty species, and amongst the shrubs there is a good deal of the *Caragana* forming very thick tufts or hedges now out of flower, but from the very great quantity of seed pods must have been very full, and they say it is then very handsome. It is a much neater growing shrub than our *Colutea*. The botanical part of the garden, properly so called, disappointed me at first. There is a considerable extent of glass, old greenhouses, pits of various sizes, and more modern and light span-roof houses, but looking untidy and out of repair, and the garden at first appeared to have more weeds than anything else, but upon going through it the collection of plants appeared to be really considerable. Amongst those in flower, *Goodenia grandiflora*, which I do not recollect in our collections, was very handsome.—*Gardeners' Chronicle*.

Floral Operations for November.

All greenhouse plants should have a free supply of air admitted, except when it is frosty. The plants should not be watered in the evening, but in the early part of the day, so that the damps may be dried up before the house is closed, as they are, during the night, prejudicial to the plants. The soil in the pots should frequently be stirred at the surface, to prevent its forming a mossy or very compact state. The plants must not be watered overhead. *Luculia gra-*

tissima is the finest ornament for the greenhouse and conservatory, now and through the winter.

The plants of the Cactus that have been kept in the open air during the summer may be brought to bloom successively by taking such as are desired to bloom immediately into the heat of a forcing pine-house. Other plants, to bloom afterwards, should be kept in a greenhouse protected from the frost. Any shoots still growing, break off the end to check it.

Plants of the Calceolaria that have been grown in the open borders during the summer months, and now taken up and potted, should be kept in a cool frame, or cool part of the greenhouse, being careful not to give too much water: just sufficient to keep the soil moist will only be necessary. Offsets will be found rooted; take them off and pot them.

Dutch bulbs, &c., may be successfully planted this month. See articles on best mode of the culture of each, in former numbers of the CABINET. Many persons who take a delight in growing some showy Hyacinths or other bulbous plants for adorning a room or window, &c., in winter or early in spring, have been frequently disappointed by the abortiveness of some and weakness of others. This principally arises from the inability of the plant to develop itself with a rapidity equal to the quantity of moisture it imbibes, on account of its upper surface being acted upon too immediately by the atmosphere, &c.; hence arises the necessity of covering the bulb. That such is a fact is evidenced by the admirable and certain success of nearly every bulb, especially Hyacinths, that is covered with about six inches of old spent bark. This or some similar light material should always be used. Even bulbs intended to bloom in glasses we prefer starting in the old bark, and then transferring them to the glasses when the shoots are about two inches long. Where such covering is not adopted, it is of advantage to have the pots or glasses kept in a dark place till the shoots are two or three inches long.

Plants of some of the Chrysanthemums that are grown in pots and taken into the greenhouse will be found to have pushed a number of suckers. If the offsets are wanted for the increase of the kind, it is advisable to pinch off the tops, so as to prevent their exhausting the plant, to the weakening of the flower. If the flower-buds are thinned out freely, it conduces to the increased size of those left. If the offsets are not wanted, it is best to pull up the suckers entire. Attention will be required to watering, as the roots absorb much, if given; give manure water occasionally. If the plant is allowed to wither, it checks the flowers, whether in bud or expanded. So much do we admire this handsome genus of flowers, that we are fully persuaded their beautiful blossoms, exhibited in form and colour, will most amply repay for any labour that may be bestowed on the plants.

Dahlia seeds are best retained in the heads as grown, spread singly where they will not be liable to mould, and kept in a dry but not too hot a situation; being thus kept in the chaff, the small seeds will not shrivel, but be kept plump. The roots must be dried well before being put away, or will be liable to rot.

Fuchsias and greenhouse plants, intended to be inured to the open air, will require to have protection at the roots, and probably, for the first winter, over the tops too, by furze-branches, canvas, wicker baskets, &c.

Shrubs, deciduous or evergreen, may now be successfully planted. If in exposed situations, they should be secured to stakes.

Herbaceous border plants may still be divided and replanted.

Straw or reed hurdles ought now to be prepared for covering frames, &c., in the depth of winter.

Achimenes, withhold water from, till February.

Shrubs, &c. Winter bloom.—Such as are to bloom early should be prepared gradually, potted (if required), and be introduced into the house, pit, &c.: such as Roses, Honeysuckles, Jasmynes, Azaleas, Persian Lilacs, Carnations, Pinks, Rhododendrons, Ribes, Aconites, Cinerarias, Sweet Violets, Hyacinths, Lily of the Valley, Mignonette, Primroses, Stocks, Persian Iris, Crocus, Cyclamens, Rhodoras, Correas, Deutzias, Mezereums, Gardenias, Heliotropes, Scarlet Pelargoniums, Cactuses, Eranthemum (the blue), Justicia, Gesnerias, Narcissus, Tulips, &c.

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GARDENIA FLORIDA var. FORTUNIANA.

Floricultura, vol. 17

THE
FLORICULTURAL CABINET,

DECEMBER 1st, 1846.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I.

GARDENIA FLORIDA; VAR. FORTUNIANA.

THERE has recently been introduced into this country several splendid additions to this beautiful and much esteemed genus, and the one now figured is a very valuable acquisition. It was discovered by Mr. Fortune, the London Horticultural Society's collector, in the north of China. The particulars relative to it, as inserted in the Journal of the Horticultural Society, are,—

“ It is a greenhouse shrub. The common single and double varieties of this plant are known to every one. That which is now noticed differs merely in the extraordinary size of the flowers, which are nearly four inches in diameter, and in having fine broad leaves, sometimes as much as six inches long. It is one of the very finest shrubs in cultivation, and ranks on a level with the double white Camellia, which it equals in the beauty of the flowers and leaves, and infinitely excels in its delicious odour.”

ARTICLE II.

ON THE CULTURE OF THE CHRYSANTHEMUM INDICUM.

BY MR. WILLIAM CHITTY, STAMFORD HILL, NEAR LONDON.

THE cultivation of the Chrysanthemum is a subject upon which so much has been written, and well written too, that it may appear perfectly superfluous to add thereto, but as there are items of management in every cultivator's mode of managing this plant different to every other, and the kind of treatment I have adopted with them the last few years enabling me to produce nice neat and bushy plants, flowering in tolerable perfection, I am induced to send you the particulars for insertion in the FLORICULTURAL CABINET.

The latter end of March, or beginning of April, I select the strongest suckers from the old plants, and plant one in a 48-sized pot, using the richest soil, consisting of equal parts of foam, bog, well-rotted stable manure, and leaf mould. When I have put off as many as I have occasion for, I set them in a cold frame, and keep them close for a fortnight or three weeks, by which time most of them are well established in the pots. They are inured by degrees to the open air, they are then taken out and placed in an open situation until the pots are well filled with roots, which will be by the middle, or from that to the end of May; they are then shifted into the pots in which I intend them to flower, some into 24's, and some into 16's, according to the strength of the kinds, using the same kind of compost for them. I then plunge the pots up to their rims in a south border, about 2 feet 6 inches apart each way, which allows plenty of room for the plants to grow without drawing each other, and for performing the operations of tying, watering, &c., which they from time to time require. In this situation the pots soon become filled with roots, and protruding through the bottom of the pots the plants luxuriate with very great vigour. In order to keep the plants snug and bushy, continual attention to stopping is necessary, commencing with the plants when they are four or five inches high, and subsequently as often as they have made four or five joints till the middle of July, when I leave off stopping and let them run up for bloom. As soon as the flower buds are well formed, which with me is mostly about the last week, or last week but one, in September, I tie up the plants to neat sticks, and arrange them in the way I wish them to

flower. I have placed sticks around the sides of the pot, and so tied the shoots as to have flowers and foliage quite down to the rim of the pot ; but though the plants so arranged have a very neat and pretty appearance, they do not flower either so abundantly or fine as when the stems are trained upright. By the middle of October most of the sorts are showing colour, when they are taken up, giving them a twist round to separate the roots that have protruded, and placed in the greenhouse. The late blooming sorts are left out another week or two, or until there is a danger of their being injured by frost. Although when taken out of the ground the largest portion of their roots are without the pot, they seem not to suffer the least check, but when placed in the greenhouse go on expanding their flowers as though they had never been disturbed. By the above mode of treatment the dwarf sorts grow from a foot and a half to two feet, and the taller sorts average about three feet six inches in height, well furnished with branches, and mostly clothed with foliage nearly to the rim of the pot, and exhibiting throughout November and the first half of December an assemblage of beauty not to be surpassed by any tribe of plants whatever. So much do I admire this tribe of plants, that I have often said if I must confine my attention solely to one class of plants, it should be the Chrysanthemum. And certainly in the varied forms, from the modest appearance of the tassel-flowered varieties to the bold fronts presented by Princess Maria, and similar flowers, and in the exquisite colouring, from the purest white to the richest purple and crimson, there is sufficient to command the admiration of every lover of flowers. Would it not contribute to the extended culture of these plants if greater encouragement was held out by the Horticultural Societies for their exhibition. They are most commonly exhibited as cut flowers, but if they were to be shown as Pclargoniums and Calceolarias ; for instance, in pots 12 to the cast, or 24 to the cast, or what not, a sufficient number of competitors would be forthcoming to render a floral exhibition in November or December as interesting and attractive as at Midsummer. I hope the above remarks will be useful ; if the process be practised I am confident the results will prove satisfactory.

ARTICLE III.

ON DISPOSING PLANTS IN MASSES.

BY AMICUS.

THE system of disposing plants in masses, so frequently and ably advocated in this Magazine, is becoming very general, and certainly produces a much better effect than the tedious monotony of an indiscriminate mixture. In the practice, however, of this superior method, it should be remembered that the groups and masses ought to be considered as parts of the whole, and as such, should harmonize and unite with each other, with regard to form and colour. Without attention to this point, the several disunited and independent parts will no more form a gardenesque landscape, than the colours arranged on the painter's palette will of themselves form a picture. I have known more than one small garden spoiled by a disregard of proportion, the shrubs and flowers being disposed in groups of far too large a size. In such a situation, a single plant, or a group of two or three, must be considered to bear the same proportion to the whole, as much larger masses or groups bear in the case of a park. Although I approve, as I have said above, of the principle of placing different species in groups and masses, I think that there are cases in which, like all other principles, it may be carried too far. In a small flower garden, which I very much admire, I have seen a group, composed of myrtles and China roses, planted alternately in quincunx order, the larger plants being in the centre; and in my opinion, a better effect was produced than if the two species had been in separate masses; the rich green colour of the myrtles' leaves, forming a ground to the beautiful white of the mingled colour, and the associations connected with both, made an impression upon me which I shall not easily forget. In the same garden there is a group consisting of an acacia, the broader and more shadowy plumes of the sumach, and the pendulous clusters of flowers of the laburnum, composing a little picture of the most highly finished character.

Gardeners might find much instruction by an examination of cottage gardens, in many of which I have seen a degree of good taste that is not always found where there is more reason to expect it. In such gardens, it often happens that very striking effects are produced by a judicious disposition of plants of the most common description,

and I think it would be a very useful study to endeavour to imitate them with plants of more rare and choice species. I was once much struck by a particular effect, (not, however, of sufficient general interest for a place in your Magazine,) produced by a plant of the common hop; and it was not until after many trials that I could find a substitute for it among more choice plants; at last, however, I succeeded to my own satisfaction by means of one of the genus *Clematis*; the species I do not with certainty know.

In small gardens, nothing can be more displeasing than a want of neatness and high finish; it reminds me of a flower-painter of the last century who used the most dingy and sombre colours that he could find, saying that he imitated Raphael, and painted for posterity. In the case of a small garden, it should be remembered that, whatever may be the beauty of the design, constant attention, and the frequent removal of plants are indispensable; three or four years of neglect would leave nothing, either to posterity or the designer himself, but a tangled and matted thicket of such plants as might come off conquerors in the struggle for life, incident to want of sufficient space.

ARTICLE IV.

REMARKS ON THE HOLLYHOCK.

BY CLERICUS.

THE Hollyhock is an old acquaintance in this country, and one of the noblest decorations of the flower garden, whether exhibiting its magnificence in the garden connected with the Royal Palace or seen in gradation downwards to that of the humble cottage. It has long been much admired by myself, and having travelled much through Great Britain, I have been increasingly delighted in my journeyings through the country villages and the environs of our towns and cities to notice the general admission of it to the gardens, and further to observe the rapid improvement now made in the increase of fine varieties of good form and decided colours of distinction. Such are the merits of the entire class of kinds, that I think they deserve to be much more recommended and cultivated. In the improvement in character of the flowers, I observe a class is progressing, having the outer, or guard petals, of a fleshy substance, that is more firm than the flimsy poppy like texture of others.

These petals, too, are of even surface, wholly free from undulation or frilling, and the edges are entire, not notched. The centre florets are regularly congregated, and in form a half globe, this also of a proportionate size to the diameter of the flower. Varieties possessing these properties are now dispersing through the country, and may be had of those nurserymen and florists who have taken a particular interest in selecting kinds, and planting them distant from those of an opposite character, and thus obtain seed, the produce of which furnishes varieties of like properties, and giving increase of colours.

It is desirable that more extended attention be paid to the selection of kinds, and raising new varieties in the manner above named, and this is just as readily done as in the case of the Dahlia, Asters, &c., and the result not less satisfactory.

A fine variety being obtained, it is readily increased and perpetuated by division. The first season it blooms, it ought not to be allowed to flower later than the end of August, but be cut down to about six inches from the ground in order to induce the production of side shoots, being headed down early, the lateral shoots become strong before the winter sets in, and thus survive its severity, whereas if allowed to bloom the entire period the plant would extend to, there would, in most cases of the best double kinds, only be the bare stem, or a late production of very small side shoots, which very rarely survive winter.

Seed should be sown either broad cast, or in drills; in April, when the plants are fit to transplant, they should be placed in rich soil, a foot or more apart, so that they are not choked hereafter by being overgrown.

The following season they will bloom, and then the selection may be made, heading down superb sorts, &c.

The time to increase those which were duly headed down is in the first or second week in March, unless the weather be very severe. In dividing the plant, the main stem and trunk of roots, is generally readily divided, taking care to have a shoot to each part so separated. When planted each should then be watered in order to settle the soil round the fibrous roots. By some this attention may appear to be too extended with the culture of the Hollyhock; the bare magnificence of the plant merits it, and much more so, to obtain, perpetuate, and cultivate successfully those varieties, having the superior properties of

form and distinctiveness of colour; every reasonable attention will be amply rewarded.

If seedlings of the first season are desired, such, though not bloomed and proved, may be obtained cheap.

The following eighteen varieties are offered either in plants or seeds, viz., orange, orange with dark crimson centre, black, rose, white, pink, red, light crimson, dark crimson, flesh colour, purple, sulphur, buff, variegated red and white, lilac, chocolate, slate colour, and brown.

I do trust my notice of this fine tribe will induce the readers hereof, wherever practicable, to a cultivation of it in a more proportionate manner according with its merits. As a back row plant, extending along a flower border, or around a flower garden, it stands unrivalled.

ARTICLE V.

REMARKS ON THE GERMINATION OF SEEDS.

ALTHOUGH this is the general method of raising plants, yet but little is generally known of the operations of nature in that process; I therefore forward the following remarks thereon, which will be of utility in raising exotic plants from seeds.

A perfectly formed seed may be considered a young plant, the vital energies of which are in a dormant or latent state, but ready to be excited to action when the proper stimuli are applied; and containing a quantity of matter in a state to be easily formed into proper nutriment, and applied to its support before it is able to provide for itself.

Seeds possess a great quantity of carbon. This substance, by its anti-putrescent qualities and hardness, prevents the seeds from undergoing putrefaction, and thus preserves them for a great length of time. All that is necessary for preserving seeds, is to prevent germination and putrefaction; for this purpose they must be carefully excluded from the action of heat and moisture, and other chemical agents. Seeds retain their vitality for a very long period—for hundreds, or even thousands of years. Seeds which have been proved to have been not less than one thousand eight hundred years old have germinated and produced thriving plants; and plants have appeared, on turning up the ground in some situations, the seeds of which are conjectured to have been buried a much longer period.

Four conditions are necessary for the process of germination : the presence of water, of heat, and of air, and the exclusion of light.

Water softens the integuments, and renders them capable of being burst by the swollen embryo; dissolves the nutritive matter contained in the seed, thus reducing it to a fit state to be absorbed for the nutrition of the embryo; conveys in solution nutritive particles from other sources; and furnishes two important ingredients in the composition of vegetables.

The air, by means of the oxygen which it contains, effects a chemical change on the farina of the seed. The oxygen combines with the carbon, and forms carbonic acid, which escapes; and thus the proportion of oxygen and hydrogen being increased by the expulsion of the carbon, the farina is converted into a semi-fluid substance, of a saccharine or mucilaginous nature, consisting of starch, gum, and sugar, well adapted for the nutrition of the plant in its infant state.

Heat always promotes chemical combination and decomposition, and thus assists the action of the water in dissolving the hard parts of the seed, and that of the air in its part of the process. Most probably heat acts as a general stimulus to the absorbents in the seed. Seeds cannot be made to germinate in very cold weather, except by the application of artificial heat. Too great heat also checks germination, because it destroys the vitality of the seed.

Light is unfavourable to germination, because it disposes to an accumulation of carbon in the seed, and a consequent hardening of the parts; or rather prevents the expulsion of carbon, and consequent softening of the parts, which, if necessary, they should be taken up and applied to the use of the plant. The seeds of red poppy and charlock remain in the ground and retain their vitality for a long period; hence they are frequent on new banks or newly upturned ground.

From the operation of these causes, it will be seen why seeds planted too deeply in the earth do not germinate. The air has not access to them, and therefore, from the want of that important stimulus, they remain torpid. Hence it is that earth newly dug up frequently becomes covered with weeds, the seeds of which soon germinate when exposed to the air.

Placing seeds at a certain depth in the earth excludes them from the access of light, which is so injurious to germination; insures a

supply of moisture, which would not remain with them were they placed at the surface; protects them from the wind, and from the attacks of animals; and enables the roots to take a firm footing in the soil.

When the germination has commenced, the seeds become soft, and swell, oxygen is absorbed, and carbonic acid disengaged; the particles of the covering of the seed lose their cohesion, and it bursts, to make way for the elongation of the embryo; the radicle elongates and descends, often attaining a considerable length before the gemmule has made any progress, and soon exercises its function of absorbing food; the cotyledons expand and become seminal leaves, which afford nourishment to the young plant in the first stage of its existence, by elaborating the sap, and wither when the proper leaves of the plant have unfolded, or remain under the surface, are gradually absorbed, and disappear; the gemmule, or first bud, gradually unfolds and enlarges; the leaves and stem appear, and we now have a young plant, a living being, able to provide its own sustenance, and to apply it to its increase, and to the formation of seeds to perpetuate the species.

In the operation of malting, the object is to convert the farina of the seed into sugar. For this purpose the seed is made to germinate, and this process is stopped (by heating) at that point at which it has been found there is the greatest quantity of saccharine matter in the seed. Were germination allowed to proceed further, the saccharine matter would be taken up for the nutrition of the young plants, and its nature completely altered.

ARTICLE VI.

ON CARNATIONS DROOPING AND DYING WHEN NEAR BLOOM.

BY A MIDLAND COUNTRIES FLORIST.

NOTICING in a former Number that an amateur Carnation grower had had the fatal disaster of some of his best kinds drooping and dying when near the period of blooming, I send the following particulars relative to the subject, and beg to inform him that it is caused by growing them too strong in the winter situation. The layers should be planted in light, but poor soil; for if they are planted in a rich compost in winter, they make a large quantity of roots, and become

very strong, throwing up stems for bloom ; which causes them to grow luxuriant, the stems become very pithy, and the sap cannot properly circulate. They then turn to a whitish green, and assume an unhealthy appearance, and when near blooming they droop, as if in want of water. I am persuaded, that if "Iris" will take and cut through the stems, he will see that they are full of pith, and quite dry, being destitute of sap. If "Iris" wishes to grow for competition, I should recommend him to grow one part of his plants in a very rich compost in order to get them of a very high colour. In doing this, he must always expect to find some that run to one colour ; but if he grows one or two of each kind on a bed that is of a poorish, but light soil, and if they should chance to run by being grown too rich, and in that case if any die by being so treated, he will see that he has saved the other which was grown on poor soil. Such is the way extensive cultivators of the Carnation do, or they would soon lose the greater part of their best sorts. It is to be regretted that those kinds that are of a high colour, are most subject to run—such as Cartwright's Rainbow, pink bizarre ; Walmsley's William the Fourth, scarlet bizarre ; Taylor's Festival, scarlet flake ; Bellerophon, purple flake ; Tyso's Princess Victoria, rose flake ; and Martin's Prince George of Cumberland, red picotee. Such as the above, and all that are of a high colour, similar to those named, should not be grown in too rich a soil.

ARTICLE VII.

OBSERVATIONS ON DRYING AND PRESERVING SPECIMENS OF FLOWERS.

BY FLORA.

ONE of the most interesting and pleasing attentions given to flowers, is that of drying and preserving specimens, and to a person anxious to become perfectly acquainted with botany they are found of much more avail than the most elaborate descriptions he can meet with. It is unnecessary, however, to enumerate all the advantages resulting from the possession of a collection of preserved plants, as they can be fully appreciated only by a person having made some advancement in the study of Botany, and who by them is enabled instantly to compare plants with each other, or with the descriptions of other botanists, and to them he can at all times refer, either for refreshing

his memory, or for instituting a more minute examination than he had previously made. A collection of dried plants was formerly called *Hortus siccus*, but now universally *Herbarium*. Various methods are in use for drying plants, but the following, being simple, efficacious, attended with little difficulty, and one that I have very successfully pursued for twelve years, induces me to offer it to the notice of your numerous readers.

The articles necessary for the accomplishment of the object in view are, a quantity of smooth, soft paper, of large size, eight boards of the same size, about an inch thick, of hard wood; four iron weights or pieces of lead, two of them about forty pounds weight, the others half that number. Or in place of these weights a number of clean bricks may be used, or, in short, any heavy bodies of convenient form. Along with these articles, a botanical box is necessary. This box is made of tin, and varies in size, from nine inches to two feet in length, according to the taste and avidity of the collector.

In gathering plants for this purpose, such as are smaller than the size of the paper are to be taken up roots and all. In many cases, portions only of plants can be preserved, on account of their size, and then the most essential parts are to be selected, including always the flowers; avoid all imperfect or monstrous shoots, but if the leaves are generally dissimilar on various parts of the species, as is frequently the case in herbaceous plants, then examples of both ought to be preserved. Plants to be preserved are to be gathered in dry weather, and immediately deposited in the tin box, which prevents their becoming shrivelled by evaporation. If gathered in wet weather, they must be laid out for some time on a table or elsewhere to undergo a partial drying. When roots have been taken up along with the stems, they ought to be first washed, and then exposed for some time to the air.

Suppose now that a dozen specimens are procured, over one of the boards lay two or three sheets of the paper, on the uppermost of which spread out the plant to be dried, unfolding its various parts, not however so as to injure its natural appearance. A few of the flowers and leaves ought to be laid out with particular care, and in many cases, those of *Ericæ*, &c., the specimen ought to be plunged for a minute into boiling water, which I have always found to prevent their leaves falling off. Over this specimen lay half a dozen

sheets of paper, on the uppermost of which lay another plant as before, and so on successively, until the whole are disposed of. A few sheets are then laid upon the last, and a board placed over all.

We may divide plants, viewed with reference to drying, into two classes, the one comprehending those which being thin, soft, and flexible, require little pressure to reduce them to a level, the other including such as being stiff and thick require much pressure. Supposing the above plants to have been of the first class, we lay upon the upper board one of the smaller weights. A series of more stubborn specimens being, in like manner, placed between other two boards, we lay one of the larger weights upon them.

Should more specimens be collected next day, they are disposed of in the same manner; and thus successively. At the end of two days generally, the plants first laid in are to be taken out, together with the paper about them. They are to be laid in fresh paper, which has been made very dry and hot before a fire, three or four sheets being placed between every two plants, and the whole put between two boards, with a weight over them. The second series is similarly treated next day, and so on. The paper from which the plants have been removed is to be dried for future use.

There will thus be four sets of plants: two in the first stage of drying, and two in the second stage. The plants of the second stage sets should be taken out about two days after they have been deposited, and after dry and hot paper has been put about them, returned to their places. The paper may thus be shifted until the plants be perfectly dry, when they are finally removed. Each plant is then placed in a sheet of dry paper, and along with it is deposited a slip of paper, on which are written the name of the plant, the place in which it was gathered, the time of gathering, the soil, and such other circumstances as may tend to elucidate the history of the species. Thus prepared, the plants are packed up in bundles, which gradually enlarge their dimensions, or increase in number till the end of the season.

It frequently happens, notwithstanding all possible precautions, that some plants, such as Orchidaceæ, fall to pieces in drying, in which case the fragments must be taken care of, so that they may be attached when the specimens are finally arranged. For this purpose procure a quantity of good stout writing or printing paper of large size,

folded into folio, which is to be stitched in coloured covers, making fasciculi of five or six sheets each. A quantity of fine large post or other writing paper, in half sheets, folio size, cut round the edges, is also to be at hand. Let a number of narrow slips of different lengths be cut from a piece of the same paper, and let some prepared isinglass or dissolved gum be in readiness, together with a camel-hair pencil. Take a dried plant, lay it upon a leaf of the fine cut paper, then fasten it down by means of a few of the slips, to which isinglass or gum has been applied, laid across the stem and some of the branches. Two or three slips are generally sufficient for a specimen. In this manner all the dried plants destined to form part of the herbarium are treated. Write the name of each species on the top of the leaf, and transcribe the notice respecting the place in which it was gathered, &c., at the bottom. Then arrange the plant according to system, and lay one between every two pages of the fasciculi. The fasciculi are formed into bundles, by being laid alternately up and down upon each other, as they do not lie conveniently when the heads of the plants are all at the top of the bundle, because the stalks and roots are thicker than the flowers. These bundles, consisting each of ten fasciculi, may be covered by pieces of pasteboard tied by strings. The collection is kept on the shelves of a cabinet made of pine wood, and to prevent depredations by insects, of which the little *Anobium castaneum* is certainly principal, it is only necessary to suspend two or three little bags, filled with camphor, in the interior. This will be found quite effectual, and is much more simple than the various other methods employed.

ARTICLE VIII.

ON INCREASING ROSES BY CUTTINGS OF THE ROOTS,

BY FLORA.

HAVING been advised to try the experiment of raising Rose trees by taking cuttings off the roots, I did so, and found it to succeed admirably. The mode I adopted was as follows:—The first week in March I took some of the long, thick, and fleshy looking roots of my English and French Roses, and cut them into pieces about three inches long. I then smoothened the surface of a border in front of a peach wall, upon this I laid the roots flat, at about six

inches apart; when the roots were placed, I covered them with fine sifted soil half an inch deep, gently beating it to the cuttings; I then laid four inches more of loamy soil well enriched with rotten cow-dung, a year old, giving the whole a good watering, and when dry, smoothed the surface over with the back of the spade. By the middle of May every cutting had sent one, [and some two strong shoots, and on examination, I found the soil I had covered the cuttings with, to be filled with a mass of fine roots; at this time, July 5th, the shoots are more than a foot high.

I have anxiously watered the bed, being in a sunny situation I found it got dry, more especially so, having the bed raised upon the old surface of the border, it would have been better to have sunk it so as finally to have it even with the surrounding soil.

[We have practised the above mode of raising Moss Roses, and similar border kinds, which have been found difficult to increase from cuttings of the wood or young shoots, and have never known it fail. The following February is the best time to take up the young plants, and remove them to beds for flowering, which they will do very freely if taken up with as many fibrous roots as possible. Well rotted cow-dung is the best manure for the Rose, being cooler than horse-dung, &c., a portion of it laid over the roots of the plants early in March, and either just pointed in or covered over with a little fresh loam, improves the vigour of the plants and increases their bloom.—CONDUCTOR.]

ARTICLE IX.

OBSERVATIONS ON WEIGELA ROSEA.

IN page 47 of our Magazine we made mention of this new syringe-like plant, which is stated to be a valuable acquisition, and not only as likely to flourish in the open air in this country, but very capable for forcing into bloom at an early season of the year, when every flower is hailed with so much gratification. Since our notice, the following particulars have been given by its collector (Mr. Fortune), and published by the Horticultural Society in their Journal, which we have much pleasure in transcribing.

Mr. Fortune states, "When I first discovered this beautiful plant it was growing in a mandarin's garden on the island of Chusan, and

literally loaded with its fine rose-coloured flowers, which hung in graceful bunches from the axils of the leaves and the ends of the branches. The garden, which was an excellent specimen of the peculiar style so much admired by the Chinese in the north, was often visited by the officers of the regiments who were quartered at Tinghae, and was generally called the Grotto, on account of the pretty rock-work with which it was ornamented. Every one saw and admired the beautiful Weigela, which was also a great favourite with the old gentleman to whom the place belonged. I immediately marked it as one of the finest plants of Northern China, and determined to send plants of it home in every ship until I should hear of its safe arrival.

“ All the gardens of the mandarins in the north of China are small, and as there is only room for a few plants, these are always of the most select and handsome description. Amongst my collections are several other plants which are common in these gardens, all of which are of great beauty and interest. Azaleas, Roses, Moutans, *Glycine sinensis alba*, *Viburnums* (more handsome than our common Gueldres rose), and various other free-flowering shrubs, make these gardens extremely gay, particularly during the spring and early summer months.

“ *Weigela rosea* is unknown in the southern provinces of China, and therefore I have every reason to suppose that it will prove hardy, or nearly so, in England; but, if not, it will make a first-rate greenhouse plant, and will take its place by the side of the beautiful Azaleas and Camellias of its own country. I never met with it in a wild state on the Chinese hills, and it is therefore just possible that it may have been originally introduced to China from Japan: this, however, is only conjecture. In the north of China, where the plant is found, the thermometer sometimes sinks within a few degrees of zero, and the country is frequently covered with snow, and yet in these circumstances it sustains no injury.

“ As this shrub has been liberally distributed amongst the Fellows of the Horticultural Society, some remarks upon its habits and cultivation will probably be acceptable. It forms a neat middle-sized bush, not unlike a *Philadelphus* in habit, deciduous in winter, and flowers in the months of April and May. One great recommendation

to it is, that it is a plant of the easiest cultivation. Cuttings strike readily any time during the spring or summer months, with ordinary attention; and the plant itself grows well in any common garden soil. It should be grown in this country as it is in China, not tied up in that formal unnatural way in which we frequently see plants which are brought to our exhibitions, but a main stem or two chosen for leaders, which in their turn throw out branches from their sides, and then, when the plant comes into bloom, the branches, which are loaded with beautiful flowers, hang down in graceful and natural festoons. It was a plant of this kind which I have already noticed as growing in the grotto-garden on the island of Chusan; and I doubt not that plants of equal beauty will soon be produced in our gardens in England.

“The possessors of *Weigela rosea* had better give it some slight protection during the next winter, by keeping it either in a greenhouse or frame until duplicates are made, when these can be planted out in the open air. The main object should be to enable the plant to ripen its wood well, for when this is done it will not only be more hardy, but it will also flower better in the following season.

“Its capability of standing out our English winters will be shown in the garden of the Horticultural Society next winter; but whether it prove itself a hardy or a greenhouse plant, it is without doubt one of the finest shrubs which have been introduced to this country of late years.”

REVIEW.

The Bee Keeper's Manual, or Practical Hints on the Management and Complete Preservation of the Honey Bee. By Henry Taylor. Third edition. London, R. Groombridge and Sons, Paternoster-row.

THIS is far the best practical publication on the subject that we have read. It is illustrated by numerous engravings. All who take an interest in the management of Bees, ought to possess the work. The book is in 12mo., 144 pages, and got up in a very neat manner.

PART II.
—
MISCELLANY
OF
NOTES AND CORRESPONDENCE.

New or Rare Plants.

BOIOPHYLLUM UMBELLATUM. UMBEL-FLOWERED. (Bot. Mag. 4267.) Orchidæ. A native of northern India, Nepal, and Khasiya Hills. It has recently bloomed in the collection at the Royal Gardens, Kew. The flowers are produced in an umbellate head of six to eight in each. Each blossom is about an inch across. Sepals and petals pale yellow spotted with deep red. Lip white, with purple spots.

CLEMATIS CRISPA. THE CRISP-FLOWERED. (Bot. Reg. 60.) Ranunculacæ. Polyandria Polygynia. Much confusion has taken place relative to the proper names of several species of Clematis. Dr. Lindley states the one now figured as *C. crispa* is correct. It is a native of North America, hardy, climbing. It blooms from May to November. The flowers are a very pale purple colour, leathery, and very fragrant. Each blossom is about an inch and a half across, the petals reflexing at their ends. Messrs. Maule and Sons, of Bristol, obtained seeds of it from North America.

CROTALARIA VERRUcosa. THE WARTED. (Pax. Mag. Bot.) Leguminosæ. Diadelphia Decandria. A native of the East Indies, introduced many years ago, but very scarce in this country. It flourishes in a warm greenhouse, and is beautiful when in bloom. It is an annual, blooming freely in large spikes. Each blossom is about three-quarters of an inch across. Corolla, vexillum greenish-white, streaked with pale blue; wings yellowish, white at the base; the rest blue, with the keel whitish, but yellowish at the point. It is well deserving a place either in the greenhouse or moderate stove.

ÆSCHYANTHUS MINIATUS. THE VERMILION. Gesneracæ. Didynamia Angiospermia. (Bot. Reg.) Introduced from Java by Messrs. Veitch. It is easy of culture, doing best in a warm, damp house, and grown in a basket or on a block of wood, as many of the orchidæ are done. It blooms abundantly; the flowers are of a brilliant vermilion colour, and when the branches are allowed to trail over the side of a basket, &c., it forms a carpet of scarlet flowers. Each blossom is about an inch long.

ÆGIPHILA GRANDIFLORA. GREAT-FLOWERED. Verbenacæ. Tetrandria Monogynia. (Pax. Mag. Bot.) Introduced into this country from Havannah. It is a robust evergreen stove shrub. The flowers are tube formed, each about an inch long, and produced in large corymbose heads, of a pale yellow colour, and blooming through the winter renders it more valuable. It is in the collection of Mr. Low.

GARDENIA DEVONIA. THE DUKE OF DEVONSHIRE. Cinchonacæ. Pentandria Monogynia. (Bot. Reg. 63.) Mr. Whitfield imported this new species from Sierra Leone. It is a vigorous hothouse shrubby plant. Each flower is single, having a slender tube, about seven or eight inches long, very similar to the long white-flowered Marvel of Peru. The mouth divides into a five-parted flower, somewhat bell-shaped, with the lobes recurving. The terminal portion of the flower is about four inches across, somewhat like a small white Lily. They are of a pure white at first, but change to a light straw colour. It has recently bloomed in the collection of Mr. Glendinning, at Chiswick Nursery.

ORPHIUM FRUTESCENS. THE SHRUBBY. Gentianacæ. Pentandria Monogynia. (Pax. Mag. Bot.) (Synonym, *Cheronia frutescens.*) An old inhabitant

of our greenhouses, and which, when grown properly, forms a dwarf branching evergreen plant, which blooms freely and becomes a most showy object. The flowers are produced in terminal branching heads, each blossom being near two inches across, of a pretty rosy-lilac colour.

POTENTILLA M'NABIANA. Mr. M'NAB's. Rosaceæ. Icosandria Polyandria. (Pax. Mag. Bot.) This variety was raised from seed by Mr. Menzies, gardener to H. Edwards, Esq., Hope House, Halifax. It is an hybrid, raised between *Patrosanguinea* and *Pleucochroa*. It blooms very freely; each blossom a little more than an inch across, of a bright scarlet, with an orange centre. A very pretty variety.

SCUTELLARIA INCARNATA. FLESH-COLOURED. Labiæ. Didynamia Gymnospermia. (Bot. Mag. 4268.) A neat and pretty greenhouse plant, a native of Mexico. It grows about half a yard high, branching. The flowers are produced in terminal many-flowered racemes; a deep rosy-purple tube, with a rich scarlet pendant lip. Each blossom about an inch long. It is a pretty plant for the greenhouse, and peculiarly so for the beds of the flower-garden during summer. It is in Messrs. Veitch's collection.

STENOCARPUS CUNNINGHAMI. Mr. CUNNINGHAM's. Proteac. Tetrandia Monogynia. (Bot. Mag. 4263.) Mr. A. Cunningham discovered this plant on the banks of the Brisbane River, Moreton Bay, in Australia. The plant is very suitable for a warm conservatory, and when in bloom is a most splendid object. It has bloomed, for the first time in this country, during the past summer, at the Glasgow and Birmingham Botanic Gardens. It is a handsome evergreen, with glossy foliage, and forms a small branching tree, three or four yards high, but no doubt it can be managed to flower in a much dwarfer state. The leaves are pinnatifid, from one to two feet long. The flowers are produced in large rays, several together forming a compound umbel. The blossoms are of a brilliant orange-scarlet, with large, striking, golden-yellow stigmas, which give a very beautiful contrast with the scarlet. At first, the three outer segments of each umbel of flowers become deflexed, hanging down around the stem, and the others stand erect, which, with the golden stamens, &c., compose a striking crown. It is singular and beautiful.

VANDA BATMANNI. CRIMSON AND YELLOW VANDA. Orchidacæ. Gynandria Monandria. (Bot. Reg. 59.) Discovered in the Molucca Islands; sent to this country by Mr. Cuming. It has bloomed in Mr. Bateman's collection the last summer. The flowers are produced in large erect spikes, a score or more of them in each. A separate blossom is two inches and a half across; the under side of a pretty rosy-crimson; the upper side fine yellow, beautifully and numerously blotched with crimson. A very magnificent species, deserving to be in every collection.

NEW PLANTS NOTICED, NOT FIGURED.

HOTA CAMPANULATA. BELL-FORMED FLOWERS. The leaves are not fleshy, as the previously introduced kinds are. The flowers grow from the axils of the leaves, on slender peduncles, in considerable quantities, and each separate blossom is at out three-quarters of an inch across, shining wax-like, greenish-yellow or cream-coloured. It is an interesting climbing plant. Messrs. Veitch possess it.

LIEBIGIA SPECIOSA. (Synonym *Tromædorffia speciosa*.) Messrs. Veitch received this plant from Java. It is a soft-wooded stove plant. It blooms profusely. The flowers are funnel-shaped, purple tube, sulphur-coloured throat, and white spreading flat limb. It is a very pretty plant.

RAPHISTEMMA PULCHELLA. (Synonym *Pergularia campanulata*.) It is a similar plant to the beautiful *Stephanotis floribunda*, the flowers being in most respects like those of the *Stephanotis*, but of a larger size, and a pink streak down the middle of each segment of the otherwise pure white flower. The flowers are produced in large racemes, numerously. It is a neat climbing plant. At Knight and Perry's, Chelsea.

ON A PIT SUITED TO PRESERVE MANY TENDER PLANTS IN DURING WINTER, AS VERBENAS, PETUNIAS, HELIOTROPES, CELSIAS, &c.—A dry pit, with facilities for excluding frosts, is indispensable, when the amateur's stock exceeds what he can conveniently protect in his dwelling-house. Choose the highest and best-drained portion of the garden, and let the pots, when stored away, be placed with their tops a few inches below the surface of the surrounding ground. The ordinary covering of glass and a mat will suffice till hard frosts set in, when the sides of the frame placed over the pit should be protected with a lining of dry straw, or other material, piled to the level of the lights. This, with an extra mat or two, will defy all frost. *Esperito crede.* But I must reiterate the necessity of giving air and light on every favourable occasion, and also of leaving the plants in darkness for a day or two whenever a thaw occurs. More plants are lost by exposure to solar light after frosts, than by any other means; and it is a fact that cannot be too extensively known, that frozen vegetation, even in the case of tender exotics, will recover itself in most cases, if allowed to thaw in the dark.

A. B.

ON RAISING ROSES FROM SEED, AND PRUNING THEM, &c.—A Constant Subscriber to the FLORICULTURAL CABINET, seeks for information as to the best method of raising Roses from seed.

Which kinds of Roses should be pruned in the autumn.

Isle of Wight, October 16.

The following particulars of the practice pursued by an extensive Rose grower and raiser of numerous good sorts, were sent us some time back, and will supply the information required.

“During the months of September and October I repaired to several first-rate nursery collections of Roses, in order to see which kinds, in each class of Roses, bore fruit the most freely, and ripened the earliest; and I then procured several of each class, which I planted at the proper season. These bloomed the following summer, and having a very extensive collection of nearly all the finest double Roses, I carefully selected farina from the best of the double flowers, and impregnated the fruit-bearing kinds therewith. The fruit-bearing flowers are generally not quite double, and I found it to be of use to thin out the larger trusses of flowers, so as to leave about half a dozen in a head of the plumpest buds.

“In the process of impregnation, just as the flowers to be impregnated are expanding, I cut away the anthers therein by means of a small pointed penknife or scissors, this prevents natural seedlings being produced from the kind. Where I had a specific design in the impregnation of any two kinds, after the operation had been effected, I tied a piece of fine gauze over the head of bloom to prevent access by bees, &c.

“In autumn, as soon as the seed was ripe, I had it gathered and placed in gauze bags, and so kept in the seed-vessel till required for sowing. Early in spring I sowed the seed thinly in boxes, and placed them in a gentle heat in a common frame, keeping the soil moist, not wet, till that portion which then pushes appears to have done entire for that season. When the plants can be safely transplanted, I have them carefully taken up, and planted in a rich soil and warm situation in the open garden, where they remain to bloom. The general quantity of the seed does not come up the first season, but remains to the second. I therefore have the boxes kept just moist, till the end of the summer, and then remove them into a dry place during winter. Early in spring place them in a gentle heat, and all the good seeds soon push forth plants, which are treated as before-named. Seed may be quite successfully treated by sowing in the open border, having it in a warm situation, and keeping it moist by covering the bed over with moss, &c. Two years are required here as in the former named instance, to get up the whole. During winter I usually spread dry leaves betwixt the plants that come up, and remain in the seed bed, so they be secured from injury by frost, being yet tender; this protection is removed at the spring. Moss or tanners' bark may be substituted for dry leaves where the latter are objected to.

“I have paid particular attention to crossing the most distant classes, as well as to obtain kinds which will bloom the longest period, and to get fine-coloured, fragrant, and very double Roses.”

The period when to prune the Rose, varies in some measure, as affected by natural causes in character, by the season, or situation where grown. What are termed "the Roses for the Summer Rose garden," whose blooming season is June and July, usually ripen their shoots, and their firmness resists the winter, and may safely be pruned in autumn. Those kinds denominated "the Roses for the Autumn Rose Garden," do not ripen their shoots in unfavourable seasons and situations, so perfectly as to justify their being pruned till the early part of March, but, as stated above, season and situation will have their influence in the matter.

Well ripened shoots may safely be pruned in autumn; unripe ones, not till March, for if cut in autumn, the shoots would imbibe at the surface of the wounds more wet than if left entire, and in proportion be affected by frost and destroyed, in which case a second pruning would be necessary in spring.)

Summer Roses.—Provence, Moss, Damask, Alba (white). Gallica, French, or Garden Roses. Hybrid Provence, Hybrids of Bourbon, Noisette, and Chinese. Scotch, Austrian, Sulphurea, Sweet Briars, and their hybrids. Climbing, Ayrshire, Boursault, Evergreen, Banksian, Multiflora, Rubifolia, Hybrid climbing as Garland, Queen, &c.

Autumnal Roses.—Macartney, Microphylla, Musk, Perpetual, Bourbon, Noisette, Chinese or Bengal, Tea scented, Berberifolia, Hybrid Perpetuals.

CONDUCTOR.

ON DESTROYING THE RED SPIDER.—During the past dry summer I have been tremendously pestered with the Red Spider on my greenhouse plants; they completely mastered my efforts. What plan am I to pursue in order to conquer?

AN AMATEUR.

[The following practical method succeeds. CONDUCTOR.]

"I have been in the situation I now hold for the last ten years, and previously in the garden of a nobleman for seven: in both places I have had the care of fruit and plant houses, and, as a matter of course, I have had to contend with the Red Spider. Twelve years back I had a number of Vines, hothouse as well as greenhouse plants, attacked most ravenously by these detestable little scoundrels; I was advised to procure some common sulphur, using a quarter of a pound to a house of about eight or ten yards long. The mode of application was as follows: the sulphur being put into a large bowl, a large painter's dusting-brush was dipped in water, and after rolling it round in the sulphur, I laid it over, like painting, the hot-water pipes and fire-flues, putting the least proportion where the pipes or flues were hottest. I chose a dull day for the purpose, and kept the house close all day, unless the sun broke out, when a small ventilation was given in order to allow the strong fumes to escape. This plan succeeded to expectation, and a repetition of this practice three times each year has kept my plants entirely free.

"It is a custom with me to have each plant-house white-washed early every spring; and with three houses I mixed the sulphur, using the same proportion, with the quicklime-wash, and thus applying them together. This has succeeded also.

"By the above attentions such plants as *Thunbergias*, &c., which are very liable to be attacked by the insect, are kept perfectly free and flourish vigorously. *Fuchsias* I find cannot bear the sulphur fumes, I therefore remove them when applying the sulphur, and keep the house closed. They might probably bear it if of a much lower degree of intensity."

NEW CHRYSANTHEMUMS.—If you consider my notes of these desirable for insertion in your miscellany, they are very much at your service. The kinds described are not all the new ones I have met with, but those which I consider to be acquisitions to our collection of this improving and highly ornamental flower.

Wandsworth.

J. SMITH.

Marshal Soult.—A very compact and closely-formed flower, not more than of medium size. The colour clear bright yellow. This flower was received from

France last season, under the above name, and this year it has again been forwarded, under the fresh name of Argo.

Emelie Labois.—A small flower of very pretty shape, rosy in colour, with white tips.

Queen Victoria (Freestone's).—This is the most distinct, new-coloured flower I have seen, being a clear bright lilac. It is also a good-shaped flower, and no grower should be without it.

Lady Hemlock.—Rather dull lemon-yellow in colour, but it is very distinct and remarkably well-shaped.

Cyclops.—This is something after the same colour as the last, of compact and good shape.

Madame Salter.—A full and fine-shaped flower, of middle size, and every bloom appears good. The colour is deep crimson-red.

Striatum.—A great novelty, the colour being white, beautifully pencilled and striped with crimson. The flowers are not large, but well-shaped, and produced in clusters.

Satyr.—Lemon colour, of good shape.

Bride.—Not a compact-formed flower, but quite double, and very beautifully coloured with shaded blush.

Orlando.—Light red, with fine broad petals; well shaped.

Endymion.—Light crimson-purple; compact form.

Sphinx.—Of similar form to the last, but more red in the colour.

Nancy de Sermet.—This is quite an anemone flower, and very pretty. The colour is pure white, except the inner petals, which are tipped with yellow.

Remarkable.—This also is an anemone-flowered kind, of very large size and exceedingly showy. The colour is crimson, the inner petals being tipped with gold.

GRAFTING ROSES.—I budded some *Roses* for the first time in my life last summer, and this spring (end of March and beginning of April) I grafted some. Of the budded ones about half the number grew, but none have flowered. Of those grafted this spring, the whole, except what were broken off, have flowered. One of the grafts (a *Ruga* on a *Boursault* stock) has had fifteen flowers. I have no experience in these matters, but I think, if this is wonderful good luck, it beats budding hollow.—*Gardeners' Chronicle*.

ON THE CLOTH OF GOLD AND TEA ROSES, &c.—I should feel very much obliged to you if you would give me any directions as to the blooming of the Cloth of Gold Rose. I have a very magnificent plant budded on the Dog Rose, which covers eight or ten square feet of my garden wall. It continues pushing strong shoots; but there is no symptom of a flower. Can you tell me whether this Rose has been flowered in England out of doors, or under what treatment?

I have a nice collection of Tea Roses, but cannot get them to grow or to flower. They are in pots sunk in the border. I keep them in a cold frame in the winter. Will you give me a few hints as to soil, &c.? I am much pleased with your **FLORICULTURAL CABINET**; it deserves much credit, and ought to be well supported. I think a list of the new florists' flowers occasionally would be acceptable, such as a description of the *Verbenas* of the year, the *Fuchsias* and *Petunias*, &c. Could a corresponding member, possessing extensively of the best, favour you with a review of the flowers of the season, it would save purchasers from imposition. I could have wished the *Penstemon gigantea elegans* had been seen by you before the plate was sent. I am rather disappointed in the plant, which is now in full flower; it is not as sufficiently distinct from *P. gentianoides coccinea* as is desirable.

ROSA.

[The Cloth of Gold Rose is a vigorous grower, and if in a very rich soil it is liable to produce what are termed gross shoots, and such rarely produce flowers. In order to induce it to bloom, the branches should be trained more horizontal; and by checking over-luxuriance of leading stems, it will promote the desired vigour of the laterals, and contribute to their floral fertility.

The lateral shoots should be so regulated as only to retain the proportion that will admit a free effect of sun and air upon them, so that they may be properly ripened and the buds duly perfected. It will, therefore, on some occasions be

necessary to thin them, and only retain what the circumstances of the plant suggest. It should be borne in mind that, in order to its blooming well, ripened wood is essential.

In the warm parts of England the Rose blooms well against a south-aspected wall; but in the northern and colder parts it is difficult to get it to succeed in the open air, and winter protection is requisite, and a glass covering over it in the early part of the season to further its fertility.

If the roots of Tea Roses, plunged in beds, are confined to the pots alone, they rarely succeed beyond just being kept alive, and make little progress. At the time of planting out the bottom of the pot should be broken out, and any internal obstruction to the roots be removed; then being plunged in the bed, and having good soil below the roots, they usually flourish satisfactorily, and bloom as desirable. Being retained in the pot, which surrounds the sides, the plant can be taken up at the close of the season without danger, and, when required, be re-potted into entire pots, and be afterwards placed in winter quarters.

CONDUCTOR.

LONDON HORTICULTURAL SOCIETY'S MEETING, *November*.—The plants produced on this occasion presented a fine display, especially the Orchids, among which were several magnificent specimens of *Cattleya labiata*. The best of these came from Messrs. Veitch and Son, and, although it had travelled all the way from Exeter, arrived in the finest condition. It had seven spikes, each with four or five large, handsome, purple flowers. It had been grown in the coolest part of the Orchid house, and had been allowed plenty of air during summer. Along with it were *Begonia fuchsoides*, a handsome bright red flowered *Fuchsia*-like species; a beautiful *Phalœnopsis amabilis*; and a new *Clerodendron* from Java, a noble-looking plant, with remarkably fine large leaves, from whose axils spring panicles about a foot long, covered with multitudes of white, or rather blush-coloured blossoms. A Knightian medal was awarded for the *Begonia*, *Cattleya*, and *Clerodendron*. Various Orchids came from Messrs. Loddiges, of Hackney, and among them the buff-flowered *Calanthe curculigoides*, *Catasetum saccatum*, one of the most extraordinary forms of the genus; *Cœlia macrostachia*, the brown-flowered *Oncidium crispum*, the beautiful little *Cattleya pumila*, *Lœlia Perrinii*, the handsome *Odontoglossum Inseayi*, together with *O. grande* and *candidum*; a tall *Oncidium oblongatum*, the curious looking *Liparis pendula*, a dark variety of *Cypripedium barbatum* and *Epidendrum auritum*. A Knightian medal was awarded for the three first-mentioned plants, together with *Oncidium oblongatum*.—Mr. Robertson, gardener to Mr. Lawrence, of Ealing Park, sent the beautiful *Lœlia Perrinii*, *Oncidium Cavendishii*, *Barkeria Lindleyana*, a variety of *Erica Banksiana*, and *Saccolabium denticulatum*, for which last a Banksian medal was awarded.—Other Orchids were sent by Mr. Rae, gardener to J. J. Blandy, Esq., among which were *Cattleya labiata*, in lovely condition; *Miltonia candida* and *Clowesiana*; *Cirrhopetalum Medusæ*, rather past its best; *Lœlia Perrinii*, the beautiful *Odontoglossum Inseayi*, *Crytochilum maculatum*, and an ugly, small, pale-flowered variety of *Oncidium ornithorhynchum*, showing that purchasers should be careful in obtaining the large dark-flowered sort.—From Mr. Webster, Earham gardens, were a beautiful *Cattleya labiata* and a cut spike of the Chinese *Renanthera coccinea*, for which a Banksian medal was awarded.—C. B. Warner, Esq., sent *Oncidium crispum*, the larger variety of *Oncidium papilio*, *Cattleya labiata*, *Lœlia Perrinii*, and *Phalœnopsis amabilis*; a certificate was awarded.—A famous *Cattleya labiata*, for which a Banksian medal was given, was produced by Mr. Moore, gardener to R. Hanbury, Esq., together with a specimen of *Mormodes aromaticum*, remarkable for its agreeable spicy odour. From Mr. Plant, gardener to J. H. Schröder, Esq., were *Lœlia Perrinii*, *Lycaste Skinneri*, *Angrecum bilobum*, the bright orange-flowered *Epidendrum vitellinum*, a colour so rare among Orchids, and a very handsome *Oncidium*, with a large pale yellow lip and brown barred petals: a certificate was awarded for the latter.—Finally, Messrs. Rollisson, of Tooting, sent a collection of plants, in which was a fine specimen of *Miltonia candida*, also *Oncidium barbatum*, two *Odontoglossums*, *Cattleya labiata* and *bicolor*, *Octomeria graminifolia*, *Epidendrum patens*, and a new transparent blush-flowered *Dendrobium*, from Java.—From Mr. Glen-

dinning, of Chiswick, was a new white-flowered Hoya, for which a certificate was awarded. It had clean-looking, shining, dark green leaves, and white flowers, which were, however, only half expanded, and therefore seen to disadvantage.—J. Allout, Esq., sent a basket of *Camellia* blooms; and collections of *Chrysanthemum* blooms came from the garden of E. Johnstone, Esq., of Stamford-hill, and from the nurseries of Messrs. Chandler and Sons, of Vauxhall, and Mr. Harrison, of Richmond. Amongst the latter were blooms of Prince of Wales, Maid of Athens, Claudius Ptolemy, Princess Alice, Bride, Emilie Labois, Mrs. Salter, Striatum, Goldsmith, General Marceau, and Argo.—From the garden of the Society was the noble mass of *Phalsnopsis amabilis*, obtained in Manilla, by Mr. Fortune, just coming profusely into blossom a second time, and promising to continue so all the winter; also two *Cattleyas*, *Lycaste Skinneri*, the brown-spotted *Miltonia Russelliana*; large, noble-looking bushes, just coming into bloom, of *Veronica speciosa* and *salicifolia*; and a small-flowered *Chrysanthemum*, sent from China by Mr. Fortune. It is called the Chusan Daisy, and is held in great repute by the Chinese.

Of Miscellaneous Subjects was a barometer from T. N. Parker, Esq., of Sweney Hall, near Oswestry, which was stated to be an improvement on the common barometer, which, from the nature of its construction, is liable to some inaccuracy; and from Mr. Hogg's pottery, Holloway, were what were called toilet stands, for small flower pots, and holed saucer-shaped plates, for placing in the bottoms of flower pots for drainage.

Floral Operations for December.

PLANT STOVE.—Roses, Honeyuckles, Jasmines, Persian Lilacs, Azaleas, Rhododendrons, Carnations, Pinks, Primroses, Mignonette, Stocks, Aconites, Persian Irises, Crocuses, Cyclamens, Rhodoras, Cinerarias, Hyacinths, Ribes, Sweet Violets, Ribes, Rhodora, Heliotropes, Narcissus, Tulips, Primroses, Lily of the Valley, Correas, Deutzias, Mezereums, Hepaticas, Gardenias, &c., required to bloom from January, should be brought in early in the present month. The plants should be placed at first in the coolest part of the house; never allow them to want water. Pots or boxes containing bulbous rooted flowering plants, as Hyacinth, Narcissus, Persian Irises, Crocuses, &c., should occasionally be introduced, so as to have a succession of bloom. Many persons who take a delight in growing some showy hyacinths or other bulbous plants for adorning a room or window, &c., in winter or early in spring, have been frequently disappointed by the abortiveness of some and weakness of others. This principally arises from the inability of the plant to develop itself with a rapidity equal to the quantity of moisture it imbibes on account of its upper surface being acted upon too immediately by the atmosphere, &c.; hence arises the necessity of covering the bulb. That such is a fact is evidenced by the admirable and certain success of nearly every bulb, especially Hyacinths, that is covered with about six inches of old spent bark. This or some similar light material should always be used. Even bulbs intended to bloom in glasses we prefer starting in the old bark, and then transferring them to the glasses when the shoots are about two inches long. Where such covering is not adopted, it is of advantage to have the pots or glasses kept in a dark place till the shoots are two or three inches long. Cactus plants that have been kept out of doors, or in the greenhouse, should occasionally be brought into the stove for flowering, which gives a succession. If any of the forced plants be attacked with the green fly, a syringe with diluted tobacco-water will destroy them. If the leaves appear bit, and turn brown (the effect of damage by red spider), a syringe of soap-suds at the under side of the leaves is effectual to destroy them. The glutinous substance remaining, not only kills those it is applied to, but prevents others returning there. The old *Kanthenum pulchellum* with its fine blue flowers, *Justicia speciosa*, *Gesneria Zebrina*, *Justicia pulcherrima*, and *Appelandra cristata*, are fine winter ornamental blooming plants.

GREENHOUSE.—As much fire as will barely keep out frost, will be necessary, and for the purpose of drying up damp arising from foggy nights, or from watering. All possible air should be admitted in the day-time, but mind to keep

the plants from damage by frost. The plants must not be watered overhead. Some of the Chrysanthemums that are grown in pots and taken into the greenhouse will be found to have pushed a number of suckers. If the offsets are wanted for the increase of the kind, it is advisable to pinch off the tops, so as to prevent their exhausting the plant to the weakening of the flower. If the flower-buds are thinned out freely, it conduces to the increased size of those left. If the offsets are not wanted, it is best to pull up the suckers entire. Attention will be required to watering, as the roots absorb much if given: give manure water occasionally. If the plant is allowed to wither, it checks the flowers, whether in bud or expanded. So much do we admire this handsome genus of flowers, that we are fully persuaded their beautiful blossoms, exhibited in form and colour, will most amply repay for any labour that may be bestowed on the plants. If seed be desired retain the blooming stems on the plants, and keep them for some time in an airy warm situation to perfect.

Dahlia seed is best retained in the heads as grown, spread singly where they will not be liable to mould, and kept in a dry but not too hot a situation; being thus kept in the chaff, the small seeds will not shrivel, but be kept plump. The roots must be dried well before being put away, or will be liable to rot.

Fuchsias and greenhouse plants, intended to be inured to the open air, will require to have protection at the roots, and probably for the first winter, over the tops too, by furze branches, canvas, wicker-baskets, &c.

If greenhouse plants require watering or syringing over the tops, let it be done on the morning of a clear day, when air can be admitted; and towards evening a gentle fire-heat should be given.

FLOWER-GARDEN.—Be careful to protect beds of what are technically called "Florists' flowers," should severe weather occur. Calceolarias that were cut down and repotted last month will require attention. Not to water too much, or they will damp off. Keep them in a cool and airy part of the greenhouse or pit. Whilst in a cool and moist atmosphere, the shoots will often push at the underside numerous rootlets. Where such are produced, the roots should be taken off and potted; they make fine plants for next season, and are easier propagated now than at any other season. Protect the stems of tender climbing Roses, and other kinds, by tying a covering of furze over them, that whilst it fully protects admits sufficiency of air for the well being of the plant.

Auriculus and Polyanthuses will require plenty of air in fine weather, and but little water. The like attention will be required to Carnations, Pinks, &c., kept in pots. Dahlia roots should be looked over, to see if any are moulding or likely to damage. Let the roots be dry before they are laid in heaps. Newly planted shrubs should be secured, so that they are not loosened by the wind. The pots of Carnations and Picotees should be placed in a situation where they may have a free air, and be raised above the ground. If they are under a glass case, it will be much better than when exposed to the wet and severity of the winter, or many will in all probability be destroyed. Where it is desirable to leave patches of border flowers undistributed, reduce them to a suitable size by cutting them round with a sharp spade. When it is wished to have a vigorous specimen, it is requisite to leave a portion thus undisturbed. Ten week Stocks and Mignonne, in pots for blooming early next spring, to adorn a room or greenhouse, must not be overwatered, and be kept free from frost. A cool frame, well secured by soil or ashes at the sides, and plenty of mats or reeds to cover at night, will answer well. Tender evergreens, newly planted, would be benefited by a little mulch of any kind being laid over the roots. During hard frosts, if additional soil be required for flower-beds upon grass lawns, advantage should be taken to have it conveyed at the time, so that the turf be not injured by wheeling. Pits or beds for forcing Roses, &c., should be prepared early in the month. Tan or leaves are most suitable, unless there be the advantage of hot water or steam. New planted shrubs of the tender kinds should have their roots protected by laying some mulch, &c. Suckers of Roses, &c., should now be taken off, and replanted for making bushes, or put in nursery rows; soils for compost should now be obtained. Beds of Hyacinths, Tulips, &c., should have occasional protection. Any roots not planted may successfully be done in dry mild weather till February.

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