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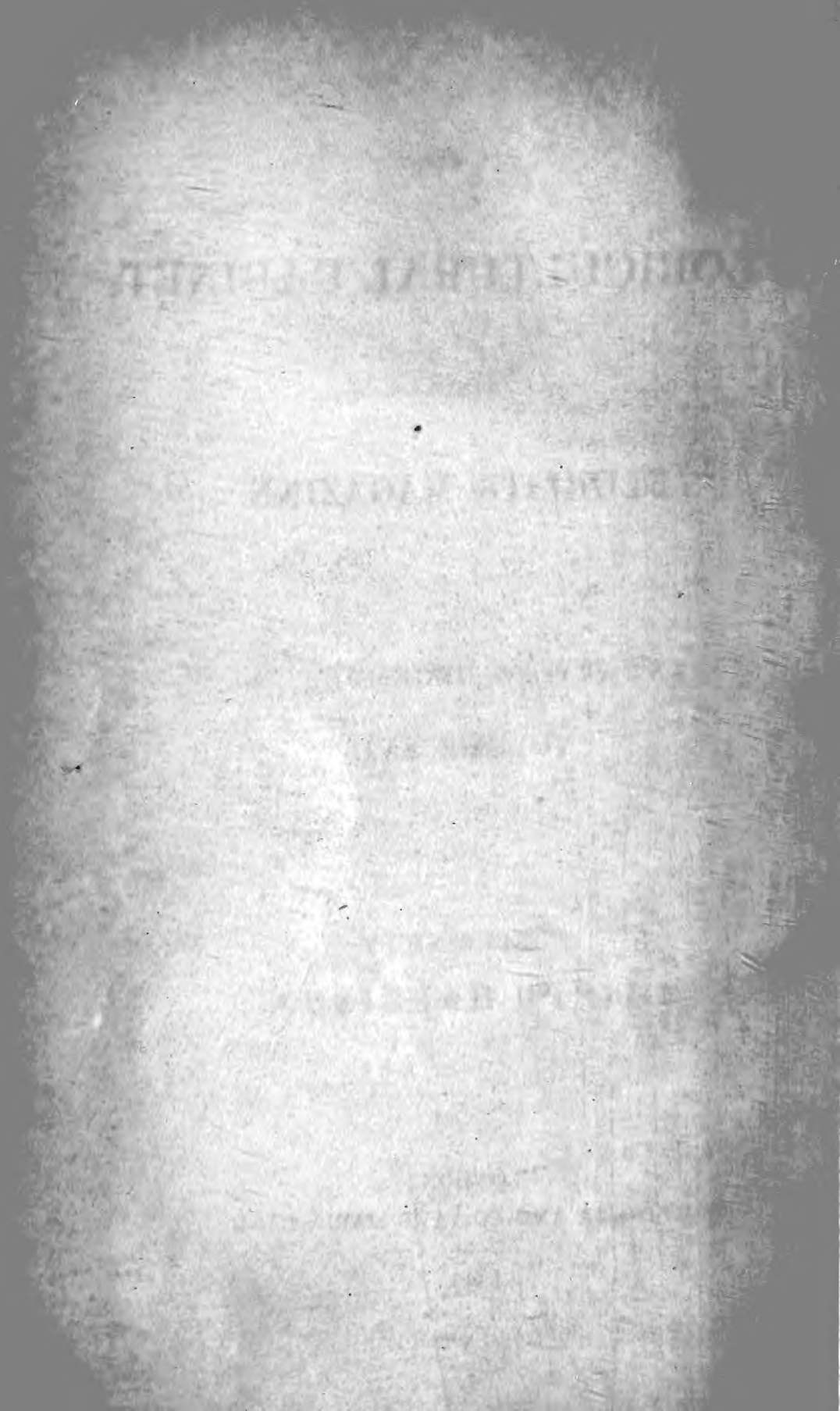
FLORICULTURAL CABINET



FLORIST'S MAGAZINE

1849.

C. Chabot, Lithog.



THE

FLORICULTURAL CABINET,



FLORISTS' MAGAZINE.

JANUARY TO DECEMBER, 1849.

VOLUME XVII.

CONDUCTED BY

JOSEPH HARRISON.

LONDON :

WHITTAKER AND CO., AVE MARIA LANE.

1849.

PROBATIONARY CABINET



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LONDON :

Printed by WILLIAM CLOWES and Sons,
Stamford Street.

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PREFACE.

WE are again brought to the closing portion of another volume of our MAGAZINE, and thus furnished with an appropriate occasion of traversing, shortly, the course we have pursued during the past year, and recording our thanks for the continued liberal encouragement which our friends have favoured us with.

As heretofore, we have endeavoured to render this Magazine a source of floral pleasure and useful information, avoiding anything distasteful or unedifying, and aiming to meet the requirements of all our readers. It is gratifying to us to have to state, not a single complaint has been made during the year, but many flattering commendations, both of the subjects introduced, the selection of flowers figured, and the excellence of their execution, have been sent us.

Ours was the *first* small Magazine containing coloured figures of new flowers, we determined it should be a cheap one, and within the reach of all persons, and as it was so it continues to be, supplying the greatest amount of useful floral information for the price charged; and so it shall be, whilst we have the support, literally and otherwise, of our friends, and this we respectfully solicit.

We are aware that many persons well able to write on floral

subjects, feel reluctant to do so, because they say it has to meet with public inspection, but if such individuals would write with all the simplicity and ease they converse with their friends, they would soon be favourably surprised at their own productions; we respectfully ask such to try, and we feel assured there will be little for an Editor to correct.

We very sincerely tender our thanks to all our generous friends for the past, and with their continued assistance we reiterate the assurance, that no practicable means of rendering our publication additionally and enduringly useful shall be untried.





J. Andrews Zinscof

Nemophila maculata!



FLORICULTURAL CABINET

JANUARY, 1849.

ILLUSTRATIONS.

NEMOPHILA MACULATA—SPOTTED-FLOWERED.

Hydrophyllaceæ. Pentandria Monogynia.

THE Horticultural Society, in 1843, sent Mr. Hartweg to collect new plants in South America, and more particularly in Mexico and California. Some very interesting particulars of his researches are inserted in our last year's volume. The results of his industry were rewarded with the discovery of many of our handsomest annual flowers, an enumeration of which are given in the extracts above referred to, and to which we direct our reader's attention. In his remarks on an excursion to "the Butes," an isolated group of mountains in California, he states, "A ride of fifteen miles brought to the foot of the mountains. The lower range, as in the former visit higher up the valley, is occupied by a *Leanthus*, a few live oaks, and *Pinus Sabini*-*niana*. Following a small rivulet, I found there a *Mentha*, and another labiate plant, *Stenactis*, a shrubby Labiate tinctoria. This new species of *Collinsia* is of stronger growth, though less striking, than *C. bicolor*; it grows chiefly on the dry sandy bed, or on the banks of the rivulet, and produces its yellowish flowers, mottled with purple, much later than *C. bicolor*. On a subsequent occasion, when I returned to this place to procure seeds of it, my hands were stained yellow by the glandular hairs which cover the seed pods, from which circumstance I named it *Collinsia tinctoria*. Another very interesting plant I found on this excursion (in May, 1844) is *Nemophila speciosa*, with white petals, one-third of which is tipped with violet-purple. It grows generally near rivulets, or in damp and partly shaded places. If the few seeds I procured should vegetate, it will prove a great acquisition to that handsome genus." Mr. Bentham considered that the specific title "*speciosa*," given by Mr. Hartweg, was not quite as appropriate as *maculata*; he rejected the former and adopted the latter.

This very lovely hardy annual is deemed the best of those discovered by Mr. Hartweg.

The plant is of similar growth to the well known *Nemophila insignis*, and he considers its specific title, *speciosa*, not so appropriate to its character as *maculata*; he therefore rejected the former. It is a lovely hardy annual, and deemed the best, of the many excellent ones, which Mr. Hartweg has discovered. Its habit is very similar to the well known *Nemophila insignis*, blooms as freely, and flourishes with the same kind of treatment. In order to have it bloom in spring, and the early part of summer, the seed must be sown in autumn. If the situation and soil be of a dry character the plants will endure the winter quite well, but if the situation be a damp one, and the soil wet, then sow in small pots, protect them in the severe parts of winter, and turn them out entire into the open ground early in March. To have a fine bloom from midsummer to autumn sow the seeds in the bed or border about the end of April, or early in May. When the soil is very rich, it tends to the production of occasional flowers not defined in colour like our figure, but veined or striped with violet; in every case, however, it is pretty, and merits a situation in every flower garden.

NOTES ON NEW OR RARE PLANTS.

ALLAMANDA AUBLETIA—AUBLETT'S ALLAMANDA.

Apocynæ. Pentandria Monogynia.

This very handsome flowering species has bloomed the past season in the fine collection of Messrs. Lucombe, Pince, and Co., of Exeter. Its nearest affinity is to *A. Schottii*, but when they are seen growing near together, the habit, foliage, and flowers, are very different. It is a weak, but scarcely a climbing shrub, it however requires a support. Seeds of it were sent from Brazil, and plants raised by Mr. Staunton. It requires to be grown in a stove, or warm greenhouse, and with proper treatment it blooms very profusely. The flowers are as large as those of *A. Schottii*, of a beautiful light yellow colour, and make a fine show. The plant ought to be in every collection, and throughout the summer would be one of its most attractive ornaments.

ASCLEPIAS DOUGLASSII—DOUGLAS' ASCLEPIDÆÆ.

Douglas discovered this species on the west side of the Rocky Mountains. It has bloomed in the open border in the nursery of Messrs. Lucombe, Pince, and Co. It is an upright herbaceous plant, half a yard high. The flowers are borne in umbels, crowned, a reddish-purple tinged with green. It blooms throughout the summer.

CHIRONIA GLUTINOSA—GLUTINOUS CHIRON.

Gentianaceæ. Pentandria Monogynia.

Seeds of this plant were sent from Australia to the Hull Botanic Garden. It is a neat growing, shrubby, greenhouse plant, evergreen, bushy, and from two to three feet high, blooming very freely. The

flowers are large, each near two inches across, and of a fine rosy red in their early stage, but when declining they have a pretty lilac tinge. It blooms for a very long season and is very showy, highly meriting a place in the greenhouse. It flourishes in a compost of equal parts of well rotted leaf mould, peat, and loam.

DENDROBIUM FARMERII—MR. FARMER'S.

Orchidaceæ. Gynandria Monandria.

This very beautiful species was sent from the Calcutta Botanic Garden to W. F. G. Farmer, Esq., of Nonsuch Park, near Cheam, in Surrey. It is not a robust growing plant, but of medium habit, and the lovely blossoms are numerous borne on racemes. The sepals are spreading, of a delicate rose colour. Petals larger, of a pale primrose colour. Labellum, a pale straw colour, with a deep yellow blotch. Each flower is about two inches across. It merits a place in every collection.

DIPLADENIA ECROPHYLLA—TAPER-POINTED.

Apocynæ. Pentandria Monogynia.

Seeds of this beautiful species were received by Messrs. Veitch, of Exeter, the plant having been discovered on the Organ Mountains, Brazil, and is, consequently, a stove plant. It is a handsome bushy shrub, blooming freely. The flowers are produced in drooping racemes. Each blossom is bell-shaped; the tube is nearly two inches long, of a tawny-yellow colour. The limb is formed of five sections, of a pretty salmon-rose. It well merits a place in the hot-house.

GLADIOLUS BRENCHLEYENSIS.

This is a very handsome showy variety, of a rich scarlet colour. It deserves a place in every flower garden, being of a strongish habit, and bearing long spikes of flowers; they are strikingly ornamental.

HOYA CUNNINGHAMII.

Introduced into this country by Messrs. Veitch, of Exeter, in whose collection it has recently bloomed. It is of a creeping, or climbing habit, the flowers being produced in corymbose heads, about twenty blossoms in each, they are cream-coloured, with a purplish corona in the centre, and are powerfully fragrant.

PIMELEA HENDERSONII.

In giving the descriptions of the finest plants exhibited at the Horticultural Society's shows, &c., held the last season, we remarked upon the beauty of this lovely kind. The flowers are produced in profusion, of a bright rosy-red colour. The plant is of the habit of *P. decussata*, some of the bushy plants exhibited being about three feet high, and almost as much across. It is a valuable acquisition for the greenhouse.

PLEROMA KUNTHIANUM—PROFESSOR KUNTH'S PLEROMA.

Melastomaceæ. Decandria Monogynia.

It was discovered by Mr. Gardner, when travelling in Brazil, who sent seeds of it to the Glasgow Botanic Garden, and Mr. Murray has

forwarded a plant to the Royal Gardens of Kew, where it has bloomed. It is an upright growing shrub, branching liberally, and blooming freely. The flowers are large, a separate one being about two and a half inches across, of a rich deep purple-red colour, and the fine red anthers give it a pretty effect. It well deserves a place in the stove.

POTENTILLA MENZIESII—MR. MENZIES' CINQUEFOIL.

This beautiful variety was raised by Mr. Menzies, gardener to H. Edwards, Esq., of Hope House, near Halifax, Yorkshire. The flowers are of a brilliant crimson colour inside, and the outside a buff yellow, with a crimson margin. It deserves to be in every flower garden, forming a bush three feet high, and blooming profusely, is highly ornamental.

SWAINSONIA GREYANA—GREY'S SWAINSONIA.

Leguminosæ. Diadelphia Decandria.

Seeds of it were sent from South Australia. It is a half-shrubby plant, growing about two feet high. The pretty pea-shaped flowers are produced in racemes about a foot long, of a handsome lavender-purple, with a pure white centre. Each blossom is about an inch across. It flourishes well in the open border in summer, but requires protection in a cool greenhouse during winter.

AT THE ROYAL GARDENS OF KEW.

In the Greenhouse.

CHEIRANTHUS MUTABILIS.—This is a lively flowering greenhouse shrubby plant, the flowers are in form like a single stock, produced in long spikes; at first they are white, and gradually change till they become a pretty purple. As it blooms freely through the winter, it is a useful plant for the greenhouse or sitting-room.

The following Epacrises were also in fine bloom, and produced a very cheering appearance:—

EPACRIS LIMATUS.—The tube is an inch long, a bright pink, with the end a pure white. The contrast is exceedingly beautiful. It ought to be in every greenhouse.

EPACRIS SANGUINEA.—Tube an inch long, of a deep blood-red. It is very handsome, and its deep rich colour renders it highly ornamental. It should be in every collection.

EPACRIS CAMPANULATA RUBRA.—The flowers are bell-shaped, half an inch long, a pretty rosy-red colour.

EPACRIS CAMPANULATA ROSEA.—The flowers are bell-shaped, half an inch long, and of a beautiful delicate rose colour. It ought to be in every greenhouse.

EPACRIS NIVEA.—Flowers bell-shaped, half an inch long, white. Neat and pretty.

EPACRIS MINIATA.—Tube one inch long, a light scarlet, with the end pure white.

EPACRIS HYACINTHIFLORA.—Tube wide, nearly an inch long, a beautiful bright blush colour. Very handsome.

EPACRIS ALBA COMPACTA.—Tube about three-quarters of an inch long, widish, a pure white. Very beautiful, and borne in profusion.

EPACRIS ONOSMAFLORA.—Flower bell-shaped, near half an inch long, white tinged with green. The plant is of stiff growing habit.

EPACRIS OBTUSIFOLIA.—Leaves short and stiff. Flowers broad, mouth funnel form, white, with a rose tinge.

EPACRIS IMPRESSA.—Tube three parts of an inch long, and a bright flesh colour. Very pretty.

All the *Acacias* are neat and handsome flowering plants, many of them delightfully fragrant too. Those which bloom in the autumn and winter seasons are especially valuable. In the splendid collection here, the following are now (December 15th) in bloom, and display a light and pleasing appearance, also richly perfume the house. The whole of them merit a place in every greenhouse or conservatory. By proper attention, the plants are readily formed into bushy specimens, and thus suited to very limited houses. They may be procured at a very reasonable price.

ACACIA TRINERVATA.—The leaves are narrow and an inch long. It is a handsome bushy plant. Flowers a pale yellow, delicate and pretty.

ACACIA DECIPIENS.—The leaves are of a triangular form, half an inch across. The plant forms a neat bush. Flowers sulphur colour.

ACACIA ROTUNDIFOLIA.—The leaves are circular, a quarter of an inch across. It is a very neat bushy plant, the flowers are a bright yellow colour, and produced in profusion. It is very neat and beautiful.

ACACIA VESTITA.—The leaves are half an inch long. It is a very neat bushy plant. The flowers are borne in large branching spikes, and along them the blossoms are produced in short racemes of ten or twelve in each. They are a pretty light yellow colour. It is a handsome species.

ACACIA PRÆMORSA.—The leaves are short, and the plant forms a pretty bush, blooming very profusely, flowers a rich yellow. Very pretty.

ACACIA LINEATA.—The leaves are near an inch long, narrow. The plant is bushy and neat. The flowers are produced in profusion, and of a rich golden yellow colour. It is exceedingly handsome.

ACACIA DENTIFERA.—The leaves are four inches long, very narrow. It forms a neat branching bush. The flowers are a rich deep yellow colour, and the globular heads large. It is a very beautiful species.

ACACIA OVATA.—The leaves are oval-shaped, half an inch across. It is a very neat bushy plant. The flowers are produced in long spikes, and are a rich yellow colour. It is a very handsome species.

ACACIA LEPTOREURA.—Leaves like a thinly foliaged *Pinus*, about three inches long. The flowers are a deep yellow. It is singularly pretty.

BOSSIÆA VIRGATA.—Foliage small and neat. The pretty pea-shaped flowers are about half an inch across, yellow, with a bright

crimson eye-like spot at the centre. It is a very interesting plant, blooming profusely, and well worth a place in every greenhouse.

POLYGALA MYRTIFOLIA.—This old and well known plant was in fine bloom; its beautiful violet-purple flowers, with a feathery tuft of anthers, gave a very cheering effect. By attention to the production of side shoots, this plant can readily be kept dwarf, and when in full bloom, at such a size, is an interesting object.

HARDENBERGIA OVATA.—The plant was coiled round a circular wire frame, and in profuse bloom. The flowers are borne in spikes, each having twenty to thirty, a pretty violet, with dark velvet eye-like central spot. It is a very neat growing plant, and beautiful when in flower.

In the Stove.

BEGONIA FUCHSIOIDES.—Last spring a small plant was placed to be trained up a pillar, it has bloomed all the season, and is likely to continue through winter. It is now ten feet high, and its rich scarlet pendant, fuchsia-like flowers, produce a handsome effect. The plant blooms well in a warm greenhouse or sitting-room.

GESNERA ZEBRINA, and *G. HERBERTII*.—These are highly valuable plants for autumn and winter ornament. Their long (two feet) pyramidal-formed spikes, with numerous laterals of scarlet and yellow flowers are exceedingly ornamental. There are many specimens, three feet high, in profuse bloom, which now (December 15th) give the house a very gay appearance. They bloom well in a warm sitting-room.

ACHIMENES PICTA.—This is another very valuable ornament. It is grown in what are called pot pans, about six inches deep and sixteen across. Several plants are regularly placed apart, so that they form, as a whole, a fine bush, and blooming (as they now are) so freely and vigorously, in contrast too with the pretty white veined leaves, they are highly interesting objects. The plants appear likely to bloom all winter.

TORENIA ASIATICA.—Three of these pretty flowering plants had been trained around globe-shaped wire frames, and now were in beautiful bloom, contrasting well with the Gesnerias and Achimenes above noticed.

ANSELLIA AFRICANA.—A most noble plant of this beautiful Orchideæ was in bloom, and by the end of this month will be at its best condition. There are several principal flower stems about four feet long, with numerous lateral branches, and having a profusion of flowers. A separate flower is about two inches and a half across, of a dull white slightly tinged with green, and having numerous bars and specks of a deep chocolate-velvet colour. It is a most charming specimen.

LÆLEA ANCEPS.—A splendid flowering Orchideæ. Each flower is five inches across. Sepals and petals a very handsomely delicate lilac-violet. The labellum has its tube-shaped portion two inches long, a deep violet, and the lip a rich velvet, with violet margin. It is highly beautiful.

ON GROWING MIGNONETTE AS A TREE AND BY CUTTINGS.

BY C. W. F.

THIS old and deservedly favourite flower is most generally grown during the summer months in the gardens, but for winter bloom in pots, either in a greenhouse or the window of a sitting-room, by sowing the seed about August or September. The plan I adopted last year, and which I now wish to bring before your notice, is, that of growing it as a tree; it is as follows:—About May seeds were sown in small pots; a few weeks after the plants made their appearance, the strongest one amongst them in each pot was retained, the others thrown away; after some time the plants, having made great growth, were transplanted into larger sized pots, in a mixture of loam, leaf mould, and sand, with good drainage; again another shifting was found necessary. During this time of the plant's growth all flower buds and lateral shoots that appeared were cut off until December, when the plants having attained by this time five feet in height they were allowed to produce flower buds. About Christmas a profuse bloom was on them, which continued to May and June, admired by all who saw them for their beautiful growth and perfume. I have now one of these plants, which has thus blown again, coming into flower, and which, no doubt, will bloom throughout the winter. Those persons who have never grown Mignonette as a tree, I would strongly recommend the plan I adopted, and they will be well rewarded. As to the plants grown by me from cuttings put in about July and August, they were in strong healthy bloom for several months during the winter, in a compost similar to the foregoing; after which, in April, they were turned out of the pots into the garden, where they continued flowering the whole summer. I have now five plants from cuttings put in as late as September, and which, I have no doubt, will bloom beautifully. I would remind those who may be desirous to grow Mignonette in pots that there must be good drainage and moderate watering.

ON FLOWER GARDENS.

OUR object in calling attention to these things at the present time, is to suggest the propriety of commencing a reformation of our flower-garden management at the proper season; and as, by the time these remarks meet the public eye, it will be the season to commence the propagation of plants for the coming season of 1849, we would insist upon the following general principles being attended to. First, with reference to the form of the garden itself; if it is proposed to make any alterations in its form, let the plans and arrangements be made at once, and after you have convinced yourself of the propriety of the design, lay it down in a temporary manner on a bed of sand, and then fill each bed with flowers of the same colour which you think of planting the beds with next season; recollecting, that if the beds are large, each may be edged with its complementary colour—as, scarlet with white, orange with blue, yellow with purple, and the

reverse; and so on of the various tints of colour. This edging or bordering is an excellent plan when cold colours, as blue, or purple, are planted on grass, as it relieves or throws the colour up just the same as a nicely shaded black ring on a sheet of paper makes the part within it look whiter than the part outside. For illustration, a bed of *Salvia patens* on grass is, at a distance of say two hundred yards, almost inconspicuous; but surround the same bed with a broad margin of *Calceolaria viscosissima*, which is bright orange, and it directly becomes bright and gay at a considerable distance.

In designing the garden, too much attention cannot be paid to introducing as simple forms as possible; for though scroll patterns and intricate tracery work might be admired in years gone by, when gardens were more sought after for their form than the plants which they contained—in these days, when the cultivation of flowers is the principal object, those forms of beds which are the most suitable for that purpose must be preferred. Now, of all the forms for effect, there is certainly nothing equal to the circle or oval, or some modification of these, always preferring the curve or line of beauty; but, of all things, avoiding acute points, and too many straight lines. Of course, if a geometrical garden has to be formed on a square piece of ground, and adjoining a square building, the boundary of the garden must, to a great extent, partake of the form of the ground and surrounding objects; but, as a general rule, straight lines should be avoided as much as possible. Another great fault in designing flower-gardens, especially in small places, is that of over crowding the beds; the effect of which is, that much ground is frittered away in walks and small beds, neither of which can by any possibility ever look well. We lately re-arranged a garden, destroying upwards of thirty beds, and replacing them by eleven beds of good solid proportions, allowing plenty of space between the beds; and the effect, now that the plants are in bloom, is much better than it ever before was; while, at the same time, from the beds standing free and open, they are seen to greater advantage, and are also better adapted for the purposes intended.

It is not enough, however, that the beds in a flower-garden should harmonise as to colour, but it is also requisite that harmony should go further than this, and that they should correspond in height and character of plants: thus, we would not plant two corresponding beds, one with scarlet Pelargonium, and the other with scarlet Verbena, for though in point of colour such an arrangement might be near enough, the effect would be discordant, inasmuch as the two beds would not entirely correspond; therefore, we should either plant both with Verbenas, or both with Pelargoniums. Small plants are admissible in large beds, but not tall plants in small ones; but, as a general rule, it is the best to let the height of the plant be proportionate to the size of the bed.

When the plan of a garden is decided upon, and the arrangement made, number each of the beds, and in a book, opposite corresponding numbers, enter the names of the several plants which each bed will require, allowing of strong growing plants two to each square foot,

and of smaller ones, such as *Lobelia compacta*, *azurea*, and the like, three or four plants to the same space. With an arrangement made in the autumn, and a guide like the preceding, it is easy to provide plants for a large garden, as it is not necessary to provide more plants than are actually required, and it is easy to see that the plants are always ready. If the arrangement is left until near the planting-out time, in the spring, the chances are that you will be deficient in a stock of some things, and have to "make shift" with some inferior kinds, and "make shifts" in gardening are always dangerous.

Another, and the last fault, in flower-garden arrangement, which we shall notice at this time, is that of arranging beds in pairs, when they ought to be planted in fours; thus, for example, supposing this page to be a geometrical garden with corresponding beds at each corner, the common practice would be to plant two beds with one colour, and the other two with another: this is wrong, and it will be found much more harmonious to plant all four beds with one colour, and, if you like, edge them with their complementary colour.

The preceding remarks apply also to the arrangement of Rose gardens, which require reforming very much, banishing the standard or tall roses, and planting the masses principally with dwarf kinds, which can be pegged down, so as almost to hide the ground entirely. We know nothing more interesting than beds of Bourbon, China, Tea, and other perpetual flowering roses, which delight one from May until October, and are always gay. More attention must be devoted to these things: indeed, for our own part, we should not think of planting any but perpetual roses, in future; and from small gardens the French and Hybrid China roses ought certainly to be expelled.—*Extracted from Paxton's Magazine of Botany.*

NOTES ON FLORISTS' FLOWERS.

THE NEW DAHLIAS FOR 1849.

THE greatest novelties among Dahlias which the past season introduced has been in the fancy varieties. We may name *Empereur de Maroc* (figured by us last month), a rich maroon and white; *Baron Freteau de Peney*, red and white; and *Ceillet Parfait*, a very beautiful striped flower, red and yellow, with good average properties, and a large size. These are continental flowers, and are very fine when in perfection. To the two last named we may add one or two other stripes as belonging to a class that seems likely to exceed in beauty all the others, and are certain to be grown this season by all admirers of the "Fancies." *Alfred* (Salter), white striped with crimson, a thinly formed flower, but handsome; *Picotée*, sulphur colour, with crimson stripes, very constant and striking, large size, and tolerable form; *Bilboquette*, pale sulphur or buff, striped with crimson, after the way of *Picotée*, but not quite so good in the centre, and of a rougher appearance. There is another striped flower worth mention too which came out the year previous, named *Mirocaulant*, or *Mirocaulunt*; the ground colour is variable, though generally a rosy-lilac striped and spotted with crimson, and when well thinned out and grown strong is

a very pretty flower, fit for any stand of Fancies at the present day. We have the drawing before us of a new flower to come out in spring, named "Striata Perfecta," which is of a similar colour to the last described, but, if as represented, is of a greatly improved form, and will be a prize.

In the other classes the best flowers which have been made known are, the Queen of England (Dodds), white, with a broad lace of rich purple, somewhat treacherous in the eye, but when caught right is beautiful in every respect. Shylock has proved a very useful flower, though, as we stated last year, it is seldom close enough. Toison d'Or is another flower which has been found very useful, it is an orange-buff colour, of great depth, but faulty in the eye, and the outline somewhat imperfect. To these we may add Black Prince (Mitchell), a rich well formed (almost black) flower, only partially let out last spring.

On the whole, we refer our readers to our notes inserted in the January number of last year, the best flowers we there pointed out, and such, without an exception that we can call to recollection, they have turned out. The following notes may be equally relied upon, they were made most carefully, and should be taken just as we have copied them from our note book. The chance is, many of them may be shown better than we report them, because the specimens upon which our opinions were formed were only the productions of one person's growth, and the plants might not have been treated in the most suitable manner:—

MR. SELDON (Turner).—Of precisely the same colour as the Marquis of Aylesbury, a sort of shade between purple and lilac, equally symmetrical and circular, and, like it, rather flat in the face, but unlike it, in having a very safe looking well-disposed centre.

DUKE OF WELLINGTON (Drummond).—A good orange Dahlia was much required, and this is one; it has a fine centre and outline, is of medium size, and the colour is bright. Nothing yet produced in this class comes near it.

QUEEN OF THE EAST (Barnes)—Distinct blush, round and symmetrical, of full average size, petals of much substance, centre regularly formed, but disfigured by a greenish tinge. We hold it a great disqualification when the centre is different in colour to the body of the flower, but we have not seen sufficient of this to say such defect is permanent.

QUEEN OF THE WEST (Spary).—A beat on Cleopatra (Atwell), clearer in colour, with a better petal and outline. Useful as a back-row flower.

FEARLESS (Barnes).—Peach-lilac, a new colour; in all points of form excellent, and of full average size. Undoubtedly one of the best flowers of the season.

BEAUTY OF HASTINGS (Barham).—White laced with rosy-crimson, as double and symmetrical as a ranunculus. Shown very small, but may be grown large enough at any rate for a front row, and it looks constant. The outer rows of petals incline back rather too much, after the way of Princess Radzville.

PROVIDENCE (Whale).—Blush mottled on the margin with light purple, medium size, rather thin, but likely to be useful.

DREADNOUGHT (Collisson).—Crimson, medium size, good centre, and well arranged; face, flat.

DUCHESS (Bushel).—White, good centre, double, fairish outline, mostly confused in arrangement, and rather flat.

DAUNTLESS (Barnes).—Large pale yellow, thin, rosette outline, may be useful as a back-row flower.

GRENADIER (Turner).—Crimson-red, in the way of Beeswing; good size, well arranged, centre rather flat, a very useful looking flower.

RUBENS (Turner).—Orange, a second class flower.

EARL OF CLARENDON (Turner).—Another orange, bright in colour, but too much after the old fashioned form.

EARL OF CLARENDON (Long).—Yellow, indifferent.

PURPLE PERFECTION (Burbury).—Crimson-purple, small and confused.

BLANDINA (Burbury).—Creamy-blush, of quite ordinary form.

PURPLE STANDARD (Rawlings).—Deep purple-crimson, medium size, good centre, unbroken outline, symmetrically arranged, but particularly flat in the face.

ELIZABETH (Legg).—White laced with lilac, medium size, good centre, and tolerably even.

MODEL (Legg).—Reddish-crimson, of moderate properties.

COMMANDER-IN-CHIEF (Legg).—A large, rough, purple-crimson.

WHITE PERFECTION (Holmes).—White, medium size, of an average good form.

WHITE LADY ().—Another white, of middle size, with a fine rising centre, good petal, true outline, and symmetrical.

CONTRIBUTOR (Barnes).—Lilac, medium size, double, but not compactly arranged, useful for its colour.

CHARLES TURNER (Turville).—White, with rosy-purple lace, good centre, full, broken outline, useful.

OCEAN MONARCH (Taylor).—Purple-lilac, rather above the middle size, well up in the centre, rosette outline, appears constant.

QUEEN OF THE YELLOWS (Harrison).—Golden-yellow, middle size, true outline, and very compactly arranged.

VICTORIA REGINA (Keynes).—Blush mottled with rosy-lilac, good centre, symmetrical, perfect outline, said to be uncertain.

MISS CHAPLIN (Dodd).—Blush with crimson lace or tips, full, symmetrical, and looks very constant.

QUEEN OF BEAUTY (Drummond).—Peculiar soft peach-lilac, beautiful colour, and possessing all the points of form in a fairish degree. Exhibited as a seedling of 1848, but advertized to come out this season.

SOL (Harrison).—Orange-buff, a distinct colour; middle size, common average eye, good petal and outline. Useful.

The following are in the class called "Fancies:"—

GENERAL CAVAIGNAC (Hunt) —Rosy-purple tipped with clear white, distinct, and of good average form.

KEEPSAKE (Barnes).—Crimson, with a rather dingy white tip, good

centre, petals narrow; flat in the face, occasionally may be found useful.

REGINA (Bragg).—Said to be a seedling of last year, but to come out in spring; red, with white tips, clear colours; useful looking flower, an improvement on *Hermione*.

MISS BLACKMORE (Dodd).—White, with purple-crimson edges, middle size, symmetrical, good outline, a little thin.

MISS STEVENS (Dodd).—White, with pale salmon-red edges, medium size, compact form, and good outline.

RAINBOW (Keynes).—Orange-red and white, colours well defined, and the flowers in this respect very striking, but every petal, in the blooms we saw, had a small indentation at the end, which, if its natural character, however superior it may be in other respects, is an undoubted disqualification.

SUNBEAM (Keynes).—Bright red, with a small white tip, rather under the average size, full and neatly arranged, but the petals are very narrow and reflect a good deal.

QUEEN OF THE MAY (Harrison).—A pretty lilac tipped with white, quite novel and distinct amongst the fancies, good centre, and symmetrical form.

MISS JANE (Howard).—Crimson purple, with white tip, good centre, and fairish outline; a useful flower.

MRS. STANLEY (Mitchell).—Crimson, tipped with white, full size, double, and well arranged; occasionally quills a good deal.

QUEEN DOWAGER (Gaines).—Bright brimstone, with clear white tip, very pretty as a border flower, but too thin for show.

PINKS.

NARBOROUGH BUCK (Maclean).—A very large flower, a rich dark colour, with a pure white ground, excellent shape.

WINCHESTER RIVAL (White).—A middle sized flower, a rich bright red, with a pure white ground, very good form.

MRS. EDWARDS (Keynes).—A middle sized flower, of a beautiful rose, with a pure ground, good form.

HARKFORWARD (Smith).—A middle sized flower, a rich purple, with a pure white ground. It is a striking variety, of good form.

CARNATION.

J. SHARP, Esq. (Holliday).—A middle sized flower, crimson bizarre, petals round, and form excellent.

PICOTEE.

DELICATA (Holliday).—A light-edged purple, colour very distinct, round petal, fine formed, of first-rate excellence.

ON WARMING A GREENHOUSE WITH HOT WATER IN OPEN GUTTERS, &c.

BY "A SUBSCRIBER AB INITIO," OF LIVERPOOL.

HAVING a small greenhouse, about thirty feet by fifteen (in which are vines and a general collection of plants), which is at present heated by

a flue, from a fire in the potting-house, and which, I must say, succeeds very well; but, in this go-a-head age, I think something new might be better, and I have lately read much about "Polmaise," &c. Now, I think, I have in my brain a cheap plan of heating by open gutters, having hot or warm water continually passing through them, but I do not know whether the steam arising might affect the inmates. I am aware it would be much more suitable for stove plants and fruits, but, I think, it would answer well for a greenhouse, and should feel much obliged by having your opinion on the subject. I could easily regulate the heat by diminishing or increasing the flow of water in and out of the pipes or gutters.

Perhaps, at the same time, you could inform me, through the widely spread and read "CABINET," if Gloxinias and Gesnerias will answer in a greenhouse; some gardeners say they will, others that they will not, unless forced in a stove.

Can you tell me when "*Fuchsia spectabilis*," *vide* CABINET for July last, will be offered for sale, and about the price; it is certainly a beauty.

[What heat is required in a greenhouse is in winter, and at which season it must be kept as dry as possible. Any steam admitted is injurious, and just to the degree permitted is the evil. We have seen it tried in several instances, and some cases the plants, &c., were a mass of mildew and rotteness. If you must alter, have the usual hot water system of closed pipes, or what is cheaper, Hazard's Warm Air System; for particulars of it, see our Magazine for 1847, pages 257 and 272. Gloxinias and Gesnerias must, to do well, be brought to a flowering state in a higher temperature than a greenhouse usually has. A stove or hot-bed frame heat is required. The *Fuchsia* will be offered in spring; we do not know the price. See notice on wrapper for the other particulars.]

REMARKS ON THE CALCUTTA BOTANIC GARDEN.

BY A VISITOR.

NEVER shall I cease to remember the delight I felt during my first visit to that luxurious domain of all that is rare and splendid in the vegetable tribes of tropical climes. I landed upon the stone steps which conduct the visitor from the waters of the Ganges to the curator's house, and passed up under an over-arching trellis well embowered by creeping plants effectually excluding the sunshine, and mingled prominently among which plants were in abundance of the flowers of a gigantic specimen of that most poetical of flowers the night-blooming cereus. On either side the path were various species of the most sensitive plants, the mimosas, *hedysarums*, &c. Passing into the lower floor, the house (generally uninhabited) I found it stored with chests of Assam tea, a produce likely to become one of the most valuable exports of India; and descending the stairs met that most excellent man, Dr. Wallich, the present curator. We examined together his library.

stored with a good collection of botanical works, ancient as well as modern. We watched at their works the native artists copying the flowers as they blossom in the garden, and the pictures from whose pencils are accumulating thus annually to be deposited in the library of the East India Company.

So soon as the sun's decline permitted, we visited the garden. This was commenced in 1768 by Colonel Kyd, and has since that time gradually increased to its present size and importance. It then passed to the care of Dr. Roxburgh, who laboured there most successfully from 1793 to the date of his death, 1813. A small temple shelters an urn dedicated to his memory in one of his most favoured spots near the great Banian Tree; and Dr. Wallich has prepared a grave for himself, where his own remains, it is to be feared, will soon repose, if he does not try before long the invigorating influence of a more northern climate. That Banian Tree to which I have alluded, gives the stranger a more forcible idea of the vastness of tropical vegetation than any other object. The trees of milder climes sink into insignificance when called to memory for the sake of comparison. Its branches and their numerous sustaining self-united stems form of themselves a grove covering about an acre of ground. Not far from the Banian is to be seen a specimen of the far-famed and much-fabled Upas Tree. That its sap is virulently poisonous admits of no doubt, but not to the extent once believed, when that in Java was the only one and that imperfectly known. So far from the very atmosphere around it being rendered pestiferous by the exhalations from its leaves, I have frequently plucked them and handled its stem. During this visit I saw, for the first time, that most rare and most elegant of trees, the *Amberstia*. But two or at most three specimens are known to exist. No one who has not seen its mingled, graceful, pale-tinted foliage and long pendulous rosy flowers, can form even a proximate conception of its surpassing loveliness. Turning to the waters of the garden I saw floating on their surface the classic flower of the eastern tales, the pink and white-petalled lotus. Around their margins were to be seen the pitcher plant, with its strange appendages of closed water receptacles attached to each leaf. Palms of various description, and among them that friend in the desert which spouts forth water when wounded with a knife. Passing to other divisions of the garden, we visited the potting houses, where annually thousands of specimens of rare and useful plants are prepared and dispatched to every quarter of the globe. Tea plants, superior varieties of the sugar cane, plants of madder (*Calotropis procera*), a substitute for ipecacuanha (*Menettia cordifolia*), a substitute for the squill (*Crinum Asiaticum toxicarum*), quassia and guaicum plants, a substitute for sarsaparilla (*Hemidesmus Indicus*), fustic and a dye-wood abounding in tannin (*Cæsalpina coriaria*). I cannot close this slight notice of the Botanic Garden at Calcutta without a further tribute to the merit of its curator, Dr. Wallich. He is by birth a Dane, and was a physician at Chandernagore, the chief Indian colony of his native country; but the late Dr. Carey introduced him to the notice of our Government, and how well his scientific attainments merited such notice, is demonstrated by his published

works, and by the fifty societies which, unsolicited, have enrolled him among their associates. Parallel to his botanical knowledge is the urbanity and liberality with which he meets the wishes not of his friends only, but of all who ask from him either the gratification of their curiosity or an addition to their botanical stores.

THE HOLLYHOCK, AS AN ORNAMENTAL FLOWER.

IN the centre of clumps planted with dwarf shrubs, and in vacancies which are two or three feet from the edge, at the backs or at least a yard from the front of borders,—in all places where there are vacancies between shrubs, or at the backs of shrubberies of dwarf subjects, the hollyhock is a fine ornamental plant. In no case is it so appropriately disposed of as where its towering spikes rise above the green foliage or diversified borders of more dwarf subjects. The dahlia, with all its variety and brilliance, its abundant blooms and protracted season, may supersede the hollyhock as a foreground subject, but it cannot be planted in the same space nor assume the same figure; for, strange as it may seem, it is difficult to place a hollyhock where it is not an ornament. It does not seem out of place unless it is out of sight. As an object wholly seen, a good hollyhock in the height of the season is a very noble subject. The splendid pyramid of flower, commencing at the top of the bushy foliage and growing upright, is, when at its best, worthy of a place anywhere, even on a lawn. Groups of them in clumps, where their heights are regulated, the tallest being the farthest removed, and the shorter ones gradually descending to the front, which is for dwarf ones only, are an addition to the best conditioned garden or dressed ground, and from their remarkable figure, distance seems to be no object. In the broad belts of plantation which surround a park, or the borders, made on each or either side of a road; in the wilderness, or anywhere else, the towering hollyhock is a permanent and graceful ornament, requiring no further trouble than planting out. In most situations it will stand without support. It will grow up where almost any other subject would be choked, and in the wildest of these places it is scarcely advisable to remove any of the spikes; they may be allowed to bloom in bunches of half a dozen, or the single spike, for as the object is merely show, the quality is no eye sore.—*Horticultural Magazine.*

CONTRIVANCE FOR WATERING PLANTS IN POTS.

BY BURRIENSIS.

IN order to prevent the inconvenience of giving too much water to pot-plants, get a circular piece of deal one inch thick, cut out the inner circular piece, put the pot so that the hole in the bottom shall be about the centre of the hole in the piece of wood; any water will then drain off. At the underside of the wood four grooves must be made crossways

of the circle, to admit of the water which so drains off passing out of the circle to the outside of the wood. I have several pieces of wood thus formed, of different sizes. If you have the circulars two inches thick, and put them into a pan or saucer full of water, place the pot upon the wood so as not to touch the water, this will prevent slugs (who will not go through the water) attacking such plants as they are fond of. The circular of this thickness will prevent the pot from touching the water.

ON IMPREGNATING CARNATIONS, PICOTEEES, &c., IN ORDER TO OBTAIN IMPROVED VARIETIES.

BY AN AMATEUR FLORIST.

To effect the above object artificial impregnation is essential. Flowers must be selected which possess the best properties, having round petals of firm substance and smooth edges. The colours must be properly disposed upon a clear ground. The operation is found to succeed best with flowers of the same class, as crimson bizarres with crimson bizarres, and scarlet flakes with scarlet flakes, and so with every other class and colour. A few days previous to impregnating a flower a few of the inner small petals, and all the thread-like filaments, must be cut away by means of a pair of small pointed scissors, but the central styles (having coiled horn-shaped tops) must remain entire. No flower must be thus prepared but what is about in its meridian condition.

The pollen (powdery substance from the anthers) may be conveyed by carefully removing the filaments with a pair of tweezers, or by means of a small camel-hair brush. In the operation, lodge all the pollen necessary upon the summit of the styles of the flower which is expected to bear seeds. If the pollen be carefully applied very little will suffice, perhaps as much as a single anther affords.

If a flower be procured from a distance, which is to supply pollen, it should be gathered before the anthers burst, and it may be preserved in a glass bottle of water, in a light situation (a window) till the anthers open.

After the flower is impregnated no water must be allowed to fall upon it for the first fortnight; the shade employed should be a funnel-shaped one, such as are used for shading carnations, dahlias, &c., from sun. In a few days after impregnation, if it be effectual, the petals will begin to coil inwards; as they decay they must be carefully removed so as not to injure the seed-pod. The earlier in the season the hybridizing process is done the better the seed ripens. Let the seed be kept in its pod till spring, and then be sown in a pot, placed in a gentle moist heat till the plants are up, then gradually inure them to a cooler atmosphere, and pot off singly as soon as they are sufficiently rooted.

An attention of this process is very interesting and pleasing, especially so when the period arrives of the progeny displaying their floral beauties. The innocent recreation in the process fully repays for attention, and when an improved flower is obtained, the reward not only stimulates to future exertion, but supplies a lovely object of admiration for a future period.

HORTICULTURAL SOCIETY.

MEETING AT THE ROOMS IN REGENT-STREET, LONDON, ON DECEMBER 5TH.

MR. SPALL, gardener to W. Carbonell, Esq., sent a specimen of the white Persian Cyclamen (*C. Persicum album*). Messrs. Veitch produced cut branches in a pot of their beautiful *Fuchsia spectabilis*. These were stated to have been cut from a plant which is growing luxuriantly in their conservatory border, and which has been in full flower these last three months, forming an object of admiration to all who have seen it. Mr. Kendall, of Stoke Newington, sent a small collection of plants from his Polmaise stove, and among them two specimens of *Torenia Asiatica*. It has been stated by a contemporary that this *Torenia* "may safely be considered as a greenhouse plant," but Mr. Kendall has found that, if treated as a greenhouse plant, in nine cases out of ten it will die off in winter, and the plants in question were produced to show that the best place to winter it in is a stove. It was stated that he last year lost every plant which he endeavoured to keep over winter in his greenhouse, and that such was also already the case this year with the plants he had so treated. The specimens exhibited had been struck late in spring, and had been kept during summer in the greenhouse, where they were continually in flower. Early in October they were removed to the stove, in which they have blossomed freely, and promise to do so all the winter. With these came a seedling *Cineraria*, in the way of "Beauty of Newington," named "Queen of the Isles." The plant exhibited was finely flowered, and was stated to be a cutting from a seedling of the present year. It had never been out of the Polmaise stove. Early in October it was subjected to a minimum temperature of 76° by day and 60° by night, proving that the *Cineraria* may be successfully forced to flower at this season of the year.

Of Orchids, Mr. Dobson, gardener to Mr. Beck, sent the pretty *Oncidium unguiculatum*, *Epidendrum vitellinum*, and the well-known *Stenorhynchus speciosus*. A certificate was awarded for the *Oncidium*. A similar award was also made to M. de Jonghe, of Brussels, for *Zygopetalum brachypetalum*, an uncommon, though not quite a new species. It is one of the handsomest of the genus, having brown and green sepals and petals, and a bluish violet lip slightly marked with white.

A beautiful variety of the Java *Vanda suavis*, for which a certificate was awarded, was contributed by Mr. Bassett, gardener to R. S. Holford, Esq. It was mentioned that of this fine species there are several varieties, some handsomely spotted, others nearly white and comparatively valueless.

Mr. Ivison, gardener to the Duchess Dowager of Northumberland, sent, in one pot, three species of *Mormodes*, from Santa Martha, queer rather than beautiful; and, with them, fruit of *Jambosa vulgaris*, gathered from a plant which has fruited profusely in a conservatory at Syon. The fruit is small and oblong, pale yellow, and having the flavour of one of the *Alberge* apricots slightly perfumed. The same

establishment also contributed fruit, said to be excellent for jellies, of what was named the "Tree Tomato of Chili." The fruit was egg-shaped, brownish red, and said to be agreeable. The leaves were large, downy, and heart-shaped, and had an unpleasant odour. The plant was stated to be *Solanum betaceum*. Certificates were awarded for both these productions.

From E. J. Cooper, Esq., of Markree Castle, Sligo, came a collection of Citrons, consisting of nine varieties of this kind of fruit. The more interesting among them, in a botanical point of view, were *C. Limetta*, a small sort of Lime having a young fruit growing out of the crown of the old one, a curious peculiarity if constant; but whether this be so or not was not ascertained. The other, named *C. Mellarosa*, bore considerable resemblance to a Tomato, being flattened at the base and top, and ribbed, showing a disposition in the parts to separate, as in the case of the Chinese figured Citron. This latter was stated to be highly perfumed, and to make a most delicious preserve. It was mentioned that the trees which produced these fruits are all planted in the bed of the Orangery, and are in the most flourishing condition. It was mentioned that twenty-five varieties of Lemons, Oranges, and Citrons, are cultivated at Markree Castle. A certificate was awarded to the excellent gardener, Mr. McIntyre for this exhibition.

ON CULTIVATING THE GLADIOLUS IN POTS FOR THE CONSERVATORY, GREENHOUSE, AND SITTING-ROOM.

BY A NORLEMAN'S FLOWER GARDENER.

MOST of the readers of the Florists' Magazine are acquainted with this lovely tribe of flowers; the long known *Gladiolus communis*, or Sword Lily, with its showy spikes of purple-crimson blossoms, being a deservedly admired ornament of our gardens. In years remotely gone by, I recollect even this fine species being generally grown in pots, and limited to the greenhouse and sitting-room for its habitation, and few plants are more handsome or ornamental for the conservatory, greenhouse, and sitting-room, than the fine species and varieties we now possess. I append a list to these remarks of the kinds under my care, and all of which I cultivate a portion in pots for indoor ornament; the beautiful variety of colours, handsomely formed spikes, in which the flowers are produced, in addition to the long period of blooming alike, combine to render them deserving of every attention, and their beauty will amply repay for all.

The compost I use is good turfy sandy peat and turfy loam, that has been prepared in a heap for some months previous, and well rotted vegetable mould. These are incorporated together in equal portions, and I use the compost in a rough state, unsifted but chopped. The time of potting is the end of September or first week in October. I give a free drainage of crocks and pieces of fibry turf. The pots I use are nine inches in diameter at the top, inside measure. I place one bulb each of five different kinds in a pot, one, the tallest growing,

in the centre, and the others around at equal distances. After being potted they are placed in a cool frame, and when they begin to push forth, I take a few pots at a time to further their growth into the gentle forcing-house for early spring bloom, and, for afterwards, from the frame into the conservatory or greenhouse. When the plants have pushed several inches, I give liquid manure twice a week to contribute to their vigour, and soft-water liberally at other times. The red spider is partial to the foliage, but I prevent their attack by frequent syringing the leaves, but avoiding the flowers. If an attack has been made, wet the leaves and dust them with common sulphur, let it remain a few days, then wash it off, this will settle the affair. When the bloom is over, and the leaves begin to turn brown, I gradually withhold water, and at length lay the pots on their sides in an open shed, where they remain till time to repot.

- Gladiolus Ada, crimson and white.
- bride, white and pink, pretty.
- blandus, delicate flesh-colour.
- Byzantinus, Constantinople red.
- cardinalis, large, scarlet.
- carneus, a pretty flesh-colour.
- coccineus nanus, dwarf, showy.
- communis, purple, and very strong.
- ————— pallidus, pale purple.
- Colvillii, rich scarlet and yellow.
- enchantress, crimson, rose and white.
- floribundus, citron-coloured.
- gandavensis, scarlet and yellow, a very fine flower.
- gloria mundi, orange, scarlet with crimson marking.
- Hellas, salmon-colour, a distinct variety.
- incomparabilis, pure white with scarlet marking.
- invincible, crimson and blue.
- Maid of Orleans, blush white with scarlet.
- Island Queen, orange, scarlet and peach colour.
- Rising Sun, new scarlet.
- roseus major, large, rose colour.
- royal scarlet, scarlet and white.
- Semiramis, crimson-maroon.
- speciosissimus, a most showy variety.
- Thalia, crimson-maroon and white.
- trimaculatus, red and white, spotted.
- tristis, brown and yellow.
- zebra, blush with red striping.
- Zulema, chocolate, white mark.

ON THE CULTURE OF THE IXIA.

THIS is a lovely tribe of flowers, and when properly grown most abundantly repays for every attention. We seldom see them now-a-days

either in nurseries or private establishments, and the reason assigned is, they are difficult to grow in a satisfactory manner. They have, however, been grown admirably, and may be again, by the use of similar means.

The *Ixia* must have a sandy turfy-peat to be grown properly in pots. It must not be sifted but chopped into small pieces, and have a liberal drainage of crocks and fibry pieces of peat. About the middle of September is the best time for re-potting or renewing them. If a stock has to be procured in bulbs, put several in a pot, cover them an inch, do not water at the time of potting, place them in a cool pit frame, and when it is evident roots are issuing forth into the soil then give a smallish proportion of water, increasing as the plants grow. When the plants have ceased blooming and the foliage has decayed it is the usual practice to take the bulbs out of the soil, and in dry condition to keep them in a seed drawer, &c. Now this is injurious, and the result is a puny bloom the succeeding season. The method to be pursued when the foliage is decayed is as follows:—Let the pots be placed on their sides, on the back shelf of a greenhouse, or similar light warm situation, say at the foot of a south-aspected wall (taking care mice do not feast upon the bulbs) till the beginning of September, then turn up the pots and give them one free watering, this will usually start them, or at most, another watering will. As soon as it is perceived that they are pushing forth give the following attention:—If the pot be very closely filled with bulbs then turn out the ball as entire as possible, carefully remove any portion of the drainage adhering to it, also remove from the top part of the ball all soil which is above the bulbs. These matters being done, and having a larger sized pot properly prepared with drainage, and an inch or two of the sandy peat over it, then place the ball upon it, so that it will admit of fresh soil around, as well as a portion over the surface. The bulbs remaining in the position they had grown the previous season, grow and bloom far more vigorously than when shook out of the soil, &c. After planting, the pots must be placed in a cold pit frame under the front wall where they will be shaded, and be kept there uncovered, as long as the weather will permit, and then only protecting them from frost. When the time arrives for putting the sashes over them the pots must be raised up, so as to be about a foot from the glass, and be where they can have full light. They will bloom well if kept wholly in such a pit frame, or be removed to the greenhouse. The very numerous species and varieties, with their many richly contrasted colours, blooming so profuse as they do when well grown, most abundantly repay for any labour bestowed. I am an amateur gardener, resident in London, and labour under disadvantages as to situation, but I am very amply repaid for the attention given, by a beautiful bloom from February, and with the later blooming kinds up to the end of July.



NEW YEAR'S DAY reminds us that the FLORAL LABOURS of 1848 have been brought to a close. Nature's operations have been done well, and the results displayed through each successive season of the year in woodland shades and wide-spread plains, on majestic hills and through lovely dales, combining with the loveliest spot of all, THE FLOWER GARDEN, have continuously proclaimed how readily and cheerfully the will of the Creator has been obeyed. Ours has been the felicity to behold with wonder, and adoringly we have been led to exclaim, "How manifold are Thy works, O Lord, in wisdom hast Thou made them all!"

What a rich delight is realized, both to body and mind, in collecting vegetation's floral beauties together, and in an imitative Paradise attend to cultivate and dress it! It affords a three-fold pleasure, and which of us have not been delighted whilst engaged in cultivating our flowers? and does it not afford pleasure in reflecting upon the successful results of the year, and in now possessing and increasingly providing a store for future display? Then there is the delight of anticipation. And how cheering it is to behold the promise of future beauty, even now, in the peeping forth of the Snowdrop, the Crocus, and the Daffodil; with the budding forth of the Honeysuckle, and to inhale the fragrance of the Mezereum bloom.

To the Florist, however, all seasons have a charm, and the garden is of perpetual interest: each successive day of an ever progressive year brings forth its claims to attention; and, first,

IN THE FLOWER GARDEN.

In severe weather be careful to protect all tender things, and on all favourable occasions remove such coverings as can conveniently be done, in order to dispel the damp air. See that all newly planted shrubs remain secure, so that they are not loosened by the wind, and a little mulch over the roots is very beneficial. During hard frosts all beds on lawns requiring raising with soil should be done, to avoid injuring the grass by wheeling. If any heads of tender Standard and Climbing Roses are still unprotected, they ought at once to be secured. As we have often recommended, this is best done by tying a covering of furze over them; it is better than straw, because it admits sufficient air to benefit the plant. Continue to collect, during the frosty weather, all kinds of soils and manures that are wanted, turfs to rot into turfy loam, sand, clean loam, peat, horse and sheep droppings, and le ves to rot, if not done already.

FLORIST'S FLOWERS.—*Auriculas* always get through the winter best when kept rather dry, and carefully freed from decayed leaves,

with just sufficient protection as may be requisite to preserve them from being frozen. A severe frost injures the embryo flower. Give air on all favourable occasions. These are the general rules to bear in mind this month, and should be strictly adhered to if the weather be severe, but if the temperature of the atmosphere is generally mild, then the supply of water may be gradually increased, as the plants will have been excited, and if suffered to languish at this time the strength and beauty of their bloom will be much impaired. Most people who raise seedling *Auriculas* sow the seed in the early part of this month, although some defer the practice until a month or six weeks later, when light and warmth have increased, and when less care attends them. *Polyanthuses* may be treated similarly, remembering they are not so easily affected by moisture, but as soon receive injury if in want of it. *Carnations* and *Picotees* require air as freely and water as sparingly as possible. The taste for these beautiful and highly fragrant flowers is much increasing, and we are glad of it; few are so inviting. If you have not yet, as we have recommended, bought in those you intend to do, delay no longer, or you may be disappointed, or put off with inferior plants. Our accounts of the flower shows and notes of new flowers will furnish you with useful information of their quality. These are a few of the best of the new ones we saw—*Scarlet Bizarres*: Lord Radcliffe (Holliday's); Hamlet (Hepworth's). *Crimson Bizarres*: Thomas Hewlett (Holliday's); Sarah Payne (Ward's). *Purple Flakes*: Earl Spencer (Barringer's). *Rose Flakes*: Ariel (May's). *Picotee, red-edged*: Gem (Youell's); Jenny Lind (Edmund's); King James (Headly's). *Purple-edged*: Amy (Burrough's); Miss Dake (Barringer's). *Rose-edged*: Venus (Headly's).

Pinks and *Pansies* in beds having had a thin layer of light sod around them require little more attention now than seeing that the lateral branches are secured by pegs so as to steady them from injury by wind, and if it comes on very severe place a flower-pot over each, taking care to remove them on the first favourable change. Fir or Yew branches, a foot or so high, pricked round the bed is an excellent protection from wind, and a few stuck in among the plants is useful in severe weather. A sprinkling of soot over the bed tends to preserve the *Pinks* from rabbits and snails. *Pinks* or *Pansies* in pots should be uncovered in mild weather, so that they may receive the benefit of free air and gentle showers. *Ranunculuses* and *Anemones* planted last autumn may be protected from injury by frost, if garden mats are secured over the bed. The bed for planting in next month should now be turned over for the last time, pick out all worms, and give it a slight sprinkling of lime, then spread the bed evenly, and it will be consolidated by the planting period. *Choice Hyacinths* may be protected by similar means, or by placing an inverted garden-pot over each. *Dahlia* roots stored safely from frost are not necessarily secure from decay, but require examination to remove all that seem damping or shrivelling, potting them in rather dry soil, and placing them in a warm frame. The best sorts, of which a large stock is desired, will, about the latter part of the month, require potting and placing in the frame, gradually inducing them into activity. *Tulips* still require to

be most carefully guarded from frost, for however hardy the nature of the bulb is, they rarely throw up perfect blooms, if touched by frost.

IN THE FORCING FRAME.

At the end of the month sow seeds of the tender annuals, as Cockscomb, Amaranthus, &c., to have them fine specimens for the greenhouse, &c., in summer; and Ten-week Stocks, Russian and Prussian Stocks, &c., to bloom early, should be sown in pots, or be sown upon a slight hot-bed: also some other of the half-tender kinds, to prepare them strong for early summer blooming.

The Jacobeæ and Guernsey Amaryllises, with others of the genus, should be re-potted; also to have a few early blooming plants of Achimenes, Gloxinias, Gesnerias, &c., they should be started, and when beginning to push separate and pot them singly.

Cuttings of Salvias, Fuchsias, Heliotropes, Geraniums, Anagallis, Hemimeris, Lotus, Bouvardia, &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. Lobelias in pots should now be pushed, in order to divide and pot singly next month. Dahlia seed is best retained in the head as grown, spread singly where they will not be liable to mould, and be kept in a dry situation; the seeds will thus be kept plump. Mignonette, to bloom early in boxes or pots, or to turn out in the open borders, should now be sown. Protect the stems of tender plants with furze branches, dry leaves, fern, &c. Sow in pans seeds of Rhododendrons, Azaleas, Ericas, &c., that plants will be fit to plant off in May.

IN THE COLD FRAME AND GREENHOUSE.

In this department, mind that if Camellias are not regularly supplied with soft, not too cold, water, the buds will drop; if too much, frequently that will cause them to drop too. Thin the flower-buds too if crowded. Never give heat to Heaths as long as the frost can be kept out by coverings or otherwise. A few degrees of frost will never injure Cape Heaths, whereas fires are their ruin. Let the air blow upon them on all favourable occasions. Nothing destroys the constitution of these plants so much as close and damp houses. Should any choice varieties of Azalea indica be required for the purpose of propagation by cuttings, they may be transferred to a temperature sufficiently high to excite an early growth. Cuttings of these will be found to root with much greater facility early in the season than at a later period, besides it is of considerable advantage to have young plants strong and well established by the approach of the succeeding winter. Gladioli, Alstræmeria, Liliun, &c., grown in pots at the end of the month, should be re-potted. When the weather is damp or foggy do not give air, only let a dry air be admitted. 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.

Chrysanthemums having now quite ceased blooming, the plants

must be placed in a cool pit where they can be protected from severe frost, and have the tops cut off. If seed be desired such plants must not be headed down, and they must be kept in a dry and warm place in the greenhouse to ripen.

IN THE STOVE.

All kinds of plants required here for ornament, and which have been duly prepared by previous culture, should be introduced in succession, giving ample supplies of water and frequent syringing over head. 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 plants best adapted for forcing are various kinds of Roses, Persian Lilacs, Azaleas, *Acacia armata*, *Neriums*, *Gardenias*, *Rhodora*, *Heliotropes*, *Correas*, *Deutzeas*, *Mezereums*, *Coronillas*, *Cytissus*, *Ribes*, *Mignonette*, *Cinerarias*, *Sweet Violets*, *Lily of the Valley*, *Tulips*, *Cyclamens*; and the old *Eranthemum pulchellum* with its fine blue flowers, *Justicia speciosa*, *Gesneriæ Zebrina*, *Justicia pulcherrima*, and *Apphelandria cristata*, are fine winter ornamental blooming plants. All pots or boxes containing bulbous-rooted flowering plants, as *Hyacinths*, *Narcissus*, *Persian Irises*, *Crocuses*, &c., should occasionally be introduced, so as to have a succession of bloom. *Hyacinth* 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 so long. *Cactus* plants that have been kept in the greenhouse should occasionally be brought into the stove for flowering, which gives a succession.

ON RAISING SEEDLING CACTUSES.

BY W. F., OF CHESHIRE.

HAVING procured a quantity of seed of the "*Cactus speciosissimus*," I shall feel obliged if you will (in your next publication) inform me as to the best mode of sowing, *i. e.*, time, soil, &c. I conclude, of course, in heat. Also, if the young plants will be the same as the parent. The greenhouse which contained the plant from which the seed was gathered had also in it *C. speciosa* and a few "*Cereus*," but the flowers were not impregnated artificially. If the seeds are to be kept till spring, will it be better to retain them in the fruit, or dry them.

[Let the seeds remain as they are till February, when, if there be a cucumber, &c., hot-bed at work, sow them in a compost of equal parts of loam, peat, and silver sand. Only just cover the seeds, but do not water them at all. They soon vegetate, and as early as well rooted pot them singly into a similar compost, having a few small bits of broken pot intermixed, giving them the usual treatment of the genus. (See articles in Vol. IX. 1841, pages 30, 60, 62.) If the flower was impregnated by the farina of another kind, either by some person, or the bee, &c., or by the current of air conveying it, then the produce will be different from the plant which supplied the seed.]





Potentilla.

1, *Insignis*; 2, *Brilliant*; 3, *Plantis*.



FLORICULTURAL CABINET

FEBRUARY, 1849.

ILLUSTRATIONS.

POTENTILLA INSIGNIS, P. BRILLIANT, P. PLANTII.

THE hardy herbaceous perennial flowers form a permanent valuable class. They are easily and cheaply acquired, require but little care, and usually bloom all the out-door floral year. Most of them, too, flower in profusion, and are really ornamental. Amongst the loveliest ranks the family of *Potentillas*, which now contains nearly two hundred species and hybrid varieties, decked with flowers of purest white, crimson, pink, scarlet, yellow, blush, purple, orange, sulphur, and cream colours:—

“With what enchantment nature’s goodly scene
Attracts the sense of mortals.”

Alike suitable for an extended flower-garden or one of but limited extent, where all should be elegance and beauty.

Potentilla insignis was raised from Indian seeds, presented to the Horticultural Society by the East India Company, and is said to be very common in the north of India. It is quite hardy. The flower-stems rise from a foot to half a-yard high, and the beautiful yellow flowers, borne in profusion, have a very gay appearance.

P. brilliant. This is an hybrid, raised by Mr. Joseph Plant, florist, of Cheadle, and the best of its class that we have seen. When in full bloom, the dazzling colour of its flowers fully justifies its specific name.

P. Plantii. Also raised by Mr. Plant. It is a very distinct variety, well-shaped flower, and profuse bloomer. Occasionally it produces a flower of an entire self colour. Although this deranges uniformity, it rather adds to its general beauty.

Mr. Plant has raised several other pretty varieties; one named *P. maculata* is of quite a new character. The flower is of a pale buff, tinged with pink, and numerously spotted with very small black dots;

others have irregular formed blotches, very distinct from the ground colour. We procured a number of these beautiful varieties last spring, which bloomed with us, and formed a very interesting group.

All the *Potentillas* are easy of culture; they must be in an open airy situation, and will then thrive in a good light loam upon a dry subsoil. The weaker growing kinds must have a good proportion of well-rotted manure and leaf mould mixed with the loam, and by thus promoting their vigour there will be an increase of bloom. Some of the kinds, however, are of a vigorous robust habit, and, when grown in very rich soil, produce a vast proportion of large foliage, but do not bear a proper quantity of flowers. The soil must therefore be regulated according to the habit of the plant in order to have a profuse bloom. In dry summers they should have a liberal supply of water.

They are readily increased by division of the plant, which should be done early in autumn; they soon re-establish themselves, and flourish the following season; but, when the division is effected in spring, they do not succeed so well. Some of the kinds produce offsets freely, and if not rooted ones, pot them in a sandy loam in autumn, and place them in a worn-out cucumber or melon bed, having the frame, and they soon strike root.

The entire tribe are pretty, but the following are the handsomest we have seen in addition to those above noticed, and all deserve a place in any flower-garden, however select the collection may be. *P. Garnerianum*, primrose, with a large spot of rose at the bottom part of each petal, which unitedly form a circle round the disk (centre) of the flower; *Thomasi*, rich yellow, large; *Hopwoodiana*, pink and white; *Russelliana*, crimson-scarlet; *MacNabbiana*, crimson and white; *Menziesii*, rich crimson; *Formosa*, rose; *Atrosanguinea*, deep crimson; *O'Brienii*, orange; *Rubra aurantia*, red and orange.

NOTES ON NEW OR RARE PLANTS.

CEREUS LEEANUS—MR. LEE'S CEREUS.

(*Synonym. Melastoma strigosa.*)

A very pretty-flowering species of *Cactæ* was received by Mr. Lee, of Hammersmith Nursery, from France as an unknown species, a native of Mexico. It is one of the stiff erect growing plants, is now a foot high, four inches in diameter at the bottom, and regularly tapering upward from a nearly circular base. It is deeply furrowed, and has sharp angles. At and near the summit, four or five large, handsome, brick-red, inclining to blood-coloured, flowers are produced; the tube being about three inches long, and the flower about the same across. It is a very pretty species, well worth growing. (Figured in *Bot. Mag.* 4417.)

CHETOGASTRA STRIGOSA—THE STRIGOSE (SHORT HAIRS).

Melastomaceæ. Decandria Monogynia.

A native of Guadeloupe, growing in beds of sphagnum moss on the top of the Sulphur Mountain. It is a dwarf greenhouse shrub, rising

about nine inches high, leaves small, branching, and spreading. It is a very profuse bloomer, and the flower is an inch across, of a bright rosy-purple colour, each petal having a darker centre. It deserves a place in every greenhouse. (Figured in *Pax. Mag. Bot.*)

FUCHSIA CORYMBIFLORA ALBA.

A WHITE flowered Fuchsia, with the blossoms as large and of a similar habit to *F. corymbiflora*, is a novelty to announce, which all lovers of this elegant tribe will read with pleasure. So great has been the number of seedling Fuchsias raised in all parts of the kingdom and Continent, that we have been almost inundated with varieties possessing scarcely any distinguishing feature to their innumerable predecessors. There can be no doubt, however, about the kind we now mention being perfectly distinct and handsome too. Mr. Salter (late of Versailles) met with it in his travels on the Continent, and purchased the stock. We understand plants will be ready for sale in the autumn, and, in the mean time, doubtless it will be exhibited at some of the metropolitan meetings.

HETEROTRICHUM MACRODON—LONG-TOOTHED.

Melastomaceæ. Decandria Monogynia.

This remarkable and handsome plant was originally discovered in Caraccas, and seeds of it were sent from New Grenada, by Mr. Lobb, to Messrs. Veitch. It is a stove shrub, with velvety leaves, and the flowers are produced in terminal corymbs, white with red at the base. Each flower is about an inch and a half across. Like many of the *Melastomaceæ*, it is apt to become naked; to prevent this, the shoots should often be stopped, and thus be kept bushy. (Figured in *Bot. Mag.* 4421.)

MIRBELIA MEISNERI—MEISNER'S MIRBELIA.

Leguminosæ. Decandria Monogynia.

A native of the Swan River; seeds of it were sent by Mr. Drummond to Messrs. Lucombe, Pince, and Co., of Exeter. It is a low bushy shrub, much branched, and blooms most profusely in leafy erect racemes. The pretty pea-formed flowers, each half an-inch across, are of a red-purple, with the lower half a deeper colour. It is a lovely greenhouse shrub, and ought to be in every collection. (Figured in *Bot. Mag.* 4419.)

PASSIFLORA NEUMANNA—NEUMAN'S PASSION-FLOWER.

A hybrid variety, recently raised on the Continent, and named in honour of Mr. Neuman, of the Jardin des Plantes in Paris. It very much resembles the well-known, handsome old passion-flower *P. cœrulea*, but not so beautiful. It is supposed to be as hardy as that species. It is in the collection of Messrs. Knight and Perry, and is well worth growing as a companion to the *P. cœrulea*. (Figured in *Pax. Mag. Bot.*)

SCUTELLARIA MACRANTHA—LARGE-FLOWERED SKULL-CAP.

Labiatae. Didynamia Gymnospermia.

Native of Eastern Asia. It is in the Royal Gardens of Kew, and is a truly handsome, dwarf, hardy, annual plant. Grown in masses it would be highly ornamental. The flowers are borne in profusion in erect terminal spikes or racemes, large, of a rich purple. It blooms during all summer. It ought to have a place in every flower-garden. (Figured in *Bot. Mag.* 4420.)

SIPHOCAMPYLUS MANETTIAFLORUS—MANETTIA-LIKE FLOWERED.

(Synonym S. nitidus.)

A dwarf, very neat, bushy plant, with pretty deep green foliage. It blooms profusely. The tube of a flower is about an inch and a half long, of a bright scarlet, with the divided end limb of a rich yellow. It is a beautiful plant, and ought to be in every warm greenhouse. (Figured in *Pax. Mag. Bot.*)

AT THE ROYAL GARDENS OF KEW.

In the Stove.

ANSELIA AFRICANA.—In our last Number we noticed this very handsome plant, then beginning to bloom; now (January 16th) it has six hundred expanded flowers, and forms a most lovely object. Its pale green flowers, beautified with deep chocolate-maroon bars and blotches, render it highly interesting. The species ought to be in every collection of Orchideæ.

COCOCYPSILUM TONTAREA.—A trailing plant, placed upon a shelf near a doorway, and the shoots hanging a-yard down. It bears numerous berries, each about the size of a coffee-berry; they are in clusters of three together, and of the most intense violet-blue colour. It is an interesting plant, and would be very ornamental for the side of a window in a warm dwelling-room. The berries remain perfect for a very long period.

In the Greenhouse.

MINDIA SPECIOSA.—A very handsome erect shrubby plant, having scanty fir-like foliage, and smallish pea-formed flowers, of a beautiful rosy-violet colour, which are profusely produced in long spikes. Blooming at the winter season renders it a most desirable plant.

ACACIA SQUAMATA.—The foliage is small, and the branches are drooping, bearing a vast profusion of deep golden-coloured flowers. It is a very interesting and handsome species.

ACACIA OVATA.—The flowers of a rich yellow, and produced in vast profusion. One of the most lovely.

ACACIA RICEANA.—Small pinus-like leaves. The flowers are borne in cone-shaped heads, profusely, of a pale yellow colour. A very neat species.

ACACIA UNDULIFOLIA.—Flowers a rich yellow, with singular foliage. A pretty plant.

BEAUFORTIA DECUSSATA.—A fine plant, was in beautiful bloom;

its numerous bottle-brush-formed heads of flowers, of a bright red colour, had a very handsome appearance. It was grown in a sandy loam, not vigorously, and this appeared to have induced it to bloom so freely.

The Epacrises we noticed in our last were still in fine bloom, and the following additional ones :—

EPACRIS VARIABILIS.—The flowers are bell-shaped, half an inch long, of a deep pink colour. A very pretty kind.

EPACRIS MAGNIFICA.—Long tube, pink with a white end.

EPACRIS TERNATUS.—tube three parts of an inch long, a pretty pink with a pure white end. Very handsome.

EPACRIS RUBRA-GRANDIFLORA.—Foliage small, neat. The flowers are bell-shaped, half an inch long; when in bud a bright red, but a pretty pink when expanded. The contrast is very interesting and handsome.

EPACRIS SPLENDENS.—Flowers bell-shaped, bright red in bud, and a pretty flesh colour when expanded.

EPACRIS DELICATISSIMA.—Flowers bright red, tube one inch long. Very showy.

EPACRIS PUNGENS.—Flowers white, tube short, and broad end, produced in spikes about half a yard long.

EPACRIS PURPURASCENS.—Tube short, with a broad star-shaped end. Nearly white outside, but the inside a purplish-red.

We have given the particular descriptions of this lovely winter-blooming tribe of plants in our last and present Numbers, to enable our readers to make a selection of the most handsome, or of dissimilar coloured flowers.

HORTICULTURAL SOCIETY'S MEETING, January 16.

SERICOGRAPHIA GHIESBREGHTIANA.—A plant was exhibited by Messrs. Hendersons, but it was a sickly specimen, the foliage being pale, when naturally it is of a deep green; the red tube-shaped flowers were not so bright in colour either, for when properly grown they are of the brightest scarlet. When this *Justicia*-like shrubby plant, now considered half-herbaceous, is properly managed, it is one of the handsomest winter-flowering plants we have, and blooms for a very long time. It requires to be grown in a warm greenhouse or stove. It flourishes admirably in the stove at the Chiswick Garden of the Horticultural Society.

NOTES ON FLORISTS' FLOWERS.

THE VERBENA.

This pretty little flower is not only one of the most valuable for the flower-garden, but a very interesting and increasingly popular one for exhibition. In making choice selections for these objects, the principal considerations are very different. For the first-named purpose, those which are brilliant and decided in their colours appear most hardy, and

so compact in their growth that, as the plant spreads over the ground, it forms a close and even surface of green. The object in view, however, with those who grow for show, is not so much the colour and habit as the form; indeed, as they are now exhibited in stands of cut blooms, habit has there no part in the question. There can be no doubt the correct and best way to exhibit the *Verbena* as a florist's flower is in stands of cut blooms, but kinds more adapted for garden ornament should be shown in pots, and trained over a wire trellis so as fully to develop their manner of growth. When exhibited in stands, they should be in a single truss of each sort, neatly supported with two or three of their leaves, in the manner represented by the accompanying figure. We have been surprised to observe the display of taste made by some exhibitors in the production of stands containing confused bunches of each kind as large as an ordinary cauliflower, and this at some of the great exhibitions of London!



Hitherto, the greatest fault in the *Verbena* as a show-flower is the unevenness and unequal expansion of the trusses, and the narrow segments and deep notches in the flower. It will be seen, therefore, the improvements necessary to correct this, and bring the flower up to the florist's standard, are, wider segments, of nearly equal size, and rounded at the ends as much as possible; so that, by laying close together, they form a circle. The truss should have all the flowers arranged close and regular, but not crowded or overlapping each other; the whole forming a half-globe, the rounder and more even the better. Looking at the improvement which the last few years has brought forth, we may anticipate soon to have varieties closely approaching the circle, and entirely free from the notch.

The following are a few of the class with widened lobes, and the best we have yet seen for exhibition:—*Lady Cathcart* (Barker), blush; *St. Margaret* (Barker), rich crimson with a violet shade in the centre; *Minerva* (Chauviere), pale rose; *Junius* (Barker), deep rose with dark crimson centre; *Venus de Canova* (Chauviere), pale lilac with purple centre; *La Reine* (Dufoy), light pink with carmine centre; *Heloise* (Dufoy), heavy purple with dark eye; *Orpha* (Chauviere), lavender with dark eye: and two or three others.

Of new flowers coming out in spring we have seen but few we thought worth noting; these we transcribe below. Doubtless there are others deserving mention; we have heard of many, one said to be a clear yellow, but we have not seen them, and therefore must leave our friends to place what confidence they please on the representations of others.

JUNIUS (Barker).—Rose with a ray of deep crimson around the eye; of good substance, and a very even trusser. In form after the way of *St. Margaret*, to which it will be not an unworthy companion.

PRINCESS ALICE (Wyness).—Blush-white with a distinct ray of bright rose around a white eye, giving the flower a very pretty

appearance; truss large, individual flowers rather small, but of fair shape.

BRIDE (Barker).—White, changing to blush as the flowers die off; trusses and flowers of medium size; segments of corolla well rounded and even.

DUCHESS OF NORTHUMBERLAND (Barker).—Peach colour; large size; segments of corolla broad, stout, and very smooth; a large trusser, and generally well arranged.

UNION JACK (Ivery).—Purple with a ray of crimson around a light eye; truss compact, flowers small, and segments not rounded enough. Apparently a compact grower, remarkable for its peculiar contrast of colours, and more a flower for the garden than show.

EYEBRIGHT (Barker).—Bright rose with a red eye; truss large, good substance, and better than the average form.

MISS THOROLD (Barker).—Delicate lilac; a large bold-looking flower.

ROYAL PURPLE (Young).—Bright deep purple; much after the way of Emma, upon which it appears an improvement.

HORTICULTURAL EXHIBITIONS:

THEIR INFLUENCE ON GARDENING.

BY MR. CHITTY, STAMFORD HILL.

WITHIN the last few years many circumstances have contributed to raise the art of gardening to its present elevation, both as to the character of its productions and the high estimation in which it is held by almost all classes. The establishment of Horticultural Societies, and the exhibitions usually held in connexion with them, have, perhaps, imparted the most powerful stimulus to the art; and the now numerous gardening periodicals contribute not only to the maintenance of a steady attachment to the pursuit, but to feed an increased and yet increasing desire to possess larger collections of plants, and to excel in their culture. The present race of gardeners, both amateurs and practical men, may congratulate themselves that, in the great variety of publications now offered to their notice, they have the opportunity of selecting according as their precise wants may require. Among the most useful of these may be reckoned the **FLORICULTURAL CABINET**, not only on account of the practical nature of the matter that usually occupies its pages, but also because of its wide dissemination among the younger branches of the fraternity of gardeners, and the consequent influence its contents must have upon their future practice. It is in consideration of this latter circumstance that I wish to offer, through the medium of the **CABINET**, such remarks as have occurred to me from time to time on the relation horticultural exhibitions bear to gardening in general; and though many of the subjoined remarks may be found trite and common-place, yet they may not be altogether useless, since it is only by the persevering application of the most common-place means that success in this, or, indeed, in almost any other, pursuit is attained.

The primary object of horticultural exhibitions undoubtedly is, to show to how great a degree of perfection the various objects of the culturist's care can be produced. A second, and most laudable one, is to afford to numbers of persons who, but for these exhibitions, would never have the opportunity of seeing and admiring many of the most beautiful productions of the vegetable world; and thirdly, by the distribution of prizes, to stimulate to the carrying out what must be acknowledged to be the ultimate object of these institutions, namely, that neat and efficient culture be carried into every department of gardening, and its ornate objects be arranged so as to produce the most pleasing and lasting effect. Notwithstanding, there are not a few who estimate the value of practical skill by the degree of success awarded to them at these public competitions; and, perhaps with reference to one particular class of exhibitors (though not certainly to the exclusion of others), this may be a tolerably correct estimate; I mean those who exhibit collections of plants. From the observations I have been able to make, I think it will almost invariably be found that the exhibition of a collection of plants, which is good both in its disposition and culture, will be found to have carried all the excellent qualities observable in his more public demonstration into every department under his charge. But while, on the one hand, scarcely anything will meet with encouragement that does not bear very evident marks of skill and application, on the other hand, there are those who seem to concentrate all their energies upon the production of specimens of excellence for public competition, forgetting that every garden should be an exhibition of itself, and, where the means are at all liberal, should be a concentration of all that is excellent in practice and skilful in culture.

To the real lover of plants and flowers, the great variety brought together at a general exhibition affords (next to witnessing the great perfection to which the specimens are brought), the most exquisite gratification; and renders them not a mere exhibition of aggregate beauty, but also, and in a very extensive sense, botanically interesting. To the careful observer this will furnish a most useful hint, to be carried into practice in furnishing the garden with plants, which should be introduced in as great variety as the size of the garden, the nature of the soil, the situation, or other circumstances, will admit, so as to render it a scene of lively interest and pleasure at every season of the year. To a well-regulated mind no earthly thing is capable of yielding more of unmixed gratification and rational enjoyment than a garden furnished after the above general manner; details, of course, with other additional matters, according to the ability or taste of the proprietor.

Not unfrequently, remarks are made upon the most perfect specimens of culture, of a despairing nature, by those whom such a display should stimulate to the emulation of like perfection: true, every one cannot command the appliances and every requisite for the production of a first-rate collection of plants; but it is in the power of every one to excel in some particular instance with some particular genus of plants, or with particular varieties of flowers, or plants, or fruits; and

thus, by their own individual effort, to raise their own character and that of their profession; for it must be borne in mind that, if gardening as an art has attained to any eminence, it has been by the combined efforts of individuals, and individual exertion must still be put forth if, as individuals, we would either raise or maintain our personal credit, and assist in the elevation of the character of our profession.

The truth of a remark made by the late Mr. Loudon at § 3184 of the "Encyclopædia of Gardening" will not be called in question by any one, namely:—"Every department of gardening has objects or final results peculiar to itself; and the main beauty of each of these departments will consist in the perfection with which these results are attained; a secondary beauty will consist in the display of skill in the means taken to attain them; and a third in the conformity of these means to the generally received ideas of order, propriety, and decorum, which exist in cultivated and well-regulated minds." Such being the case, it will be seen to be to the advantage of the young gardener, while he is emulous of the honour conferred upon successful competition, to carry the qualities necessary to the production of such a result into every portion under his management.

REMARK ON FUCHSIA SERRATIFOLIA.

BY J. C., OF HEDGELEY.

IN answer to my inquiries respecting the best method of flowering a large specimen of *Fuchsia serratifolia* in the open air, you favoured me in your Number for May, 1848, with full and explicit instructions on the subject.

I have now the pleasure of informing you that the result of my attention to your directions was complete success and satisfaction to myself.

The *Fuchsia*, trained to a neatly-tapered larch pole, made rapid growth during the summer, and in September began to expand its beautiful flowers. In October, so splendid and stately an object was it, that although I knew it must shortly be destroyed by the frost, yet I could not make up my mind to interfere with its beauty by removing it for preservation during the winter. My *Fuchsia*, therefore, fell a victim during the extraordinary snow-storm which visited the north of England at the end of October.

THE SNOWDROP.

GALANTHUS NIVALIS, from *gala* and *anthos* (milk and flower), and *nivalis* (snow-white). The French call it February Violet, and White Bell; the Germans Snow Bell. Mrs. Barbauld thus elegantly notices the appropriateness of the English name Snowdrop:—

“ Now the glad earth her frozen zone unbinds,
 And o'er her bosom breathe the western winds ;
 Already now the Snowdrop dares appear,
 The first pale blossom of th' unripen'd year ;
 As Flora's breath, by some transforming power,
 Had chang'd an icicle into a flower :
 Its name and hue the scentless plant retains,
 And winter lingers in its icy veins.”

“ Fair-handed spring unbosoms every grace,
 Throws out the Snowdrop and Crocus first.”

THOMSON.

The Snowdrop appears selected by Flora to find whether the frost be mitigated, and as a herald to announce the arrival of her garland. It is the first flower that awakes from the repose of winter, and cheers us with the assurance of the reanimation of nature ; and hence it has been made the emblem of consolation. We look upon it as a friend in adversity, sure to appear when most needed :—

“ Winter's gloomy night withdrawn,
 Lo ! the young romantic hours
 Search the hill, the dale, the lawn,
 To behold the Snowdrop white
 Start to light,
 And shine in Flora's desert bowers,
 Beneath the vernal dawn,
 The Morning Star of flowers.”

MONTGOMERY.

“ The Snowdrop, who, in habit white and plain,
 Comes on, the herald of fair Flora's train ;
 The coxcomb Crocus, flower of simple note,
 Who by her side struts in an herald's coat.”

CHURCHILL.

This delicate lovely flower was formerly held sacred to virgins, and this may account for its being so generally found in the orchards and gardens attached to old monastic buildings :—

“ Like pendant flakes of vegetating snow,
 The early herald of the infant year,
 Ere yet the adventurous Crocus dares to blow,
 Beneath the orchard boughs thy buds appear.

While still the cold north-east ungenial lowers,
 And scarce the hazle in the leafless copse,
 Or willows show their downy powdered flowers,
 The grass is spangled with thy silvery drops.”

MRS. SMITH.

The formation of the flower is admirably adapted to the days of north winds and the nights of hoar frost. The delicacy with which the corolla is attached to the flower-stalk enables it to move with the winds in every direction, without fear of snapping or suffering the air

to injure the parts of fructification, and its modest pendant position throws off all water from the same. The pure white petals contribute to perfecting the farina, for they act as reflectors to throw all the light and warmth on the anthers. In shrubberies, care should be taken to have these flowers plentifully where they can be seen from the window of a breakfast-room, and among shrubs, grass, &c., they should have the appearance of growing wild, avoiding formal clumps, and seem as if scattered in irregular masses :—

“ Poets still in graceful numbers
 May the glowing Roses choose ;
 But the Snowdrop’s simple beauty
 Better suits an humble muse.

Earliest bud that decks the garden,
 Fairest of the fragrant race,
 First-born child of vernal Flora,
 Seeking mild thy lowly place.

Though no warm or murmuring zephyr
 Fan thy leaves with balmy wing,
 Pleas’d we hail thee spotless blossom,
 Herald of the infant spring.

’Tis not thine, with flaunting beauty,
 To attract the roving sight,
 Nature from her varied wardrobe
 Chose thy vest of purest white.

White as falls the fleecy shower,
 Thy soft form of sweetness grows ;
 Not more fair the valley’s treasure,
 Nor more sweet her Lily blows.”

CULTURE OF CAPE HEATHS.

THE garden establishment of S. Rucker, Esq., Wandsworth, near London, is justly celebrated for its collection of superb plants, as well as for the superior manner in which they are grown. The superb Heaths are under the skilful management of Mr. W. P. Leach, who has drawn up an excellent Article on the method of culture he practises, which is inserted in the *Gardeners’ Chronicle* of last Nov. 25th. It comprises the following particulars :—

Heaths will thrive as well in a greenhouse with other plants as when in a heath-house ; in fact, some of the woolly-leaved kinds do better, but they should be kept at the coolest end. The soil best suited is a mixture of Wimbledon peat and a much lighter kind of peat from Croydon ; or, as a substitute for the latter, well-decomposed leaf mould. Wimbledon peat two parts, light peat or leaf mould one part, and silver sand one part. He uses the peat fresh from the common, where it is dug two inches deep, paring off the subsoil and the rough top. The compost is passed through a sieve of 1½-inch mesh.

Re-potting is done any time from first of February to the end of August. He uses a liberal drainage, this being very essential in proper culture for large plants three or four inches deep. In potting, he places the collar of the plant a little above the fresh soil, so that water may not lodge about that part; never disturbs the old ball, except to rub off a little of the surface soil; fills up sufficiently high to leave it at the sides one inch below the rim, in large pots more in proportion—this is in order to retain water when applied; and presses the fresh soil very firmly round the ball. When done in summer, he shades the plant for a few days. They require little water after potting till they push a-fresh into the new soil. All free-growing kinds succeed best out-of-doors, in a not overshadowed place during summer; the slow growers, as *Massoni*, *tricolor*, &c., are best kept in the house or pits; the *Heath* tribe requires plenty of air and little shade. Always gives a liberal shift if the plants are well rooted, as from an eight-inch pot to a twelve. As soon as plants are re-potted, he pegs down some of the lowermost branches, to hide the soil and have the plant bushy. In hot dry weather he well waters the ground between the pots, which is much better than wetting the plants overhead, which is apt to induce mildew, and causes the plants, too, to lose their inner foliage. To remedy the evil of mildew, he dusts the parts affected with sulphur, and places the plant in a dry situation, allows it to remain two or three days, and then brushes it off. When large specimens have done blooming, he says, “I take a pair of shears, and clip them all over. Free growing sorts are then placed out-of-doors, to make their growth and set their bloom; the slow growers are kept in-doors, and have plenty of air day and night. In housing them in autumn, they are not allowed to touch one another, and, if possible, are elevated on pots or blocks, so as to allow a free ventilation of air among them.”

They require little water in winter. He raps the side of the pot, and, if it sounds hollow, gives it water carefully; for to give much to such as *Massoni*, *Hartnelli*, and *aristata*, would be sudden death to them; but such as the *ventricosas*, *perspicua nana*, &c., require it often, and as much as will soak the entire ball. In winter, he applies it in the morning, to get the house dry during the day; in dull weather a little fire heat is given in the day-time, giving air then back and front. The heated pipes are allowed to cool before the house is closed. Nothing is more injurious to *Heaths*, or, indeed, any other plant, than high night temperature. He never uses fire at night unless there are twelve or fourteen degrees of frost; eight or nine degrees of frost will not injure *Cape Heaths*, if the wood has been properly ripened in autumn. Damp will do them more mischief than frost.

ARRANGEMENT OF FLOWERS AS TO COLOURS, &c.

BY G. B. N., OF SOMERSET.

I THINK you would be conferring a great favour on many amateurs if you were to follow up the Article upon the grouping of flowers which

you inserted in your last Number, I mean, so far as regards the arrangement of their colours; and I would take the liberty of suggesting that a tabular form would be the most useful, admitting of the easiest reference. It would be desirable to state in such a table, not only what is the complimentary colour, but also what is the best contrast. I would specify some of the colours about which I want this information, and which that Article does not satisfy. See table annexed.

But if you feel that all this is beyond you, as I confess it is beyond me, perhaps some notice of this, my request, in your next Number would enlist the services of some lady amateur, whose more immediate province, perhaps, it is; or, perhaps, you can refer me to some work which treats of colours in these particulars. I have observed accidental notices of contrasts in some of your Numbers, but they seemed to me at the time not to mention several colours which I wanted information about.

FUCHSIA CORDIFOLIA.

BY J. C.

Is this Fuchsia generally a shy bloomer? With me it grows to an immense size both in and out of doors, but a flower is seldom seen on it. Most probably I mismanage it.

[In 1846 we had a strong plant grown in a rich loamy soil, in a pot about ten inches diameter at the top. It grew vigorously, but had only a very few flowers. Feeling disappointed with it, the plant was retained undisturbed in its pot, and during winter kept in a cool part of the greenhouse, and just secured from frost. Very little water was given, scarcely enough to keep the soil moist. As the spring advanced, the plant began to push, and an increase of water was given, but it was not re-potted. It commenced flowering early in the season, and continued to bloom profusely all the summer. The colours of the flowers were much richer than those borne when the plant was luxuriant the previous year. It is very probable the plant will bloom well, if it be grown in a compost of sandy loam, and a moderate proportion of vegetable mould, also to have a pot comparatively small to the size of the plant. Properly attended to in other respects, we think it would prove to be, as it did with us, a very handsome object.]

PLUMBAGO CAPENSIS.

BY A. G.

A CONSTANT reader would feel obliged to some practitioner who can inform him, to say how he must grow this plant so as to bloom it well. I have a plant five years old, now in a twelve-inch pot, trained in a circular manner round some stout stakes from four to five feet high. Last year I spurred all the shoots into two or three eyes, and re-potted it in a rich loamy soil, and kept it in a cool greenhouse; it looked healthy, and grew moderately, but bloomed very sparingly. Now, if any kind friend can inform me how I can grow and bloom it well, I shall feel greatly obliged.

LAGERSTRÆMIA INDICA.



THIS is one of the most elegant blooming exotic plants which has ever been introduced into this country. It is a native of China and Japan, and is there held in very great esteem. In those countries it grows

erect, about three yards high, forming a tree-like shrub, and branching numerously. The large curled-formed flowers are borne in profusion at the extremities of the shoots in large branching panicles of a beautiful rose colour, rendering it an object of highest admiration. It is but little known in this country, although it was introduced many years ago. The reason appears to be, that it did not receive that mode of treatment it required; and, in consequence of failure in blooming, it became a neglected plant. We recollect it being in several old-fashioned dark greenhouses or orangeries, and, although we never saw it bloom in such places, yet it was a handsome object, being of such a graceful form. It requires to be grown in a very warm greenhouse, or, which is better, a hot-house. The compost should consist of equal parts of loam, peat, and well-rotted manure and leaf-mould. A liberal drainage should be given, and in the growing season a free supply of water. It roots rapidly, and requires plenty of pot room. Another essential is to have bottom heat, either by being placed upon a flue or plunged in a tan bed; but we had it upon the former, where it bloomed beautifully. If turned out into a border which was warmed, near to a flue, it would flourish still better, and bloom in surprising profusion. In its period of growth it requires a high temperature, not less than seventy degrees by day, and the plant must be syringed frequently and the flue sprinkled with water two or three times a-day. If properly treated, it will begin to flower by the end of May, and continue to the end of October. When the blooming season is over, it must have a lower temperature, and less water to the roots, so as to be kept nearly dry. It is essential it should have a season of rest from November to the end of February. At the latter time all the previous year's shoots must be shortened, so as only to leave two buds on each. A little water may then be given, gradually increasing it till the buds burst, when the plant, if in a pot, must be re-potted. If the roots have coiled in the pot, so as to form a matted mass, carefully loosen them, and prune them in. We repeat, plenty of pot room is essential. The plant is readily increased by cuttings of the young wood, which should be taken off as soon as the shoots have attained sufficient firmness not to be likely to damp off. Insert them in equal parts of loam and silver sand, plunging the pot where it will have a gentle bottom heat and be covered with a bell-glass.

YELLOW PICOTEE.

A WRITER in the January Number of the *Midland Florist* very earnestly urges all cultivators of Picotees to persevere in attempts, by impregnation, to obtain perfect flowers of the yellow class; and having proceeded thus far, he states, "I conceive the following plan, under distinct heads, will be eligible for the purpose I have in view:—

"First. Saving seed from yellow selfs, hybridized with the yellow picotee; and, for experiment's sake, reversing the parents, whenever it will not have a tendency to reduce colour.

"Secondly. From two yellow-ground picotees,

“Thirdly. From deep-coloured yellow selfs, hybridized with the highest coloured white-ground picotees, of the several classes of red, purple, and rose, using the pollen from those flowers which are particularly distinguished by a steady style of marking, and not intermingling light and heavy edged.

“Fourthly. From yellow picotees, hybridized as in No. 3.

“The following white-ground varieties are well calculated for the purpose of hybridizing, as they are all of first-rate excellence:—Headley’s King James and Venus; May’s Portia, Sebastian, and Juliet; Marris’s Prince of Wales and Prince Albert; Ely’s Emperor and Mrs. Lilly; Norman’s Beauty; Matthew’s Enchantress; Cox’s Regina; Wood’s Princess Alice; Gatliff’s Regina; and Mrs. Bevan.”

And it would further the object if some one would give a descriptive list of yellow picotees, setting forth their particular properties. We shall be glad to be favoured with such a list for our next Number.

AZALEA INDICA ; OR, CHINESE AZALEA.

AN excellent weekly contributor to the *Gardeners’ Chronicle* states, that this fine tribe of plants flourishes admirably under the following method of cultivation:—

Compost.—Six parts of heath mould, in which there is a large portion of vegetable matter, one part of sandy loam, and one of the usual white sand. Great care must be taken in potting to have all the fine roots spread outwards and not in masses together, but be disposed as equally around as possible, and thus absorb more of the matters necessary for vigorous growth. A liberal drainage must be given, more to those kinds which are semi-evergreens than such as are deciduous.

In its native country, at the time of growth, the Azalea is stimulated by a high temperature, and with us it must then have a powerful heat, and will only obtain a full development but with plenty of sun and a moist atmosphere, promoted by syringing morning and evening. When the growth is completed the heat must be gradually lowered, more air given, and the plants soon be taken into a cool pit or greenhouse, where they must remain a time to ripen their wood, and by the middle of July they may be taken out and placed on a east or west-expected border, where they will be sheltered from cold winds and the dropping of trees. At the end of September the flower-buds will generally be well formed, then remove them into the greenhouse or vinery, giving them air only when mild and dry. Water must be applied with care in winter, the evergreen requiring more than the deciduous kinds. More air and water will be necessary as the plants approach the blooming period, usually from February. The plants commence growing as soon as the blooming is over, then is the time to repot, and if seed is not required, cut off the decayed blooming heads in order to give all possible vigour to the shoots, which are to produce the bloom of the following year. The best time to put cuttings in for propagation is when the parent plants are in vigorous growth, for the cuttings

partaking of that the more readily strike root than when the juices are comparatively motionless. Peat and sand in equal portions is the best soil to strike the cuttings in.

PENTSTEMON SPECIOSUM.

No flower-garden ornament can exceed in beauty a bed of these plants when in full bloom; their fine sky and dark blue flowers, so profusely produced, and so neat in form, &c., render it as a whole one of the loveliest, and meriting a place in every flower garden. It is generally supposed to be a perennial plant, but the fact is, it is a biennial, and dying at the end of the second year has led to the conclusion of its being exceedingly difficult to cultivate. The contrary, however, is the case, as is stated by Mr. Gordon, of the Horticultural Society's Garden, in a communication inserted in the "Gardener's Chronicle," who says, "no plant is more easy when properly cultivated," &c. The principles of his method of culture are embodied herein:—

The plant seeds freely, which ripens towards the close of summer. If the seeds are sown the spring following the plants rarely come up till the following year, but if sown as soon as gathered, in pots or pans, in a compost of loam and sand, and be placed in a cool frame free from frost through winter, then in March be removed to a warmer situation, as the greenhouse, the plants will be fit to repot in May, into sixty-sized (three-inch) pots, in a compost of sandy loam and well rotted cow-dung. They should be placed in a close pit or frame for a few days till recovered from shifting, then give a free admission of air, and early in July remove them into a frame which slopes to the north. At the end of August shift them into larger pots, giving plenty of air and water, and towards the end of October turn them out, with entire balls, into the bed where they are intended to bloom. The compost should be rich, and consist of sandy loam and well rotted dung. Any small plants may be kept in pots till March, then be planted out, and they will bloom later in the season than the autumn planted ones. Never water the plants overhead, but the soil liberally. If the plants put out in October be covered with a frame sash or hand glasses, in wet weather, during winter, it will tend to preserve them, as they are soon injured by damp and frost together, although they will bear a severe dry frost uninjured. A supply of plants being thus provided each season this valuable ornament may every year enrich the beauties of the flower garden. Seeds may be procured of the regular seedsmen, at a reasonable price, and if obtained immediately and sown, the plants would very probably come up the ensuing spring.

DESCRIPTIVE LIST OF PICOTEEES.

BY J. M., JUN.

THE following descriptive list of Picotees is from the note book of an amateur grower, and the particulars have been taken with much care. Their accuracy may be fully relied on. Some of the sorts are not new,

but they have properties which render them deserving cultivation, and to persons about commencing growing this lovely tribe of flowers the notes will, I hope, prove of some assistance. With this object in view I transmit them for insertion in the CABINET:—

KIRTLAND'S PRINCESS AUGUSTA.—Heavy-edged, purple Picotee: pod good; petals large and well shaped; ground colour pure; edging very heavy and regular, and the general form of the flower fine.

MITCHELL'S OR MANSLEY'S NULLI SECUNDUS.—Heavy-edged, purple Picotee: pod pretty good; petals very firm, thick and smooth, and well formed; ground clear and without speck; edging very regular. As it is rather deficient in the number of its petals it will not on this account stand as a first-rate of its class, but the edging being neat and regular and seldom barring, and the petals being thick and firm of texture, gives it a character which, when well grown, it will maintain, more especially as it is invaluable to those who wish to obtain seed.

BENNET'S NONPAREIL.—Heavy-edged, purple Picotee: pod good; petals firm but small; ground pure; edging bright and regular.

DICKSON'S TRIP TO CAMBRIDGE.—Heavy-edged, purple Picotee: pod good; petals very firm and even; ground colour pure; edging pretty regular and even, but sometimes apt to bar.

GIDDEN'S MRS. HENNEL.—Heavy-edged, purple Picotee: pod good and large; petals large and thick; ground good; edging rather irregular and prone to bar. This is a large showy flower and crowns well up.

GREEN'S VICTORIA.—Heavy-edged, pale rose Picotee: pod good; petals firm and smooth; ground colour pure; edging regular and beautifully feathered, but occasionally apt to stripe too much.

HUFTON'S NEHEMIAH.—Heavy-edged, purple Picotee: pod middling; petals firm and pretty, well set; ground pretty clear; edging bright and very heavy, but rather too much striped.

GIDDIN'S SIR ROBERT PEEL.—Heavy-edged, red Picotee: pod good; petals large and crowning; ground good; edging of a fine rich rose, but somewhat irregular.

SHARP'S RED ROVER.—Heavy-edged, red Picotee: pod middling; petals firm and smooth; ground pretty pure; edging good and regular. This flower is rather too small, but it is otherwise a good variety.

SHARP'S DUKE OF WELLINGTON.—Heavy-edged, red Picotee: pod fine; petals broad and well formed and crowning finely; ground good and clear; edging well marked and regular.

HUFTON'S WILL STUKELY.—Heavy-edged, red Picotee: pod large, but rather short; petals firm and fleshy; ground clear; edging very heavy and bright; beautifully feathered when well grown. This is a large robust growing flower, very showy, but rather coarse, and it is apt to bar too much, and a little serrated.

WOOLLARD'S MISS BACON.—Heavy-edged, red Picotee: pod pretty fair; petals rather small, but neatly formed; ground pretty clear; edging distinct, but occasionally apt to bar. This flower, though neat, is however too small for exhibition, it is now only a good border variety.

BARRAUD'S CORNELIUS.—Heavy-edged, red Picotee: pod good; petals very broad, thick, and well formed; ground pure; edging very regular and bright. This is a very heavy-edged flower and is very apt to stripe, but when it is in character it is excellent.

MARRIS' MARY.—Heavy-edged, red Picotee: pod good; petals large and well formed; ground pure; edging well marked, apt to bar slightly.

HUDSON'S VENUS.—Light-edged, red Picotee: pod of a medium size; petals well formed and with a full good crown; ground clear; edging pretty regular. This is a nice neat flower.

KIRTLAND'S DUKE OF WELLINGTON.—Light-edged, red Picotee: pod fair; petals broad and pretty even; ground not very pure, being a little spotty; edging regular.

SHARP'S HECTOR.—Light-edged, rose Picotee: pod pretty fair; petals large and well formed; ground very pure; edging pretty regular.

LEE'S MARY.—Light-edged, purple Picotee: pod good; petals well formed and of a medium degree of stiffness; ground pretty pure; edging regular and distinct.

KIRTLAND'S QUEEN VICTORIA.—Light-edged, purple Picotee: pod good; petals well formed though small; ground pure; edging very regular and delicate. In order to get this flower of a sufficient size for exhibition the pods ought to be reduced in number to a very few, and, indeed, this applies to almost all the light-edged class of Picotees.

ELY'S GRACE DARLING.—Light-edged, purple Picotee: pod good; petals pretty well formed, but thin; ground pure; edging perfect and distinct. As the styles stand out well this is a very good variety from which to obtain seed by crossing, &c.

BRINKLOW'S PURPLE PERFECTION.—Light-edged, purple Picotee: pod good; petals very firm and smooth; ground pure; edging very light and regular. This is an exceedingly good flower of its class.

PARKINSON'S MATILDA.—Red Picotee: pod fair; petals large and thick; ground good; edging rather irregular and apt to bar.

WOOLLARD'S LITTLE WONDER.—Red Picotee: pod middling; petals good, but small; ground good; edging distinct and well marked. This is a neatly shaped flower, but rather small, and like others of its kind must be reduced in the number of its flower pods, in order to get it of a sufficient size.

BENN'S MARC ANTONY.—Red Picotee: pod fair; petals pretty well formed, but rather thin; ground good; edging finely marked with dark red.

ON PASSIFLORAS, &c.

A CONSTANT subscriber will be obliged by replies to the following inquiries:—

1. What is the latest time the *Passiflora racemosa cœrulea* and *P. onychina* may be pruned, they cover a pillar in the greenhouse, and if pruned now, the bare stems on the pillar (which faces a drawing-

room window) will be naked and bare for three months at least. Can this be avoided by late pruning? The *P. onychina* has been in flower several weeks, and still is.

2. A *Begonia fuchsioides* has been flowering for some months, but is now looking sickly, the leaves turning yellow. What should be the treatment?

3. A *Beaufortia decussata* and an *Epacris heteronema* will not flower with us, what can be the cause? The *Epacris autumnalis* has been in flower for weeks, and still is in profusion.

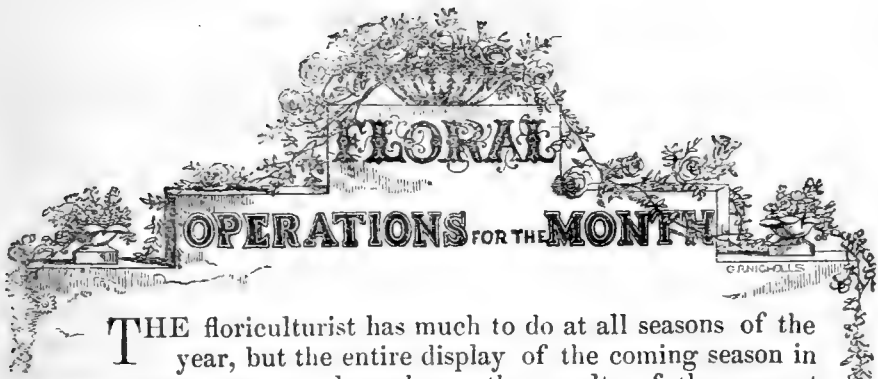
4. The average heat of the greenhouse is from 45° to 55° . Is the temperature high enough to flower the following *Passiflora*—*Kermesina princeps*, *racemosa*, *cœrulea*, and *edulis*,—and will they all bear fruit?

[1. Being in a greenhouse at the temperature stated, it will not be likely to be excited to grow before the beginning of April, that period will be early enough to prune and dress it, and it will then be quickly re-furnished.

2. The *Begonia* having been long in bloom, probably the pot is very compactly filled with roots, and requires to be re-potted into a larger to promote a fresh growth. The greenhouse at the temperature stated is too cold for its flourishing in winter (now December 21st), and it will in consequence assume a yellow hue. Take the plant into a stove, &c., after re-potting, and it will soon grow and flower again, If there be not the stove convenience, &c., let the plant have a period of rest, giving very little water for the next two months.

3. *Beaufortia* should be grown vigorously, for in proportion to that will be its bloom. Grown weakly it must not be expected to flower. It flourishes in a compost of equal portions of loam, sandy peat, and leaf mould, a good-sized pot and liberal drainage. It is very handsome when ornamented with its fine scarlet flowers. If the plant of *Epacris* be healthy it blooms as freely as others. They flourish in a very sandy turfy peat, in a chopped rough (not sifted) state, and free drainage. These are essential to produce a vigorous growth and fine bloom. Just before turning the plants out of doors in spring let them be shifted into fresh pots and soil, otherwise the roots being so fine and delicate the hot sun against the pots is apt to destroy the points and causes the plant to be sickly, and sometimes destroys it altogether.

4. The four *Passifloras* will not do as well as in a stove, but in the greenhouse they must be kept in the warmest part, and by judicious management in that particular they will bloom freely from July to October. *P. edulis* will not do there as well as the others. All the species of *Passiflora* will produce seed if impregnated, and of course a fruit, but the kinds which are considered the eatable ones are, *P. edulis*, *incarnata*, *laurifolia*, and *quadrangularis* or *granadilla*. These require to be cultivated in the stove. All *Passifloras* grow freely in equal parts of loam, sandy peat, and leaf mould, in a rough state.]



THE floriculturist has much to do at all seasons of the year, but the entire display of the coming season in a great measure depends on the results of the present period, as the supply of plants must now be provided, and whether it is to proceed from seed, be propagated by cuttings, or increased by division, a prompt attention now is essential to success.

IN THE FLOWER GARDEN.

If severe weather occurs, sufficient protection must be afforded to all tender plants, but on all favourable occasions, as far as can conveniently be done, take off the covering in order to dispel any damp air. See that all newly-planted shrubs remain secure, so the roots are not loosened by the wind. Planting trees, shrubs, &c., ought to be done as early as possible, guarding against the frosty air damaging the fibrous roots; as little exposure as possible is essential to success in growth. If Rose Trees are to be planted they must be done this month, or success is hazardous, and if they live they do not usually do well that season. Prune the open-air kinds of the entire hardy class. Perennial and biennial plants in the flower bed may be divided. Plant out Hollyhocks as soon as possible, if they are to bloom well the coming season; so with any of the biennial plants. Pink beds, see that the plants remain secure, and stick some whin or fir-tree branches in among the plants, or make a low hedge of them around the bed, in order to screen the plants from the strong cold wind; a top dressing of well-rotted hot-bed manure should be given. Fresh soil should be added to all flower-beds; it very much promotes the production of a profusion of flowers. Manures should be laid over the roots of Roses, removing a few inches of the earth, filling up the hollow with well-rotted cow or hot-bed dung, and sprinkle it over with soil, so it may dry. Collect soils, &c., for forming compost, such as turf, peat, loam, &c. If the surface of beds of bulbs has become hard and stiff, stir it over frequently, in order to admit that free atmospheric influence to the roots which is essential to success. Polyanthuses in beds ought to have three or four inches thick of dry leaves carefully laid over it, but not to bury the plants; add a sprinkling of soil to hold the leaves from blowing away, and, in severe weather, a few short sticks pricked in over the bed would support a mat for covering.

Take the first opportunity about the middle of the month, if the weather be dry, to plant the Ranunculuses and Anemones, placing them at five inches apart, and an inch and a half deep from the crown to the surface; and if the soil be dry, after planting, press the surface with a flat board. If the formation of the bed has not been effected,

dig out a space half a yard deep, and put all over the bottom a layer of cow manure five or six inches deep; after which fill up with the proper compost (see articles upon). Auriculas and Polyanthuses in pots should have plenty of air in fine weather; take off a portion of the surface soil, and fill up with a rich compost (see last month's Calendar for these as well as on Carnations, Picotees, and Tulips). Be careful that the latter-named plants be firmly secured in their positions, so that they be not damaged by wind. A small protection against strong wind should be provided on the bed side and most exposed; and Carnations will require more water now. Pinks, take care to secure them from being blown and twisted by wind; a few sticks pricked among the plants will steady them. Press the soil to the plants. Stir the surface of the beds occasionally. Heartsease in beds should have a similar protection, and a little fresh soil spread over the bed. Auricula seed should be sown in a light loamy soil, and the pots or boxes be placed in a cool pit; the surface must be made even by pressure with the bottom of a pot; keep the surface just moist whilst the seed vegetates. Now is the time to make a plan of the flower garden, parterre, &c., and to mark each bed with the kind of flowers required, and then to prepare a stock to furnish accordingly, whether from the sowing seed or otherwise, as with Verbenas, &c.

IN THE FORCING FRAME.

Sow seeds of the tender annuals, as Balsam, Amaranthus, Cockscomb, &c., in pots, and the half-hardy kinds, as Asters, Stocks, &c., either in pots or upon a bed of soil, &c. When sown in pots, do not water the surface at the time, but after a few days, if the soil be dry, a gentle sprinkling may be given, and afterwards, till the plants are up, great care must be taken to keep it moist, for when once softened, if the seeds become dry, destruction soon follows. Gardenias should be forced now, as also other similar plants. (See list in Stove department.)

Cuttings of Hemimeris, Salvias, Heliotropes, Geraniums, Lotus, Bouvardias, Anagallis, Verbenas, Petunias, and such like plants for the open beds in summer should immediately be struck, or the plants will be too weak to answer the purpose. If cuttings were put off in autumn they should now be potted off singly into small pots, they will then be well established by turning out time; any long ones amongst them should be stopped to induce laterals and make bushy plants.

Dahlia roots should be immediately put to force; if increase is requisite, take off the shoots when about four inches long.

Dahlia seed should be sown in pots, and only just covered. Lobelias, too, should be potted singly at the close of the month to have them vigorous by turning out time. Boxes and pots of Mignonette for succession should be sown. Achimenes, Gesnerias, Gloxinias, &c., should be introduced to promote their immediate growth, and as soon as the plants have pushed, pot them, singly or otherwise, as desirable. Amaryllis, &c., may be excited in like manner. Hyacinths, &c., approaching bloom, must be placed in an airy, light situation, and to those in glasses give a change of water every three or four days. At the

closing part of the month pot singly *Tigridia pavonia* and *T. conchiflora* into small pots. Sow immediately in pots seed of the Chinese Primrose, and as soon as the plants are fit to pot off do so in a rich compost; keep them in heat for a short time, and never water them over-head, as they are liable to be rotted off by its remaining in the centre; care, too, is necessary not to give too much at the roots, for if kept *wet* they soon become sickly. The plants properly treated will bloom fine the same season. The fringed flowered kinds are the best. *Cinerarias* should now be forwarded by re-potting, due attention to watering, &c. They often require fumigating, being so very subject to the green fly. *Calceolarias*, too, should be encouraged to have them large, they, as well as *Cinerarias*, succeed best when grown in a warm, moist, airy pit-frame, kept at about 56 degrees of temperature. Thus kept, and temperature increased with the season, they will bloom luxuriantly, duly potted, &c., and when coming into bloom may be removed to the greenhouse, &c. *Jacobæa* and Guernsey Lilies, &c., should be re-potted. *Mignonette* be sown in pots for early summer blooming. *Fuchsias* required for exhibition should now be cut in so as to have them a good shape, and after having pushed a little be re-potted, thinning away all unnecessary shoots.

IN THE COLD FRAME AND GREENHOUSE.

All air, in dry favourable weather, must be admitted, so as just to keep frost out. If damp a gentle fire may be applied when air cannot be admitted. *Pelargoniums* to be superb specimens should be re-potted into their blooming pots (read the several articles on their culture in previous volumes), they must have a free circulation of air around the plants, it gives vigour to the shoots and prepares them for a higher temperature afterwards without injury, and a stronger bloom is produced. Fumigate to destroy green fly. The one-year old plants headed down last autumn will have produced young shoots, now a few inches long. If not already properly thinned do it directly. In order to have a succession of bloom, now stop the shoots; this will induce the production of lateral ones, which will come into bloom after the first race of plants have ceased, and continue to a late period of the season. A few more plants stopped a month later will supply to the end of the year. Attention to the provision for succession is very necessary by all persons who have but room-windows for a habitation for their plants. An excellent compost for *Pelargoniums* consists of equal parts of turfy sandy loam, which has been cut and turned for a few months previous, and well rotted manure. (See last Volume, p. 199.) The surface soil in all pots should be stirred up; it tends to health. *Epacris*, *Correas*, *Coronillas*, *Acacias*, *Cinerarias*, and other plants, will now be coming into bloom, water seldom as possible, but when given, let there be as much as will moisten *all* the soil. *Ericas* will still generally be inactive, therefore give but little water as required, and recollect their proper situation is in the most airy part of the house, but guard them from north-east winds very carefully. If any mildew appears, dust with sulphur. *Camellias*, too, should occupy an airy part, and the greatest care taken

to keep the soil in an equally moistened medium state, using water of a temperature equal to that of the house; if these points are neglected it is likely the flower buds will drop. Give weak manure water alternate with the other. Continue to preserve all inmates of the *cold frame* in as quiescent a state as possible. In all cases when very severe weather continues for some time, it is necessary to keep the sashes close, and perhaps to retain during day as well as night the matted covering; much caution is therefore required to avoid destruction by damp. Admit air in abundance whenever the weather permits, and occasionally, when a mild day presents, clean the pit throughout, stirring the surface a little, also scrupulously remove all dead leaves and branches from the plants. Carefully and sparingly give water now and then, as absolutely required only. By observing these rules, injury from frost and damp is avoided. *Alstroemerias*, *Lilium speciosum*, and others should be re-potted. Any young plants which have filled their pots with roots should be potted into larger, as they require, from time to time. If a syringing of the plants over head be really necessary, let it be done in the morning of a day which is likely to be fine, and air be admitted freely.

IN THE STOVE.

Old plants of *Fuchsia corymbiflora* now gently pushed on will come finely into bloom by the first week in May, or if the season be fine, earlier. Exotic seeds should now be sown (see articles in former volumes). Successive introductions of plants forced must be brought in, as *Roses*, *Lilacs*, *Azalea*, *Acacia*, *Heliotropes*, *Correa*, *Coronilla*, *Cineraria*, *Sweet Violets*, *Cactus*, *Cyclamen*, *Gardenia*, *Justicia*, *Eranthemum*, *Honeysuckle*, *Pinks*, *Gesneria zebrina*, *Nerium*, *Mignonette*, &c., and pots or boxes of *Hyacinth*, *Narcissus*, *Persian Iris*, *Crocus*, so as to have a constant succession of bloom. (See remarks on *Hyacinth* in *January Calendar*). All the plants now enumerated are suited, too, for a warm conservatory, and as that useful appendage is often contiguous to a room they are doubly charming in such a situation at this early season. *Orchidaceous* plants should be re-potted now, as they may require. Take care that a due proportion of moisture is maintained in the atmosphere, although most of this tribe require to be quite dry at the root during the rest season; yet they still require a somewhat moist atmosphere. Specimen plants for exhibitions will require re-potting, pruning, &c. *Ixoras* should be elevated so as to be near the glass in order to set their bloom, they must have plenty of air at all times convenient. Attacks from red spider at the under side of the leaves must be looked after and at once be destroyed, or they will soon spread their ravages, as will be exhibited by the leaves becoming brown and spotted.





1. *Browallia Jamesonii*
2. *Browallia juncea*, "Juncea."



FLORICULTURAL CABINET

MARCH, 1849

ILLUSTRATIONS.

BROWALLIA JAMESONII—MR. JAMESON'S BROWALLIA.

MOST of our readers are doubtless acquainted with some of the species of this pretty genus, the annual *B. grandiflora*, and *B. elata*, having long been summer ornaments of the greenhouse and flower-garden. The beautiful one we now figure far exceeds all the others. It is, too, an evergreen shrubby plant, with something of the habit of the Myrtle. It flourishes in the greenhouse, and blooms profusely throughout the summer. It is a native of Peru, in the northern parts, growing in woods, where it forms a handsome bush from two to three feet high. It was discovered by Mr. Lobb, Messrs. Veitch's collector. We saw it shown at the floral exhibitions at Chiswick and Regent's Park Gardens the last season by Messrs. Veitch. It is found hardy enough to be preserved in a pit-frame through winter. It grows freely, is readily increased by cuttings, and well merits a place in every greenhouse.

VERBENA JUNIUS.

The Verbena is one of the loveliest ornaments of the flower-garden. Their great variety and beauty, also their peculiar adaptation for decoration when grown either singly, in masses, or in vases, rustic baskets, rock-work, &c., renders them universally esteemed, and every properly furnished flower-garden will contain some of this charming tribe. During the last five years much attention has been directed to the raising of seedlings, in order to obtain flowers of an improved form and substance of petal. One of the most successful cultivators is Mr. Barker of St. Margaret's, who last year raised the very distinct, beautiful, and fine-shaped variety we have figured in our present plate. A particular description of it and several other of his very fine new

varieties about to be sent out the coming spring, are given in our last month's advertising sheet. We frequently visited the bed of seedlings at St. Margaret's last summer, and can bear testimony to the superior merits of the flowers.

We solicited Mr. Barker to give us particulars of his method of culture, and we have been favoured with the following remarks:—

THE VERBENA.—It is now some twenty years since, when visiting the neat, but small, nursery of our esteemed friend, Mr. Robert Shipp, of Palgrave, in Suffolk, my brother and myself first saw that sweet floral gem the old *Verbena Melendris*; there were eight or ten plants, each producing a single truss of bloom; with which we were so much delighted, that, after sundry consultations, we ventured to inquire, "What is the price of a plant of the *Verbena*?" The reply was, "One shilling." Happy, fortunate boys! we really, unitedly, possessed the sum required to purchase a single plant, and although bankrupts in cash, we esteemed ourselves rich indeed in floral wealth. Our prize was borne in triumph to our little patch of garden, planted and tended; where it amply repaid all our attentions with its liberal crop of bright and beautiful flowers.

Years passed on, and our little stock increased annually; at length *Tweediana* was introduced, purchased, and added to our stock. Again, a short time, and *Teucroides* made its appearance; that was also purchased, and from that we saved our first seeds. The *Verbena* is associated with the recollections of our early childhood; it has been our innocent, cheerful companion through youth; it is now our especial floral favourite. Not to the exclusion of the many other classes of florists' flowers; far from it, we are great admirers of all, and, for general purposes, we do not think the *Verbena* has not an equal. How many and varied are the situations for which it is adapted! In the humble cottage garden, on the decaying stumps of trees, on the rough and rugged rock, in rustic tubs and baskets, in the richly decorated vase, in the greenhouse or conservatory, in the well kept garden of an amateur, or on the grand parterre of the noble and the great, it is equally at home.

How rich and varied are its colours, ranging from a most dazzling scarlet to the most pure white! How delightfully sweet is the perfume diffused by many varieties! Its habit is also various; some growing erect, and others being perfect creepers; suited, too, for training over ornamental wire-work frames or baskets, or for hanging pendant, around the sides. And if we add to its many other good qualities the very long period it continues in bloom, we think we shall have said sufficient to prove our former assertion,—“that it is entitled to universal favour.”

No plant is of more easy cultivation than the *Verbena*; the beds should be prepared directly after the old plants are destroyed by frost, giving them a good dressing with well-rotted manure; the remains of an old cucumber bed is preferred by us for the purpose. Turn up the soil to the depth of from twelve to eighteen inches, leaving the surface rough, to be well pulverized by the frost. In the early part of April, level down the beds, stirring the soil about three inches deep; the beds will then be ready to receive the plants. The distance

from each other must be determined by the effect to be produced. If to form masses, twelve inches will be sufficient, but if for single specimens, or to produce flowers for exhibition, then three feet apart will not be too much. After planting, the shoots should be regulated; being neatly and securely pegged down, to prevent them being disturbed by the wind. All the after attention they will require will be to (remove the pegs from) time to time as the shoots elongate. And should the season prove dry, supply them with water, using liquid manure every third time liberally for all high or bright colours, but with caution for light or white flowers.

Cuttings should be taken about the end of August, and be planted in sand or any other light soil under a north or west wall, and covered with a frame or hand-glass, where with little attention they will be rooted in about a fortnight.

When well-rooted, plant singly into three-inch pots, using a soil composed of equal parts of turfy loam and peat; place them in a close frame for a few days until the plants are established in the fresh soil, after which they may be gradually exposed to the full influence of sun and air. Stop every shoot at the second joint, to make the plants bushy; allow them to remain in the frame till the end of October; then remove them to a cool pit or airy greenhouse, where they may be protected from frost. All the attention they will require through the winter will be an occasional watering. Stopping, and (should the mildew make its appearance) a slight dusting with sulphur.

In the first week in March (weather permitting) they may again be removed to the frames, and exposed as before to the sun and air. Under such treatment, the plants will be very hardy, short jointed, and quite prepared for turning out in the second week in April, and will stand fully exposed to four or five degrees of frost uninjured. These directions merely apply to the good old established varieties; with new sorts, of course, the case is widely different. The plants of such new varieties are but seldom to be obtained from the nurseries until the second week in April, and as such plants will have been propagated in spring it will be advisable to protect them for a short time, and prepare them by degrees for exposure in the flower-garden; indeed, the safest time for planting out *Verbenas* propagated in spring, is the second week in May.

The great advantages derived from early planting, with well prepared plants, is, an early and abundant crop of flowers, and of very long duration.

NOTES ON NEW OR RARE PLANTS.

AERIDES CRISPUM—SIR RICHARD BROOKE'S AIR PLANT.

Orchidaceæ. Gynandria Monandria.

THIS very beautiful species is a native of Courtallam, in the East Indies, and has bloomed in the collection of Sir Richard Brookes, Bart., at Norton Priory. The whole genus of *Ærides* are handsome; but this is the most lovely, and one of the rarest. It has recently bloomed in the noble collection at the Royal Gardens of Kew. The racemes of

flowers are drooping, and from eight to ten inches long. A single flower is about two inches across. The sepals and petals are white, tinged with rose. The lip is very large, three lobed, the middle one fringed at the edge. At the base it is white, with the rest of a deep rosy-purple. It merits a place in every collection (Figured in the *Bot. Mag.* 4427). Its natural habit is to grow on trees, blocks of wood are usually used in this country set upright, three or four feet long; to the top of which the roots are secured; and as they descend, the long block allows space. The *Ærides*, Mr. Smith observes, do well when the roots can affix themselves to the walls of the stove, especially if moist. Chimney-pipes answer well, moistening the surface. The *Ærides* require a very warm part of the Orchid-house.

BROWALLIA SPECIOSA.

A fine shrubby new species introduced by Messrs. Veitch's. The flowers are about an inch and a-half across, of a blueish lilac, with a pale yellow eye. It is a valuable plant for the greenhouse or conservatory.

DIPLADENIA NOBILIS—NOBLE DIPLADENIA.

This handsome species is a native of Brazil. It is a stove-climber, and delights to be placed in full exposure to the sun, or the flowers will not fully open, nor be in equal profusion. It delights in a compost of equal parts of loam, peat, and sand. In the growing season, it requires a moist atmosphere and a free supply of water at the roots. Weakish liquid manure occasionally given is very beneficial. In the winter, keep it dry, a season of rest being required. The flowers are borne in terminal one-sided racemes, of six or eight together. The corolla is tube bell-shaped, two inches long, the expanded surface border, about the same across. There are two varieties of it, one a pretty pink colour, with a darker inside tube; the other white, with a dark rosy inside tube: both are handsome, and merit a place in the stove. (Figured in *Pax. Mag. Bot.*) It is now in several of the London nurseries.

EXACUM ZEYLANICA—CEYLON EXACUM. (Syn. *Chironia trinervis*. *Lisianthus Zeylanicus*.)

A beautiful annual, which has recently been raised from seed in the Dublin Botanic Garden, and where it bloomed in September last. The stem grows erect, terminating in a corymbously branching, blooming head of flowers. A single flower is about an inch and a half across, of a rich purple-blue. It is a valuable acquisition, and merits a place in the stove, or warm greenhouse, probably in summer. Seeds should be sown early in spring, and be potted off singly as soon as ready. The pots should be placed in saucers, and occasional supplies of water be given in them. The soil should be of an open turfy character, and a liberal drainage be given, to allow the surface water to pass away freely.

LISIANTHUS PULCHER—BEAUTIFUL LISIANTHUS.

Mr. Purdie discovered this very beautiful species in New Grenada. It has bloomed in the stove at the Royal Gardens of Kew, and with

Messrs. Lucombe and Pince at Exeter. It is a tall shrub, and Mr. Purdie states, in its native country grows from five to seven feet high. The flowers are produced in terminal panicles, each having from twelve to twenty; the blossoms are drooping. A single flower is an inch and a half long, tubular-funnel shaped, with a five-parted limb, of a very rich scarlet colour, having the inside of the mouth streaked with yellow. It is a valuable acquisition, and ought to be in every close warm greenhouse. It thrives in an open peat soil well drained. Pieces of limestone mixed with the soil has proved beneficial in promoting its growth. In its native situation it grew at an elevation of seven or eight thousand feet, therefore requires a light atmosphere.

LOASA PICTA—THE PAINTED-FLOWERED.

This pretty species was discovered by Mr. Lobb in the Andes mountains of South America. It is an annual, and very probably hardy. The stems rise about a foot high, branching. The flowers are borne in leafy racemes, drooping. Petals reflexed; the lower half is of a bright yellow, and the rest white. The centre nectaries are white, beautifully mottled with red. A single blossom is an inch and a half across. The plant flowers profusely. It is a very handsome and highly interesting species. It has bloomed at Messrs. Veitch's, of Exeter. (Figured in *Bot. Mag.*, 4428.)

MACLEANIA PUNCTATA—DOTTED-LEAVED.

Vaccinæ. Decandria Monogynia.

Sent from the Andes of El Equador by Mr. Lobb to Messrs. Veitch, in whose greenhouse it bloomed last summer. It is a low shrub, producing its showy flowers in long terminal clusters. Each flower is an inch long, cylindrical tube formed, bellying, swollen at the lower half. They are of a rich rosy-red, with five-parted limb (mouth) white tinged with yellow. It flourishes in loam and peat, and the pot well drained. (Figured in *Bot. Mag.*, 4426.)

MILTONIA SPECTABILIS, var. PURPUREA-VIOLACEA.

This beautiful variety has bloomed in the orchideous stove at the Royal Gardens of Kew. Sepals and petals are of a deep rich purple colour. Lip a pale lilac-purple. Each flower is nearly five inches across. The Miltonias do best in shallow pots, well drained, and fixing the plant in rough peat soil, mixed with chopped sphagnum, moss, and broken potsherds. They require a high temperature, but shade in summer.

THE RANUNCULUS BED.

HAVING previously treated on the cultivation of the Ranunculus, I now propose to communicate some new and important facts, the result of experiment, on the formation of the bed. If this be properly done, success is certain; provided the plants be let alone, and not destroyed or injured by watering, which, nine times out of ten, is the root of all mischief. The beds should have been made in September

or October, being composed of about two parts rich pasture soil and one part old pulverisable cow manure. The top four inches, however, should consist simply of soil to which a little sand has been added, that it may be preserved free, and hence little liable to cracking, the greatest disaster to the Ranunculus bed; the uppermost two inches, in which the roots are set, should contain still more sand, say one-third, or a fourth, with this view, as well as conducing greatly to the expansion and size of the tubers themselves. When the bed becomes cracked, the moisture, even in the lowest parts of it, quickly evaporates, and the long delicate roots are torn asunder and destroyed; hence, in very dry seasons, the whole surface of the bed should be carefully covered with nearly half an inch of sand, which is quite effectual in preventing the evil, and is more cleanly, more easily applied, and more beneficial than bark or moss.

Notwithstanding that all practical writers on the Ranunculus have again and again inculcated the necessity of making the beds early, it will be found that five florists out of six neglect the precaution; and then the universal complaint is raised, that the flower is uncertain, capricious, and of impossible culture! I never yet knew an individual who did not admire the Ranunculus; nay, who did not admit, on beholding a well-bloomed collection—literally presenting all the varied tints and colours known even to the pencil of the painter—that it was the first of florists' flowers; yet nine out of ten will conclude, with all the air of injured innocence and misfortune, "as for their parts, they could never grow them." It is simply because they never fairly tried. To such—however undeserving—I will now point out a "royal road," by which success is certain; at least it has proved so with me for two years, though I would still urge the excellency of the plan above pointed out. Six weeks before planting time (*i. e.* St. Valentine's day), let the soil of the bed be dug out two feet in depth, put in four inches of good pasture soil, and then prepare the following solution:—Fill with soft water a large tub (or garden cart, moving on wheels, which all should possess), put into it two or three shovelful of fresh—quite fresh—cow manure, and stir it well up with a garden rake, till it acquire the consistency of thin pea-soup; pour this out with a watering-pan (the rose being taken off) upon the four inches of soil, till it is completely saturated. When the liquid is absorbed, which will be in a few minutes, carefully remove from the surface of the soil any small lumps of manure, straw, &c., which may be left thereon. Then put on other four inches of soil; saturate this as before, and pick off pieces of litter or manure; and so proceed with the rest of the bed, putting on four inches of soil, and saturating it with the liquid. Lastly, put on four inches of soil, mixed with sand, as explained at the beginning of this article, which must not receive any of the liquid. I have tried this plan two years. The first year was with roots of shy sorts, which had become so small that I judged them incapable of blooming in the main bed. To my surprise, they presented the most vigorous bloom in my collection. Last year I tried it more generally; and though it was the most unpropitious season in the memory of man for Ranunculuses, the roots so treated gave me a plentiful bloom, while the rest of my

bed was certainly below par. Let not your readers shake their heads at this plan: a very wise head, viz., Mr. Lightbody's, was shaken at it when I first communicated to him my intention of trying it. I shall, this year, adopt it with one-half my valuable seedlings, that come what weather it may I may be sure of a vigorous bloom. I am fully aware of the danger of overstimulating the *Ranunculus*, by which a strong bloom may often be got for one or two years, but which induces a dwindling and falling off of the roots for the future; but if the roots, for three years, bloom well and take up well, I shall not hesitate to recommend this as the best of all plans yet devised. All the nutritious and stimulating ingredients contained in the fresh manure being so diluted and intimately and equally dispersed through the soil, offer appropriate, easily digestible, and absorbable ingredients of nourishment; and, of course, this is altogether different to the mixing or digging fresh manure *en masse* in the soil. The roots of the *Ranunculus* will not penetrate a piece or mass of fresh manure, but perish, if kept in contact with it; and hence the necessity of using very old manure, when the bed is made in the ordinary way. Mr. Lightbody's plan, and he is a great authority, is to put a stratum of three or four inches of old manure eight inches below the surface, the soil above and below being only very moderately enriched. He also recommends that the roots should be immediately planted in soil made light and free with sand—they take up so much larger. Indeed, the roots of the *Ranunculus* penetrating so deep as fifteen or twenty inches, it is to the middle and lower depths that we must most carefully attend: here the soil must be retentive and without sand.

I should state, that the soil in this neighbourhood is stiff and clayey; and hence the necessity of using so much sand in the surface of the bed. Where the soil is naturally light, and not disposed to crack, my precautions will be the less called for.—*Dr. Horner, in the Gardeners' Chronicle.*

CHOROZEMAS.

THIS showy tribe of greenhouse plants well merits a place in every greenhouse. The following method of treatment with *C. angustifolium* by Mr. Leach has succeeded most admirably in the gardens of S. Rucker, Esq., of Wandsworth (as given in the *Gardeners' Chronicle*). It is equally applicable to all the tribe.

Early in March or April he re-pots a small plant, six inches high, into a nine-inch pot, using Wimbledon peat, rotten turf, and vegetable mould, in equal parts, to which is added a good sprinkling of silver sand: this is passed through an inch and a half meshed sieve. An inch of crocks or bits of charcoal is given for drainage, over which is put two inches of the roughest of the soil; then fills round the ball of the plant with the compost. The surface of the ball inclines from the trunk of the plant to the side of the pot, to prevent water lodging round the trunk; which, if not guarded against, often kills the plants. The surface is an inch lower than the rim, to allow sufficient water to be retained at the time of watering. After potting, the plant is placed

in a cool pit or frame for six weeks; then it is fully exposed till September, when it is replaced in the pit or frame, and just kept from frost, also from cold draughts, or it will not be healthy long.

To preserve the plant from red spider, it is occasionally laid on its side, and syringed with warm soapsuds. Water sparingly in winter. The plant is cut down to about eight inches in the following April; this induces the production of young shoots, and when they push it is re-potted into a twelve-inch pot. In the above-named compost, a liberal drainage, and bits of charcoal—the size of a walnut, is mixed in the soil. The plant is then placed out of doors, in not too shady a situation. The shoots are thinned, tied, and properly regulated, stopping the leads when necessary, to keep the plant bushy. If the points of the shoots be pinched off early in November, it causes the plant to bloom profusely in early summer.

OUR ISLAND FLOWERS: THEIR POETRY AND ASSOCIATIONS.

BY WILLIAM JOHNSTON, ESQ., BALLYKILBEG HOUSE.

How shall we find words to express our sentiments on those exquisite beauties whose every petal is poetry, and whose images are entwined in the day-dreams of every mortal who is at all sensible of poetic associations? One is almost afraid, in this cold, calculating age, of uttering a thought concerning the graceful and the lovely, lest the demon of gold should crush them with his destroying hand, or with his pestilential breath dispel the idealities which make up so large a part of the joys of life.

Of all earth's pleasures, there is none so pure, or, shall we thus express it, so like the enjoyments of paradise, as that delight arising from sweet converse with flowers—those fairest of all the Creator's works, and which, perhaps, have undergone the least change of all terrestrial things from the desolating effects of sin.

Exists there an inhabitant of Britain, brought up among its hills and valleys, its woods and streams, who has not beheld with intense delight the first pale PRIMROSE—that earliest of vernal flowers, and favourite of life's short spring-time—raising its fair head from among the green drapery of the bank? Pale as the lunar rays, and, with the moon, sharing equally the devotion of the poets, it reminds one of the fair maiden who stoops to gather its blossoms, at the same time thinking, perhaps, of some loved brother, who in childhood used to sit with her beside the Primrose bank; or dwelling, it may be, on the memory of a sainted parent, who has since gone to her home beyond the stars.

What a charm there is about the Primrose! It attracts not notice by the gaudy lustre of its colours, nor secures attention by the strength of its sweet perfume; but as the dawn of morn surpasses in beauty the full blaze of a summer day, so the Primrose, the dawn of flowers, while gay exotics have each their coterie of admirers, enchants every one by its simple elegance, and recalls long forgotten images and

scenes of other] days, which time itself has not been able entirely to erase.

The lowly, modest DAISY claims, equally with the Primrose, a place in the lays of the poets, and in the reminiscences of days gone by. It uncloses its eye with the day, and speaks of the Omniscient Eye, who sees alike the past, the present, and the future, and to whom not even the Daisy is beneath notice.

But there is a little fairy flower which peeps forth in the morning of the year, often wearing a snow-wreath mantle, and vieing in aërial form with the elegant flakes, which seem as it were the falling robes of the spirits of the sky. When the wintry blasts are over, and the storm of life is past, the spirit rises, and leaves things earthly behind; so the SNOWDROP, in vestal drapery, rises with angel-like form from the earth, and having been as it were dead in the autumn before, again awakes to life; teaching mortals to hope, and anticipate re-union with those friends who are "not lost, but gone before."

At the time when grim winter's icy reign ceases, and spring—royal maiden—treads the flowery path to her sylvan seat, hailed with songs of welcome by a thousand woodland minstrels, she gathers the VIOLET as her train sweeps along, and selecting it from many bright jewels, 'twines it, wreathlike, among her flowing, golden tresses. There is not, perhaps, among the flowers, one more full of poetry, or one which conveys a better idea of the adorable and angelic. Certainly, were we asked to point out the flower which was to rank as the emblem of perfection in the feminine character, we should unhesitatingly raise to our lips a blossom of the *White Violet*.

What shall we write of the WOOD SORREL? Its delicate pencilled flower, and sensitive, emerald coloured leaves, appear as if, having survived the shock in Eden, they were painfully agitated by, and unequal to contend with, the storms which now rage from pole to pole; yet, frail as it appears, when the tempest passes over, it rises, uninjured, to new life. It is supposed to be the true shamrock of Erin; and its leaf, three in one, reminds the Irish emigrant of the [green isle, and sends his thoughts over the blue waters to his former home.

(*To be continued.*)

ON THE VEGETATION OF BRAZIL.

MR. GARDNER was a pupil of Sir W. J. Hooker when he was botanical professor at Glasgow; and while there, having devoted much time to the study of natural history, and botany in particular, and his mind being excited by the glowing descriptions which former travellers had given of the natural productions of the tropics, he was seized with an ardent desire to travel in such regions. Mr. Gardner is now Director of the Botanic Garden at Ceylon; and his narrative under notice was principally compiled during his voyage from England thither.

About two months after his embarkation, on the 20th of May, 1836, Mr. Gardner first set foot on the shores of the great continent of the new world, at Rio de Janeiro. Soon after his arrival at Rio, Mr.

Gardner tells us, he made the acquaintance and gained the friendship of a family that had already travelled in distant parts of South America, and who were devoted to pursuits similar to his own; in their company he made many excursions in the vicinities of Rio:—

“In order to present some general idea of the splendid scenery of the country, and the leading features of this part of Brazil, I will give an account of some of these excursions. There is a path by the side of the great aqueduct, which has always been the favourite resort of naturalists who have visited Rio; and there is certainly no walk near the city so fruitful either in insects or plants. The following notes were made on the return from my first visit along the whole length of the aqueduct. After reaching the head of the Laranjeiras valley, which is about two miles in extent, the ascent becomes rather steep. At this time it was about nine A.M., and the rays of the sun, proceeding from a cloudless sky, were very powerful; but a short distance brought us within the cool shade of the dense forest which skirts the sides of the Corcovado, and through which our path lay. In the valley we saw some very large trees of a thorny-stemmed *Bombax*, but they were then destitute both of leaves and flowers, nearly all the trees of this tribe being deciduous. There we also passed under the shade of a very large solitary tree which overhangs the road, and is well known by the name of the Pao Grande. It is the *Jequetibá* of the Brazilians, and the *Couratari legalis* of Martius. Considerably further up, and on the banks of a small stream that descends from the mountain, we found several curious *Dorstenias*, and many delicate species of ferns. We also added here to our collections fine specimens of the tree-fern (*Trichopteris excelsa*), which was the first of the kind I had yet seen. The forests here exhibited all the characteristics of tropical vegetation. The rich black soil, which has been forming for centuries in the broad ravines from the decay of leaves, &c., is covered with herbaceous ferns, *Dorstenias*, *Heliconias*, *Begonias*, and other plants which love shade and humidity; while above these rise the tall and graceful tree-ferns, and the noble palms, the large leaves of which tremble in the slightest breeze. But it is the gigantic forest trees themselves which produce the strongest impression on the mind of a stranger. How I felt the truth of the observation of Humboldt, that, when a traveller newly arrived from Europe penetrates for the first time into the forests of South America, nature presents itself to him under such an unexpected aspect that he can scarcely distinguish what most excites his admiration, the deep silence of those solitudes, the individual beauty and contrast of forms, or that vigour and freshness of vegetable life which characterize the climate of the tropics. What first claims attention is the great size of the trees, their thickness, and the height to which they rear their unbranched stems. Then, in place of the few mosses and lichens which cover the trunks and boughs of the forest trees of temperate climes, here they are bearded from the roots to the very extremities of the smallest branches, with ferns, *Aroideæ*, *Tillandsias*, *Cacti*, *Orchideæ*, *Gesneriæ*, and other epiphytous plants. Besides these, many of the large trunks are encircled with the twining stems of *Bignonias*, and shrubs of similar habit, the branches of which frequently become thick,

and compress the tree so much, that it perishes in the too close embrace. Those climbers, again, which merely ascend the trunk, supporting themselves by their numerous small roots, often become detached after reaching the boughs, and where many of them exist, the stem presents the aspect of a large mast supported by its stays. These rope-like twiners and creeping plants, passing from tree to tree, descending from the branches to the ground, and ascending again to other boughs, intermingle themselves in a thousand ways, and render a passage through such parts of the forest both difficult and annoying.

“Having reached by mid-day the level on which the water of the aqueduct is brought from its source, we continued our walk along it for upwards of two miles. Our progress, however, was slow, from the number of new objects continually claiming our attention. In damp shady spots by the side of the aqueduct we found the common water-cress (*Nasturtium officinale*) of Europe, which is one of the few plants that is truly cosmopolite; and on the rocks grew some little European mosses, which, being old acquaintances, recalled pleasing thoughts of home. Numerous ferns, and many strange-leaved *Begonias* grew along the side of the little stream. While collecting specimens of a moss, I had a providential escape from a poisonous snake; I caught it in my hand along with a handful of the moss, which was soon dropped when I perceived what accompanied it. Venomous snakes are not uncommon in the province of Rio de Janeiro; but accidents do not so often result from them as might be supposed.”

“The Corcovado mountain offers a rich field to the botanist. I frequently visited the lower portions, but only once ascended to the summit. The ascent is from the north-west side, and although rather steep in some places, may be ridden on horseback all the way up. Some of the trees on the lower parts of it are very large. The thick underwood consists of Palms, *Melastomaceæ*, *Myrtaceæ*, Tree-ferns, *Crotons*, &c.; and beneath these are many delicate herbaceous ferns, *Dorstenias*, *Heliconias*, and, in the more open places, a few large grasses. Towards the summit the trees are of much smaller growth, and shrubs belonging to the genus *Croton* are abundant, as well as a small kind of bamboo. The summit itself is a large mass of very coarse-grained granite. In the clefts of the rocks grow a few small kinds of Orchideous plants, and a beautiful tuberous-rooted scarlet-flowered *Gesnera*.”

About fifteen miles from the city rises the Gavea or Topsail Mountain.

“Among the loose rocks at the foot of the mountain we made a fine collection of beautiful land shells, and on the rocks by the sea shore we found the beautiful *Gloxinia speciosa*, which is now so common in the hot-houses of England, growing in the greatest profusion, and covered with flowers. Along with it grows a kind of wild parsley, and, twining among the bushes, a new kind of Indian cress (*Tropæolum orthoceras*, Gardn.). On the face of the mountain, at an elevation of several hundred feet, we observed some patches of one of those beautiful large-flowered Orchideous plants which are so common in Brazil. Its large rose-coloured flowers were very conspicuous, but we could not

reach them. A few days afterwards we found it on a neighbouring mountain, and ascertained it to be *Cattleya labiata*. Those on the Gavea will long continue to vegetate, far from the reach of the greedy collector."

Immediately opposite the Gavea is a mountain called the Pedra Bonita. On one excursion to this mountain—

"A great part of the top we found to be covered with the beautiful lily-like *Vellozia candida*, on the branches of which grew a pretty *Epidendrum*, with rose-coloured flowers. Along with the *Vellozia* grew two beautiful subscaudent species of *Echites*, one with large dark violet-coloured flowers, the other with white ones of a similar size. They both exhale an odour not unlike that of the common primrose, but more powerful. On the edge of a precipice on the eastern side, we found, covered with its large rose-coloured flowers, the splendid *Cattleya labiata* which a few days before we had seen on the Gavea."

"Other excursions to the islands in the bay, and to Jurujuba, on the opposite side of it, were also productive of many interesting species of plants. It was at the latter place, on dry bushy hills, that I first saw the really beautiful *Bugiuvillea spectabilis* growing wild. It climbs up into the tops of the bushes and trees near which it grows, and the brilliant colour of the flowers, which it produces in the greatest profusion, renders it conspicuous in the woods at a great distance. This, as well as the equally beautiful *Bignonia venusta*, are much cultivated as ornamental climbers in the suburbs."

From the Organ Mountains many beautiful plants have already reached our gardens. His ascent he describes:—

"The whole length of the road is through one dense forest, the magnificence of which cannot be imagined by those who have never seen it, nor penetrated into its recesses. Those remnants of the virgin forest which still stand in the vicinity of the capital, although they appear grand to the eye of a newly-arrived European, become insignificant when compared with the mass of giant vegetation which clothes the sides of the Organ Mountains. So far as I have been able to determine, the large forest trees consist of various species of Palms, *Laurus*, *Ficus*, *Cassia*, *Bignonia*, *Solanum*, *Myrtaceæ*, and *Melastomaceæ*. In temperate climates natural forests are mostly composed of trees which grow gregariously. In those of tropical countries it is seldom that two trees of a kind are to be seen growing together, the variety of different species is so great. Many of the trees are of immense size, and have their trunks and branches covered with myriads of those plants which are usually called parasites, but are not so in reality, consisting of *Orchidææ*, *Bromeliaceæ*, *Ferns*, *Peperomiæ*, &c., which derive their nourishment from the moisture of their bark, and the earthy matter which has been formed from the decay of mosses, &c. Many of the trees have their trunks encircled by twiners, the stems of which are often thicker than those they surround. This is particularly the case with a kind of wild fig, called by the Brazilians, *Cipo Matador*. It runs up the tree to which it has attached itself, and at the distance of about every ten feet throws out from each side a thick clasper, which curves round, and closely entwines the other stem.

As both the trees increase in size, the pressure ultimately becomes so great, that the supporting one dies from the embrace of the parasite.

“There is another kind of wild fig-tree, with an enormous height and thickness of stem, to which the English residents give the name of Buttress-tree, from several large thin plates which stand out from the bottom of the trunk. They begin to jut out from the stem at the height of ten or twelve feet from the bottom, and gradually increase in breadth till they reach the ground, where they are connected with the large roots of the tree. At the surface of the ground these plates are often five feet broad, and throughout not more than a few inches thick. The various species of *Laurus* form fine trees; they flower in the months of April and May, at which season the atmosphere is loaded with the rich perfume of their small white blossoms. When their fruit is ripe, it forms the principal food of the Jacutinga (*Penelope Jacutinga*, Spix), a fine large game bird. The large *Cassiæ* have a striking appearance when in flower; and, as an almost equal number of large trees of *Lasiandra Fontanesiana*, and others of the *Melastoma* tribe, are in bloom at the same time, the forests are then almost one mass of yellow and purple from the abundance of these flowers. Rising amid these, the pink-coloured flowers of the *Chorisia speciosa*—a kind of silk cotton-tree—can be easily distinguished. It is also a large tree, with a stem covered with strong prickles, from five to eight feet in circumference, unbranched to the height of thirty or forty feet. The branches then form a nearly hemispherical top, which, when covered with its thousands of beautiful large rose-coloured blossoms, has a striking effect when contrasted with the masses of green, yellow, and purple of the surrounding trees.

“Many of these large trunks afford support to various species of climbing and twining shrubs, belonging to the natural orders *Bigno-niaceæ*, *Compositæ*, *Apocynæ*, and *Leguminosæ*, the stems of which frequently assume a very remarkable appearance. Several of them are often twisted together and dangle from the branches of the trees, like large ropes, while others are flat and compressed, like belts: of the latter description I have met with some six inches broad, and not more than an inch thick. Two of the finest climbers are the beautiful large trumpet-flowered *Solandra grandiflora*, which, diffusing itself among the largest trees of the forest, gives them a magnificence not their own; and a showy species of *Fuchsia* (*F. integrifolia*, Cambess.), which is very common, attaching itself to all kinds of trees, often reaching to the height of from sixty to one hundred feet, and then falling down in the most beautiful festoons.”—*Extracted from Mr. Gardner's Travels in Brazil.*

ON CAMELIAS.

BY E. W. B.

I HAVE purchased some plants with flower-buds upon them, will they bloom well in a dining-room constantly in use, having a bow-window facing the east?

[Yes, keep them where they will receive all light possible. Never

allow the soil to be quite dry or buds will drop off. Keep the soil just moist, not at the surface merely, but through the entire ball; do not, however, keep it soddened. In rooms the leaves and stems are liable to get dusted over, let them be cleaned twice a week with a sponge and water, or hold the plant sideways, whilst a good washing is given by means of a water-can with its rose on. When it is mild out of doors a little air admitted at the window will be beneficial. With the above attention they will be found to succeed well.]

ON THE HOLLYHOCK.

THE cultivation of this magnificent Eastern plant is of great antiquity in this country. Its noble size, majestic height, and splendid flowers, could not fail to attract the attention of our earliest collectors of floral plants. It is not recorded when it was first introduced into this country, but was grown in the gardens as early as 1564, and mentioned by Dr. Turner.

The derivation of the English name is traced to the Saxon language, the old name of Holyoak being the same as the Saxon Holihec. In floral language it is figured as the symbol of fecundity, and its extreme fruitfulness seems to justify the device. The Hollyhock is very common in China, and the yellow in some parts of Africa, in the Marootzee country. Linnæus describes it as a native of Siberia. We have but few flowers that contribute more to the embellishment of large gardens than the Hollyhock; it is not suited to a small parterre, its aspiring height befits it for a nobler situation where to display its grandeur and beauty of appearance. The noble stalks are like so many floral banners garnished with magnificent Roses of variety of colours, embracing every shade of the Rose from the palest blush to the richest crimson, and from a pure white; the yellows are equally numerous, until they reach the richest orange, from which the colour is carried to a dark chestnut. Others are dyed from a reddish purple to a rich deep, and running up to a black. We gave a descriptive list of our finest varieties in the last November number of this Magazine. So much do we admire this fine flower that we have cultivated many thousand plants annually. To give full effect to the Hollyhock they should be planted in clumps of one colour, and arranged so as to have the colours nearest together, and be so different as to produce the greatest contrast, as light colours next the darks, &c. We have so arranged them in clumps (at irregular distances) of from ten to twenty plants in each, backed by shrubs, and the large masses of finely contrasted colours produced a most splendid effect.

It delights in a deep well-enriched loamy soil upon a dry substratum. It is readily increased by division in autumn and cuttings in spring. New improved varieties are, of course, obtained from seed, sowing it in April, and planting them out for proving their character in September or October. They now rank as show flowers at the exhibitions. We have seen them presented by a single flower of each sort, but the most proper method is by short spikes, half a yard to two feet long. To have such in a proper state of bloom the top of a branch should be cut

off a week or ten days before the time for exhibition, and the cut being made rather near the flower will soon be covered by the bloom, and a dense spike of flowers be obtained. A collection of these noble flowers ought to be in every garden. Some of the stalks of fine varieties should be cut down as soon as the bloom ceases, or even before, in order to cause the production of shoots around the stem at the bottom, either to furnish stems for the following year's blooming, or to prove shoots for a division of the plant in autumn. The Hollyhock blooms the best in the second year from planting out.

WINTERING SALVIA PATENS AND SIMILAR PLANTS.

BY J. H.

LET a dry day be chosen to take up the plants, and let the tops be cut off and the soil shaken from their roots. Lay them for a few days in a shed to dry, and having procured a box or old tub sufficiently large to hold the roots when packed closely, get some dry sandy peat, finely broken: a layer of the roughest of this, about an inch thick, should be laid at the bottom of the box; the roots may then be packed as closely as possible in layers, and the spaces between each filled with peat. When the box is full, give it a good shaking, and press it well down with the hands, to stop up all the cavities; finally covering the whole about two inches thick with the rough part of the peat. The box may then be removed to a cellar or other convenient place, secure from frost, where it may remain without any further care until the following spring. In the same manner, Fuchsias, scarlet Pelargoniums, weakly Dahlia roots, and similar plants, may be preserved through the winter. It must, however, be observed that scarlet Pelargoniums, Fuchsias, &c., will require to be taken out of the boxes much sooner in the spring than *Salvia patens*.

ON EXHIBITING CARNATIONS, &c., WITH CARDS.

BY AN OLD CARNATION GROWER.

I HAVE observed an article in a contemporary publication in which it is insisted that Carnations and Picotees should be shown on cards, stating, they can be as easily judged, and as it saves the exhibitor trouble, the matter should be so decided. Now without saying a word against the indolence that would suggest such a sacrifice of the beauties of a flower to save a little trouble, I will take leave through the medium of your pages to remind those growers or exhibitors who advocate the plan, that there are hundreds of old and first-rate florists who have over and over again decided that Pinks, Carnations, and Picotees should hold themselves in their proper posture without the aid of ties or cards, or any other artificial support, and a split pod or a falling guard-petal, or a tie on one flower in a stand should disqualify the whole. But, further, I deny the assumed facts that the flowers can be judged as well, or as quickly. If the rules, that a flower shall be fresh, the petals stand out well, without any artificial support, and that

the pod shall not be split, be adhered to, the judges must remove the card of every flower to see that they are not split and that the flowers are not loose; and so to save a lazy exhibitor a little trouble with twelve flowers, the judges must have the collected trouble of the whole transferred to them. On the other hand, if the object of the advocates of such a system be to make the card a cover from split pods and tumble-down flowers, I hesitate not to assert that there is too much genuine floriculture remaining, and too much enthusiasm for good flowers existing, to permit the intrusion of such a system—one utterly at variance with the first principles of floriculture. These flowers have certain points which constitute perfection; they should be half a ball; the guard-petals should stand out square and firm; the pod should be whole; fresh flowers should beat stale ones; yet if the plan dictated in the article I have referred to was adopted, it would destroy the effect of all these beautiful points, and at once reduce a clean, fresh bloom, perfect in its way, to the level of a burst pod, broken guard-leaves, and a loose bundle of petals held together with a card, and with the additional disadvantage that the burst and bad flower would be the largest.

TO PROPAGATE HOLLYHOCKS.

THE easiest method of cultivation which I have discovered, combining certainty of colour and form, is to select and mark such that you wish to propagate; then, in June or early in July, (as the season best suits,) cut a branch off the plant or plants selected into as many pieces as there are eyes, or shoots, allowing a space of two inches on each side of the eye. Cut them into such lengths, and slit them down the middle, removing all the pith from the inside; put them immediately into some soil or earth in a shady place, (say the north side of your garden,) about an inch deep, keeping the eye above the earth; water, and cover with a hand-glass, and if hot weather, water well over the glass, but do not disturb it. In six weeks there will be nice young plants, which should be planted out early in November, in such places as required. They will blossom freely in the June following. This plan is the only one which I have found to my satisfaction; it may induce others to try some improvement which may prove even better.—*Cottage Gardener.*

ON SALVIA PATENS.

BY A CURATE.

THIS superb blue flowering plant is one of the finest ornaments for the parterre or flower-garden. Complaints have been made of the shortness of its season of blooming profusely. I have adopted the method of shortening a portion of shoots to cause the production of lateral ones, doing it just before the blooming commenced, so that when the shoots left uncut were ceasing bloom, the lateral ones were beginning to flower. By this mode of treatment, I kept up a fine display from May to October.

ARRANGEMENT OF FLOWERS AS TO COLOURS, &c.

BY G. B. N. OF SOMERSET.

IN our last Number some remarks on this subject from a Correspondent were inserted. The table of colours there alluded to was lost, but discovered afterwards, too late, however, for insertion in that Number. Our Correspondent hopes, in which we unite, that some lady amateur, whose province, perhaps, it is, would specify the colours, in some such way as the following table suggests:—

1. <i>Colour.</i>	2. <i>Complimentary Colour.</i>	3. <i>Contrast.</i>	4.
Scarlet. Orange. Yellow. Red. Maroon, <i>e. g.</i> Louis Philippe Verbena. Pink. Pale Lilac, <i>e. g.</i> Vangendi Verbena. Rosy, <i>e. g.</i> Mesembryanthemum tricolor. Crimson, <i>e. g.</i> Basilisk or Barberi Verbena.	White. Blue. Purple. Green.		This fourth column might contain examples to illustrate the proposed arrangement, and perhaps there should be another column between 2 and 3, to give illustrations of that also.

CONVERTING A GLOOMY ROOM INTO A CHEERFUL ONE.

BY ELIZABETH.

ABOUT one year since I was induced to try an experiment on a gloomy sitting-room window, facing a narrow street, by substituting plants for the usual appendages of blinds, &c. The plan I adopted was this:—on the outside of the window, I had a shelf fixed as close to the glass as would but just allow for the opening of the sash, and raised about a quarter of a yard from the ledge on which it stands; on the other side of the window, in the room, is a stand consisting of two shelves, the height of which comes about a quarter of a yard lower than the one outside, the other shelf of the stand being about the same distance from the top, next the same, from the floor; a row of plants are then arranged on the outside of the window, on the shelf placed there, care being taken that they occupy the intervals left between the plants in the room, so as to exclude the light as little as possible, merely with a view to supply the deficiency of a blind. Thus arranged in three successive rows (not crowded) the effect is very well, converting a dull sitting-room into a pleasant one. The “tout ensemble” appeared really as one, and the illusion scarcely perceptible, at the same time occupying hardly any space in the room, so as to be inconvenient. Though an amateur in floriculture, I am a great admirer of this interesting department of the Almighty’s love and power, who has scattered these fair relics of paradise around us, thus enlivening the desert of human life—yet too often in vain—on his blind and erring creatures, who though rather seeking happiness in those things which remind them the least of them, and banish them from their

minds, turn heedlessly from the delights around them. To that class of your readers who, like myself, have no facilities for the cultivation of flowers beyond good windows and airy sitting-rooms, a few directions often prove very useful, such, for instance, as appeared in the December Number, pages 298-305, and 315. Will you state more particularly whether the plants referred to in those articles may be cultivated with any degree of success by those who have neither greenhouse, hot-beds, &c., at their command, perfect specimens of floriculture not being so much the object as a succession of flowers throughout the year? and are they (the winter ones especially) suitable to the window before alluded to? I ought, perhaps, to have added that there is not so much light as could be desired.

THE RANUNCULUS.

A WRITER in the Florist, who has had twenty-seven years' experience in cultivating the Ranunculus, states, that the varieties degenerate with age, and bloom weakly in proportion, and that such degeneracy is more the cause of failure in blooming this beautiful tribe than any other cause. During the first seven years he had procured roots of all the best kinds, but being disappointed with the bloom, he had nearly given up all future attempts at cultivation. Observing, however, a bed of seedlings in vigorous bloom in Mr. Tyso's garden, he resolved on an annual sowing, selecting out the best sorts for future cultivation. He has done it for the last twenty years, and during that period has had a fine vigorous bloom every season. Some of the flowers of his earliest raised seedlings now begin to bloom much smaller than formerly, and he believes no change of soil or climate could bring them back to their former vigour. He advises the purchasing of youthful seedlings, or annually to raise seedlings. He annually refreshes his beds with a few barrows of maiden earth, mixed with pig or horse dung. To be a successful grower, procure seed or youthful seedlings. To save good seed, as soon as the bloom ceases, place a cover over the stem to protect the head from wet, as moisture prevents the seed ripening. Seedlings bloom well the second season.

TREE MIGNONETTE.

THE *Reseda odorata*, or common sweet Mignonette, treated after the following manner, forms a real treat in the conservatory during the winter and spring months.

Sow in spring in a number of small 4-inch pots. When up, clear off all the plants but one in the centre; as it grows train it upwards to a stick until it is a foot high, or two, if you please; do not allow any side shoots to grow on the stem, and remove all leaves to within a few inches of its top. When the plant gets as high as you wish it, top it, and then it will throw out side branches; as they advance, pinch off their tops until you have formed a nice bushy head to your plant, and above all things do not allow any bloom to appear until it has become strong, which will be by winter, if it has been well attended to. For

the first winter it will be advisable not to have them in larger than 8-inch pots. Mignonette being an annual, if the seeds are not picked off after flowering, it is ten to one that the plant will die. I have had excellent Tree Mignonette three years old; very bushy, and full of flower all winter. Mignonette is often neglected at Midsummer, when our hands are full of other work, and yet this is the very time when Tree Mignonette wants most care, for the flowers not being wanted during summer, ought then to be removed, in order to have a fine winter display. To keep worms from entering and disturbing the roots, add a handful of soot at each shifting over the drainage.

Mignonette delights in sandy loam, not too light, and being a gross feeder, a little diluted manure-water may be given once a-week with advantage. If this is contemplated, the mould need not be made so rich in the first instance.

Winter Mignonette, as it is generally called, requires to be treated differently from the above. It is generally sown about the 20th of August, if later it will not acquire sufficient strength by winter for the London market. I generally grow from eight to ten plants in a 48-sized pot, which is six inches deep. For this sowing, it is safest to use a light sandy and rather poor mould, for if the latter is too rich and strong the plants damp off during winter. Out of nearly a thousand pots, I have often scarcely lost one by attending to this, by not allowing a drop of rain to fall on them during winter, by never watering them unless they were flagging, and by admitting at all times plenty of air. In the case of frost coming, however, they are closely covered up, sometimes for a week or fortnight together; and if you have not followed the above rules, you will suffer severely from damp. Do not expose your plants for some days after the frost breaks up, and that only by degrees; above all things do not expose them to the sun. My anxiety to give them light, after being so long covered up, has sometimes led me for the moment to forget this, and I have suffered severely for my negligence.

Should the winter prove mild, the plants will root into the ashes they are placed on; therefore they must be lifted up occasionally to break the roots. Slugs will annoy you if you do not look after them; they fatten on Mignonette. To retard some of the pots, pinch the heads off the plants; by this means they will not flower so strongly as those not pinched, and will yield a succession of bloom.—*Gardeners' Chronicle*.

INK FOR WRITING UPON ZINC.

BY BURRIENSIS.

TAKE of verdigris, in powder, and of crude sal ammoniac, of each one drachm; lampblack, half a drachm; water, one fluid ounce and a quarter (that is, ten drachms); mix these ingredients well, and put the whole in a two-ounce phial, as there will be a little effervescence. This makes a most excellent and permanent ink for writing upon zinc. I have tried it. Keep the zinc in the house for three days, after you write on it. You may then expose it to any weather. I have tried, but in vain, to rub out the writing, with water and a brush.

Use a quill pen—not a steel one.

FLORAL
OPERATIONS FOR THE MONTH
IN THE FLOWER GARDEN.

MANY matters which we noticed in our last month's Calendar will require attention this month, we very respectfully refer our readers to read it. Proceed, however, without loss of time to complete all necessary alterations in this department, such as removing shrubs, planting edgings, laying turf, cutting the grass edges of walks, rolling grass-plots, &c. Shrubs requiring increase by layers may be done now, in a similar way to the Carnation; some of the tough-wooded kinds do well by having the branch twisted at the part where the cut in laying would have been made. All perennial and biennial border plants which it may be desirable to increase should be parted at once. Where they have spread out large, the most ready way is to divide them with a spade into as many pieces as are wanted. Add fresh loam, leaf-mould, rotten dung, &c., to beds, before sowing seeds or replanting. Now is the time to decide upon some arrangement of plants for the beds of the flower garden, in order to give plenty of time to prepare a stock of those required. Hardy annuals, to bloom early in the summer, may be sown in sheltered situations. Cover them with finely sifted soil, and press it gently down on the seeds. Finish pruning Roses. Take especial care to be providing plants of every class required for bedding out on lawns, flower gardens, &c., in April or early in May. No delay must be allowed. German Asters, Geraniums, &c.

FLORIST'S FLOWERS.—At this time *Auriculas* and *Polyanthuses* that were top-dressed in proper time, and since received due attention, will have commenced growing. Admit air on all favourable occasions, to prevent them being drawn. Where increase is not particularly required, it will greatly strengthen the bloom by removing all side shoots as they appear. Give every attention, to maintain the plants in vigour. Manure water should be given once a-week, taking care it is not poured upon the foliage. Sheep's dung, put into a tub, and soft water poured upon it, in quantity so as it forms a strong liquid, is very serviceable. The dung must be collected for a few weeks before using. Old cow-dung will also answer the same purpose. If any appear too forward in showing bloom, it is best to leave them to take their chance of being in condition when wanted. Checking is almost sure to induce small and uneven flowers. Sow seeds of the above.

Anemonies and *Ranunculuses* must be finished planting immediately. If no bed had been prepared for them, it may be made by taking out the soil to the depth of fifteen or eighteen inches, and replacing it at the bottom with a layer three or four inches thick of cow-dung, and filling up with soil composed of decayed turfs taken from a loamy pasture. The mode of planting is in drills, and to press the tubers

down, so that they rest firmly, drawing the soil over them to the depth of two inches. The arrangement of the varieties is purely a point of taste; some, when they are for exhibition, keep each sort to itself, in rows, across the bed. The only advantage of this is that the best blooms are more easily selected. Such as were planted in the autumn will now be making their appearance above ground. It is very necessary to keep the soil well round the crown of the plant; when this is neglected the bloom suffers. Should the weather be severe, protection will still be requisite. *Tulips* require continued attention, as directed last month. Any that happen to be affected with canker will appear sickly; the roots should be examined, and the damaged part 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. If by any casualty they get frozen, then, early in the morning, sprinkle the tops over with cold water, and keep them covered over for an hour or so before they be exposed, as the sun must not be allowed to shine upon them until the frost is all out. *Carnations* and *Picotees* may, at the end of the month, receive their final shifting. The pots known as No. 12's are the size usually employed. In potting, place at the bottom two inches deep of crocks, to give free drainage. Use a compost—which is best if it has been previously prepared and become well incorporated together—of these proportions: 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*, by breaking very well with the spade. Place the plants in a sheltered situation out of doors, and let them be carefully looked after. All those not required for potting plant out in rows in a bed, each plant being a foot apart in the rows, and two feet from row to row. Where frost has disturbed the roots of *Pansies* in beds, they should be pressed into their places, and a top-dressing of rich mould given to them, all over the bed. In forming new beds the plants should be placed six or eight inches apart, and the situation where they can have all the benefit of free air. Plants in pots, under glass, will require shifting into larger sizes, for as this is the period when they begin to grow, they will soon become weak, and bloom out of character, if confined in small pots. If beds of *Pinks* were not planted in autumn early in the month they may be. In removing the plants, whether out of pots or open ground, be careful to retain all the ball of roots, and as uninjured as possible. For the open bed use a trowel for removing with. When planted, water, to settle the soil around the roots. *Hyacinths* in beds ought to have protection from sharp frosts, and on fine days the surface soil should be stirred over occasionally. To have *Roses* bloom late in the season now cut off the shoots to below where the new buds have pushed.

IN THE FORCING FRAME.

Sow seeds of any tender and half-hardy annuals that have been omitted, and introduce them here. Sow liberally of *Cinerarias* and *Chinese Primroses*, for if the plants be properly attended to, they will produce a fine bloom for autumn. Such as have been sown, and are up, should have all possible air given, to prevent their being drawn.

In watering, it must not be 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 tepid water. Annuals sown in frames—*Cockscombs*, *Balsams*, *Thunbergias*, &c.—if large enough to pot, should be done in 60-sized pots.

Sow seeds of *Dahlias*, *Fuchsias*, *Petunias*, *Verbenas*, &c., as soon as possible; cover them lightly with fine sandy soil, and press the surface smooth with a piece of flat board. Seeds of most greenhouse plants will do well if sown now. *Dahlia* roots, brought in last month, will have begun to push shoots, which, when about three inches long, should be taken off, cut close under a joint, and stuck in sand. Continue to put in cuttings of all kinds of plants intended to bed out. Re-pot and forward *Amaryllises*, *Gesnerias*, &c., as directed last month. *Ipomeas*, *Echites*, and similar plants, may be trimmed in, disrooted where necessary, and brought here to excite early growth.

IN THE GREENHOUSE AND COLD FRAME.

Continue to admit all air possible. Re-pot the various inmates as required from time to time, and examine to see that the drainage is free. If any of the soil looks black and wet, and the pot feels heavy, there is something wrong. If any of the pots are too full of roots, the plants should be removed into pots a size larger; and the soil should be rich, light, and moderately porous. There is a soil which is good for almost every kind of greenhouse plant—loam, with the turf rotted in it, decayed cow-dung, leaf-mould, peat-earth, chopped small or rubbed through a very coarse sieve, and road-sand, equal quantities of each; it will do for everything; but if we had Heaths to grow, we should treble the quantity of peat-earth, and not alter the others, so that it would be one of each of the others and three of peat-earth, instead of one all round. In moving a plant from one pot to another take care that the plant be not sunk in the least more in the new pot than it was in the old one, and see that the compost, well mixed up, is made to go down very nicely all round the old ball of earth. Plants shifted in this way should have a little water to settle the earth to the roots. All the shelves of the greenhouse, and all the plants should be cleared of dead leaves, and the places kept very clean.

Calceolarias, *Verbenas*, *Petunias*, and other young stock, intended either for decorating the flower garden or to bloom in pots, must, as growth advances, have the shoots stopped, which will cause them to be bushy. *Fuchsias* require similar attention, forming cuttings of the young shoots, if desired.

Camellias exhausted with flowering should now receive a little extra attention. Our practice is to remove them to a cooler situation for three weeks, on the principle of slow breaking, and to give the root a chance of overtaking, in some degree, the expenditure which has taken place in the system. Any pruning necessary is performed at this juncture; no plant can succeed better, after judicious pruning, than the *Camellia*.

See that *Lilium speciosum*, &c., are not saturated by watering. Let the *Azaleas* be re-potted, if required, and they must be pushed on by

additional warmth ; an increase of pot-room contributes to vigour. (See our last volume on Azaleas.)

IN THE STOVE.

Successive introductions of plants for early bloom should still be attended to, as directed last month. See to pruning in such creepers as are overgrown, before fresh growth commences. Complete all potting as early as possible. Orchidaceous plants, especially, should be done at once, in order to obtain as early a growth as convenient. Use plenty of charcoal, in lumps, and keep plenty of indestructible material round the outside of the pots, to facilitate the passage of both air and moisture with rapidity. Increase atmospheric moisture in proportion to heat and light. Look sharp after insects ; the snails, &c., are very fond of the young buds at this period, and soon cause great injury. Orchids recently imported should have a warm and constantly moist atmosphere for a few weeks, until they begin to grow, but no water should be applied to them until that period, and then with moderation. They will fill their pseudo-bulbs by atmospheric moisture alone, and all excitement otherwise risks the well-being of the plant.

MEALY BUG ON PLANTS.

A CORRESPONDENT in the *Gardeners' Journal* has applied the following mixture for destroying the insect on plants, and it has never failed to effect it. One pint of neats'-foot oil, half an ounce of soap-liniment, and half an ounce of mercurial-ointment, moderately heated, so as to blend them together.

The writer is of opinion that the oil alone would be sufficient.

SONGS OF THE FLOWERS.

FLOWERS ! what numerous associations the word brings to the mind ! Of what countless songs, sweet and sacred, delicate and divine, are they the subject ! But the eloquence of flowers is not so generally understood as it might be by our countrymen ; they do not allow themselves leisure to admire sufficiently, or enjoy the beauties of nature.

Flowers, however, have, and do speak, a poetic language, clear and intelligible, in many instances expressive of the intensity of feelings to which common language is inadequate. In connection with the marriage ceremony, our forefathers assembled at day-break crowned with flowers ; flowers were strewed in the path of the bride and bridegroom ; the house was garlanded with them ; singers and dancers appeared crowned with oak, myrtle, and hawthorns ; the bride and bridegroom were crowned with poppies ; and upon their approach to the temple a priest received them at the entrance, presenting to each a branch of ivy—a symbol of the tie which was to unite them for ever.

A friend has promised to supply us with one subject for each successive number of our Magazine, the selection being in unison with the season in which it appears, and, we believe, they will meet with the approval of all our readers. The author prefaces the one which we insert in this Number as follows—CONDUCTOR.

In these floral lyrics, a humble attempt is made to give an harmonious interpretation to the “ language of flowers.”

If the received characteristic of the flower be cheerful, the author trusts that its song is so arranged as to image that cheerfulness : if, on the contrary, it be symbolic of grief, that a correspondent tone pervades its plaint.

Those flowers, to which classic or other legends belong, preserve their old traditions, and tell of them in their songs ; and in the choruses (one for each season's congregated flowers) a rude endeavour is made to bring the cheerfulness of Spring into pleasing contrast with the sadness of Winter.

NO. 1.--SONG OF THE PRIMROSE.

BY JOHN DUGGAN, ESQ.

Hark ! I hear the soft peal of my fairy-love's bell,
 As he calls me to 'wake from my trance in this dell,
 Where through the dark Winter I slept, while bright gleams
 Of Spring's coming joy soothed my wind-cradled dreams.

Now the tempests are gone ; and rude Winter's afar
 In the bleak icy north, where no pretty flowers are ;
 And on rose-coloured wings glides dear Spring to the earth—
 Lo ! she breathes o'er this bank, and sweet sisters have birth !

Spring, gentle Spring ; why so long didst thou stay ?
 Dearest mother ! ah, promise thou'lt ne'er pass away
 From thy children, who love thee, and live in thy look ;
 Who languish and die when by thee they're forsook.

Thou art kindest mother ! I feel thy sweet kiss,
 And no fear of drear Winter o'ershadows my bliss.
 Come forth lovely sisters, and hie through the dale,
 While, like coy nymphs, we blush, fondly wooed by the gale.

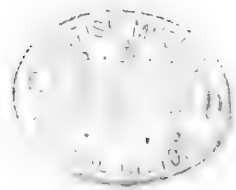
See ! the butterfly comes through the hawthorn glade,
 To tell to his Primrose what conquests he made ;
 " That his heart's all mine own "—this his tale is to me—
 " That I still am his lady-love, queen of the lea !"

Yet while he plays the rover, and flirts in far bowers,
 Many lovers come courting me—bees, flies, and flowers ;
 With these rivals I laugh ; and if modest and meek
 I, at times, allow one to salute my soft cheek.

Thus I pass the bright day ; and now dew-bringing eve,
 Round the deep cloud of gold which the day-splendours leave,
 Hangs a rich purple fringe, spreading far in the West,
 Till its folds on the dim mountain top seem to rest.

Ere I close my meek lids comes the glow-worm nigh,
 And he lights his love-lamp with a gleam from mine eye ;
 While my crimson-leaved sister, the Ev'ning Primrose,
 Richer shines in the rays her lamp-lover bestows.

As my nodding head 's drooping, night dews o'er me weep,
 And the black-beetle's lullaby hums me to sleep.
 Then my dreams give me back all the joys of the day—
 Dost thou envy the Primrose her happiness, say ?





Aillet de Bohême.



FLORICULTURAL CABINET

APRIL, 1849.

ILLUSTRATIONS.

VAN GEERT'S ŒILLET DE BOHEMIA DAHLIA.

THIS very beautiful Dahlia is another valuable acquisition to what is termed the Fancy Class. We recently received a root of it, along with a drawing of the flower, from Mr. C. Van Geert, of Antwerp. Its great beauty, and excellency in other respects, entitles it to a place in every collection of these noble flowers; and in any flower-garden it would be one of its loveliest ornaments.

NOTES ON NEW OR RARE PLANTS.

ABRONIA UMBELLATA.—UMBEL-FLOWERING.

Nyctaginaceæ. Pentandria Monogynia.

MR. HARTWEG discovered it in California, and sent it to the Horticultural Society, in whose garden it has recently bloomed. It grows naturally creeping upon the ground, but does remarkably well when trained as a climber. The flowers are produced in great abundance from June to November, in heads very similar to the Verbena; they are of a pretty rosy-purple, with a lighter centre. They emit a very delicious fragrance, especially in the evening. It is a very good bedding plant for the flower-garden in summer, as well as for pot-training. (Figured in *Pax. Mag. Bot.*)

AZALEA QUEEN PERPETUAL.

This new variety we recently saw in bloom at Messrs. Knight and Perry's nursery, King's-road, Chelsea. The flowers are of medium size, a bright rosy-pink, with upper petals slightly spotted on a crimson ground blotch. It is a neat-formed flower.

BEJARIA COARCTATA.—CLOSE-FLOWERED.

Ericaceæ. Polyandria Monogynia.

It is a very neat evergreen shrubby plant, growing about a foot high, and blooms profusely. The bush is similar in its growth to a *Rhododendron hirsutum*. The flowers are borne in large terminal racemes, of twenty or more in each. A separate blossom is about an inch and a half across, having seven petals, a pale rose streaked with a deeper colour. It has bloomed along with Chinese Azaleas in the greenhouse at Messrs. Lucombe, Pince, and Co., of Exeter. It is supposed likely to prove a hardy shrub. (Figured in *Bot. Mag.*, 4433.)

CALONYCTION MACRANTHUM.—LARGE-FLOWERED.

Convolvulaceæ. Pentandria Monogynia.

A magnificent perennial greenhouse climber, with an elongated tuberous rhizoma, and long, smooth, milky, climbing stems, of a sombre purple colour. The lower leaves are cordate-ovate, acuminate; the upper ones hastate, with roundish basal lobes. The flowers grow in umbels of four or five together in the axils of the leaves; they are large and strong; the calyx is tubular, deeply five-parted, the three outer segments membranaceous at the borders, and bearing on the outside a long divaricated horn; the tube of the corolla is cylindrical, delicate green, merging to white at the summit; the limb pure white, nearly five-lobed, each lobe being traversed by a broad fold or plait, which is prominent underneath, finely striated, and inclining to green. The flowers are from six to seven inches across, and the tube alone more than four inches long. Native country not known. It is the *Ipomæa Krusensternii* of the Belgian gardens.

CHIRITA MOONII.—MR. MOON'S CHIRITA.

This very fine species is a native of Ceylon. It blooms during the whole of summer, and its large rich purple flowers streaked with yellow are highly ornamental. It merits a place in every hothouse. During summer we found it bloom well in a warm greenhouse, and requiring similar treatment to the *Gloxinias*. It was figured in our last year's volume, and now in *Pax. Mag. Bot.*

DENDROBIUM DEVONIANUM.—THE DUKE OF DEVONSHIRE'S
DENDROBIUM.

Certainly one of the loveliest of all orchideous plants. It is a native of the Khoseea hills, in the East Indies. The flowers are borne in a rather dense terminal raceme. The ground colour is white. Sepals slightly tinged with purple. Petals, the tips have a rich purple spot. The lip is elegantly fringed, and its pure white ground beautifully ornamented with two large spots of rich orange, and its terminal point tipped with purple. A separate flower is about two inches and a half across. The flowers are produced on leafless stems during the dry season. It merits a place in every collection. (Figured in *Bot. Mag.*, 4429.)

DIELYTRA SPECTABILIS.

This new Fumaria-like plant was brought from China by Mr. Fortune. When vigorous it grows half a yard high, producing three or four axillary racemes of flowers, each about nine inches long. The blooms hang down in regular succession of opening. Each flower is an inch and a half long, and about one wide; the exterior petals of a beautiful rose-colour, and the small interior ones white, with a little purple tip. It is a very interesting plant, and blooming freely in winter and early spring months, is truly a valuable acquisition. By a process of successive treatment, it is a likely plant to bloom all the year, and be an interesting object for the sitting-room, greenhouse, or stove. In bloom at Messrs. Knight and Perry's.

GESNERIA PICTA.—PAINTED GESNERIA.

Sent from Columbia to the collection of the Royal Gardens of Kew. The flowers are produced on a long terminal spike-formed raceme. Each blossom is an inch long, ventricose-formed, scarlet with yellow beneath. (Figured in *Bot. Mag.*, 4431.)

GLOXINIA FIMBRIATA.—FRINGED-FLOWERED.

M. Ketchu, of Paris, sent this very handsome species to the Royal Gardens of Kew, where it bloomed last autumn in great beauty. The flower is large, two inches and a half long, and nearly as much across the mouth; white, with a slight tinge of lilac in some parts. Tube inside a deep yellow, beautifully spotted with red. It is a very distinct species, and highly merits a place in every collection. (Figured in *Bot. Mag.*, 4430.)

GOMPHOLOBIUM VENUSTUM.—THE BEAUTIFUL.

Mr. Drummond discovered this lovely species at the Swan River colony; seeds were sent to Messrs. Knight and Perry, and in their establishment at King's-road, Chelsea, it has bloomed. It is a twining plant, blooming profusely. The flowers are in clusters of ten to twelve in each, at the ends of the branches, of a reddish-purple colour. It is a charming species. (Figured in *Pax. Mag. Bot.*)

GOMPHOLOBIUM HIRSUTUM.—THE HAIRY.

Mr. Drummond also discovered this species in the same locality as the *G. venustum*. It is of a similar habit. The flowers are produced in terminal clusters, of a deep rich yellow colour. (Figured in *Pax. Mag. Bot.*)

Gompholobiums require a compost of equal portions of light loam and sandy heath-mould, with a little silver-sand. A free drainage, dry air, and judicious watering are essential to success. Half-ripened side-cuttings inserted in silver-sand, and placed in a gentle bottom heat, soon strike root.

KENNEDYA EXIMIA.—THE CHOICE KENNEDYA.

Mr. Drummond sent this handsome climbing plant from the Swan River colony to Messrs. Knight and Perry. It is a profuse bloomer,

and very ornamental. The flowers are borne in axillary racemes, and are a bright scarlet colour with a golden eye; and when the plant is at its prime, it appears a mass of bright scarlet and gold. It deserves a place in every greenhouse.

MILTONIA KARWINSKI.

A very beautiful orchideous plant from Mexico. The flowers are produced in a long raceme. Sepals and petals bright yellow, spotted and barred with a rich brown. The lip is white at the point, deep violet at the base, and of a bluish colour in the middle. In the collection at the Chiswick Gardens. A most lovely species.

PENTSTEMON VERPLANCKII.

Raised by M. Verplancke, of Ghent. It is a variety of what has commonly been called in this country *P. gentianoides*, but extremely vigorous; the stem rises a yard high, and produces a large panicle of flowers. The tube of the blossom is funnel-shaped, of a bright purple colour, becoming rose towards the end limb; the throat is white. It is in the Belgian gardens, but no doubt will soon be sent into this country.

We obtained a new *Pentstemon* from the Continent, one of which, out of a number we possess, we planted in the open border last April; it has not yet bloomed with us, but has grown so vigorously that it is now seven feet high, with numerous strong branches, and has endured the winter well. We have been informed by a nurseryman from the Continent that he had seen it in bloom, and each flower was as large as that of a common Canterbury Bell.

CORRÆA SEMPERVIRENS.—A very neat hybrid, the flowers are about an inch and a half long, of a primrose-green colour; contrasts nicely with the rich coloured sorts.

C. LONGIFLORA.—Flower about an inch long, of a bright carmine colour, tube narrowish, but very neat.

C. NE PLUS ULTRA.—Tube broad, pretty flesh colour, with a white end, an inch and a half long. Very pretty.

C. TRICOLOR.—The flowers are one inch long, tube rosy flesh, with a vivid green end. It is a very pretty variety.

C. DELICATA.—Tube an inch and a half long, a pale flesh-colour, with a lilac tinge; being so delicate is a very neat and pleasing variety.

C. ROSEA-PALLIDA.—The tube of the flower is ventricose (bellying), an inch and a half long, a bright light-rose colour. Very distinct.

All the above are handsome ornaments throughout winter, and in fact nearly all the year, and well deserve to be in every greenhouse.

The following *Camellias* are the best we have seen in visiting all the extensive collections around London:—

CAMELLIA AUGUSTINA SUPERBA.—The flower is of a most beautiful rich pinky-blush colour. The petals are of good substance, neatly rounded, and cup-formed. It is a charming variety, and deserves to be in every collection.

C. LEEANEA SUPERBA.—The flowers are of good form, a bright crimson with a light centre. Very pretty.

C. ALBERTI (or *PRINCE ALBERT*). White, tinged with blush, and beautifully streaked and marked with bright carmine. Good form, and one of the loveliest of the tribe. It ought to be in every collection.

C. TEUTONIA.—Pink, with a stripe of white up the centre of the petal. Some of the flowers are white, with a slight tinge of pink, and others pure white. Very pretty.

C. CARSWELLIANA.—Red striped, good form, handsome.

C. BEALII.—Rich scarlet-crimson, and the petals round. A very handsome variety.

C. COLLETTI.—Bright velvet red, with large irregular patches of pure white. Very good form, and well deserves to be in every collection.

C. MARCHIONESS OF EXETER.—A very large handsome-formed flower of a most lovely rosy-peach colour. It ought to be in every collection.

C. LANDRETHII.—Beautiful rose, with a light centre, fine imbricate form. Well merits a place in every collection.

C. QUEEN OF ENGLAND.—Handsome delicate rose, with a pure white stripe up the centre of each petal. Very good form. It ought to be in every collection.

C. DUCHESSE D'ORLEANS.—Delicate flesh colour, striped and spotted with carmine, good form, and deserving to be in every collection.

C. MONT BLANC.—Pure white, fine globular form; a very superb variety, and a valuable acquisition to any collection.

C. CHALMERS PERFECTA.—Beautiful waxy-rose, with patches of white. Good form, very handsome.

C. SHERWOODI.—Bright cherry-colour, striped with white; excellent imbricate-formed.

C. TORNIETTA D'ITALIE.—Bright carmine, banded with white. Very beautiful.

C. FULGENS SUPERBA (NOVÆ).—A vivid red, with white stripes. Pæony-formed flower. Very showy and handsome.

CULTURE OF THE VERBENA.

IN passing through the Royal Gardens at Buckingham Palace last autumn, we saw a considerable number of *Verbenas* grown most admirably in large pots, from twelve to eighteen inches in diameter. They had been kept in a large conservatory all the summer, and being supported by a number of sticks, the plants had grown uninterrupted so as to form specimens two to three feet high, and of proportionate diameter.

These beautiful specimens in such variety produced a delightful effect, being arranged so that the colours should give the best contrast. These in-door plants have abundance of air admitted through the season; and the plants being placed near together, the air and bees, in addition to the gardener's practical attention, the flowers become

impregnated with their neighbours, and an abundance of well-ripened seed is thus obtained.

The method of propagating the Verbena by Mr. Wyness is also deserving of notice. He has shallow pans, such as are placed under flower-pots, filled nearly up to the rim with silver-sand (the sand in which cuttings in general are struck in), and water is poured over it so as to make it just wet. Cuttings are then pressed (easily done) into the wet sand, and the pans are placed in a hot-bed frame of good temperature. The sand is still kept just wet, and with such treatment cuttings root in a week or ten days, when they are potted off singly.

DESCRIPTIVE LIST OF PICOTEEES.

BY J. M., JUN.

(Continued from page 43.)

WILDMAN'S ISABELLA.—Heavy-edged, red Picotee: pod good; petals well formed; ground very clear; edging very regular, and of a deep red or maroon. This is a very good flower of its class in the old sorts, and may in general be depended upon.

BRINKLOW'S DUCHESS OF SUTHERLAND.—Light-edged, red Picotee: pod good; petals well formed; ground pure; edging very regular. This is a pretty certain flower, and produces abundance of grass.

JOHN'S PRINCE ALBERT.—Heavy-edged, purple Picotee: pod good, petals fine and well shaped; ground very pure; edging good and well defined. This flower being rather inclined to grow small, the number of flower pods ought to be reduced to a very few, say two or three.

WILMER'S PRINCE ROYAL.—Heavy-edged, purple Picotee: pod fine; petals large and well formed; ground pure; edging regular and of a bright purple. This is a most desirable variety.

TOLWORTHY'S ISABELLA.—Light-edged, red picotee: pod only middling; petals pretty good; ground good; edging distinct, and well feathered with dark red.

ROBINSON'S NOTTINGHAM HERO.—Light-edged, purple Picotee: pod fine; petals well formed and very smooth on the edges; ground pure; edging very regular, but occasionally stripes. This is a very full flower.

SHARPE'S AGITATOR.—Heavy-edged, purple Picotee: pod fine; petals of a fine form and substance; ground pure; edging very regular and distinct. This ought to be rather strongly grown, and when in vigorous health it is one of the best in its class.

SHARPE'S COUNTESS DE GREY.—Light-edged, red Picotee: pod very good; petals well formed; ground very pure; edging delicate and rather uncommon. This is also a most desirable flower of its class.

BENNET'S NONFAREIL.—Heavy-edged, purple Picotee: pod good; petals rather narrow; ground clear; edging regular and of a bright purple.

BARRAUD'S BRIDE.—Light-edged, rose Picotee: pod good; petals broad and large, well formed and smooth on the edges; ground pure;

edging very delicate and regular.—This is a first-rate flower, and almost equal to Mrs. Barnard.

WOOD'S PRINCESS ALICE.—Heavy-edged, purple Picotee: pod very good; petals fine; ground very clear; edging neat and regular. As this is inclined to grow small, it ought to be reduced to a very few pods.

FELLOW'S PURPUREA ELEGANS.—Light-edged, purple Picotee: pod very middling; petals well formed, but a little serrated; ground good; edging regular.

BURROUGH'S MRS. BEVAN.—Light-edged, red Picotee: pod good; petals well formed, thick and velvety; ground pure; edging very regular and distinct. This is a most desirable flower.

GARRAT'S LADY DACRE.—Light-edged, rose Picotee: pod fine; petals very well formed; edging very regular and distinct. This is a very superior flower of its class, and much resembles Waine's Queen Victoria, but crowns much better.

HEADLEY'S SARAH.—Light-edged, red Picotee: pod pretty fair; petals pretty well formed, and crowning well; ground not very pure; edging regular.

SHARPE'S INVINCIBLE.—Light-edged, purple Picotee: pod good; petals well formed; ground pure; edging pretty regular.

GIDDIN'S VESPASIAN.—Light-edged, purple Picotee: pod very good; petals very fine and well formed; ground pure; edging very delicate and regular. This is a first-rate flower of its class when well grown.

CRASK'S QUEEN VICTORIA.—Heavy-edged, purple Picotee: pod good; petals large and well formed, but rather serrated; ground pure; edging very deep and regular. This flower is rather too thin in its petals to take a first-class position, but otherwise it is a desirable variety.

SHARPE'S GEM.—Light-edged, red Picotee: pod fine; petals well formed, smooth and even, the guard petals being very stiff; ground pure; edging very regular and distinct.

GIDDIN'S TEASER, or as it is sometimes known under the name of BRINKLOW'S MASTERPIECE.—Heavy-edged, red Picotee: pod good; petals fine and well developed, and crowning well; ground pure; edging somewhat irregular, and very apt to stripe. This is rather a coarse flower.

WILSON'S FANNY IRBY.—Light-edged, rose Picotee: pod pretty fair; petals well formed and smooth; ground good; edging very regular; and although this is of the light class, it is a little too heavy. The flower is of a medium size.

WILSON'S PLUPERFECT.—Light-edged, purple Picotee: pod good and large; petals large and broad, but a little serrated; ground pure; edging fine and very distinct.

CRASH'S PRINCE ALBERT.—Light-edged, purple Picotee: pod very good; petals broad, smooth, and firm; ground pure; edging light and regular, with a beautiful feather, and not apt to stripe.

WILMER'S ELIZABETH.—Light-edged, purple Picotee: pod very fine; petals well formed, and with a good crown; ground very pure;

edging very regular and neat. This is a most desirable flower of its class.

ELY'S MRS. HORNER.—Heavy-edged, red Picotee : pod good ; petals well formed ; ground pretty pure ; edging distinct and not very heavy, though classed as such.

MARRIS' PILOT.—Heavy-edged, red Picotee : pod good ; petals large and well formed ; ground pure ; edging very regular.

PULLEN'S LADY PEEL.—Heavy-edged, purple Picotee : pod good ; petals large and fine ; ground pretty pure ; edging rather too heavy.

HUFTON'S MISS HUNTER.—Heavy-edged, purple Picotee : pod good ; petals large and well formed ; ground clear ; edging regular. This is a vigorous-growing flower, producing plenty of grass.

JACKSON'S DELIGHT.—Heavy-edged, purple Picotee : pod pretty good ; petals large but somewhat confined ; ground pretty clear ; edging heavy, and very apt to stripe. This is also a most vigorous-growing flower.

ROBINSON'S MRS. MUGGLESTON.—Light-edged, purple Picotee : pod good ; petals large and well shaped ; ground pure ; edging regular and beautifully marked.

SHARPE'S CRITERION.—Light-edged, red Picotee : pod not very good, being rather short ; petals of a medium size, and somewhat confused ; ground pretty clear ; edging neat and distinct.

HARDY'S ROYAL BRITON.—Heavy-edged, red Picotee : pod good ; petals well formed, and inclined to crown well ; ground not very pure ; edging regular and distinct.

BARRAUD'S COLONEL FOREMAN.—Light-edged, red Picotee : pod good ; petals good ; ground pure ; edging neat and well marked.

JESSOP'S SIR WILLIAM MIDDLETON.—Heavy-edged, red Picotee : pod good ; petals very large and fine ; ground clear ; edging regular and distinct. This is a desirable variety.

WAIN'S QUEEN VICTORIA.—Light-edged, rose Picotee : pod middling ; petals large and pretty thick, but a little confused ; ground pure ; edging distinct.

BRINKLOW'S HOPE.—Light edged, purple Picotee : pod good ; petals full and well formed ; ground pure ; edging very neat and distinct.

BARNARD'S MRS. BARNARD.—Light-edged, rose Picotee : pod fine ; petals broad and smooth, and well cupped ; ground pure ; edging light and delicate. This is a fine and most desirable variety for any collection.

ELY'S JOHN WRIGHT.—Heavy-edged, purple Picotee : pod good ; petals large and fine ; ground pretty clear ; edging very heavy, and apt to run.

MUSCROFT'S VICTORIA.—Red Picotee : pod good ; petals large and pretty well formed ; ground pretty clear ; edging regular, but very apt to stripe.

WAKEFIELD'S QUEEN OF SHEBA.—Heavy-edged, red Picotee : pod good ; petals very large and fine ; ground pretty clear ; edging good and distinct, with a very deep feather. This is rather an early flower.

GIDDINS' FAVORITE.—Light-edged, rose Picotee : pod fine ; petals well formed ; ground pure ; edging beautifully light and distinct.

(To be continued.)

ON TRAINING THE GERANIUM.

IF you have a nice young healthy and stocky plant to operate upon, it is better, but not absolutely necessary. If you have, pinch off its head, and when it breaks out at the sides, either peg down the side branches as nearly straight out as you can, without tearing the joint, or tie them down, which must be done thus: tie a string tightly round the pot, just under the rim; and under this pass a loop of thick worsted, over the end of each branch, to keep it down in the position you wish it to grow in. When the branches reach out as far as you wish them, a little beyond the rim of the pot you mean the plant to flower in, pinch off their ends; and after they have pushed out their eyes into branches, you may remove the strings, and you have thenceforth a trained plant, to last you many years, and each year better than the last.—*The Florist*.

NEW CAMELLIAS.

IN a former volume of our Magazine we inserted an extensive descriptive list of the finest kinds of this noble plant, especially of new continental varieties; we purpose giving some remarks on more recent ones. The following are highly spoken of in the *Ghent Annales*:—

Borgia.—This charming variety is of Italian origin; and, like the balmy climate in which it has been raised, it presents attractions of the most inviting character. Its name commemorates a profound scholar and naturalist, the eminent Cardinal Borgia. It is of a vigorous habit. As if indicative of the robustness of the flower and the habit of the whole plant, the buds are large and full, somewhat round, and disposed to open with perfect facility; this latter circumstance will doubtless render it an excellent sort for forcing into early flower, without the fear of seeing it cast its flower-buds, an evil to which many other kinds are somewhat liable. The flower assumes that habit, so commonly sought, a regular ranunculus-form; it is nearly four inches, and a half in diameter, very full, finely imbricated; the colours are bright cherry red, and white. The petals at the exterior portion of the flower are from an inch and a half to two inches broad, distinctly veined, slightly notched at the margins, especially at the middle; from the circumference the petals gradually become narrower towards the centre, where they are much smaller, oval, and upright. The distinguishing feature of the flower consists in a series of broad white bands down the middle of all the petals, these bands or stripes being delicately shaded with light rose or crimson.

Emiliana alba.—A vigorous-growing plant; flower white, striped with rose, and regularly imbricated. The usual size of the flower is four inches in diameter, with from eight to ten tiers of petals regularly disposed; all the petals white, streaked with pink or light crimson. Those of the outer range are about an inch and a half broad, round, entire, convex or lying back, slightly undulated at the margins. The striping differs in different petals; sometimes it is deep red and broad, and sometimes faint and narrow, but generally well distributed, which

produces an admirable effect. At the base of the petals, in the heart of the flower, the white is delicately tinged with yellow. This was introduced by Mr. Alexander Verschaffelt, of Ghent, 1847, from America.

Grand Duke Constantine.—This variety is of vigorous habit. The flower is about three inches in diameter, and generally of a pale rose or soft blush colour. The petals are slightly undulating and delicately tinged with pure white at the margins, those at the circumference being uniform and larger than the rest; towards the centre they become very irregular, those of the inner range being much folded and smaller, while a few at the heart of the flower again partially incline to the open and expanded form of the external range. Here and there, both on the outer and inner petals, may be seen a slight streak of crimson, while the soft blending of the rose with the white towards the margins renders the variation very distinct, and constitutes the rich and agreeable feature of this variety. It was raised by M. Caluwaert Vermeulen, of Courtrai, in Belgium.

Zavonia.—The introduction of this variety in the collections of Belgium is due to Mr. Alexander Verschaffelt, of Ghent, who received it from Milan in 1844. The habit of the plant is strong and vigorous. It is a fine variety, worthy a place in the best collections. It is one of that class which has regularly imbricated flowers, of a perfectly circular outline. The diameter of the blossoms is four inches. The petals are broad and large, entire at the margins, and slightly indented at the summit. At the centre only they begin to change form, and become longer and somewhat pointed. The centre is well formed, compact, of few petals, these being neatly imbricated. The colour is a uniform deep rich rose, delicately tinged.

OUR ISLAND FLOWERS: THEIR POETRY AND ASSOCIATIONS.

BY WILLIAM JOHNSTON, ESQ., BALLYKILBEG HOUSE.

(*Continued from page 56.*)

WHAT beautiful ideas are called forth by the little star-like WOODROFFE! Modest, humble, and retiring, as it takes its station at the foot of some stately prince of the forest; there is nothing at all attractive about it, to the careless or indifferent observer, which should cause him to single it out from its fairer sisters around. But when *their* beauty and fragrance have passed away for ever, as the evanescent dreams of a day, the Woodroffe's undying charms vanish not, but remain as *one* with whom, though scarcely noticed during life, fond memory never wearies lingering.

Were there such a being as Titania, where should she and her fair nymphs be more likely found, than reposing on the pearly bosom of the WHITE CONVULVUS? Dwell on this lovely, fragile thing, ye who, as the butterfly, flutter in the beams of a summer sun; and recollect that not, as it, are ye to perish in a day, nor disappear for ever when your sun goes down! Think of the Convulvulus, ye children

of faith, and, as ye cling to the sure Refuge, remember that the winds cannot separate you from it; nay, more, not even the tempest raised by the hand of Death! Lovely *Convolvulus*! you teach us that brief is to be our stay on earth, but remind us of the cloudless days in the realms of glory!

The pink blossoms of the SWEET-BRIER ROSE have been twined, perhaps, round every cottage porch in England; and, by the lays of Britain's bards, the *Eglantine* has become immortal. Let us permit Fancy to rise on aerial wing, and fly to the bowers of Eden. Behold Eve, on the morning of the fall, gathering her favourite flowers from many a bright parterre; her countenance not, as formerly, radiant with smiles, but reflecting the cares of a sad, foreboding heart! She pauses as she plucks each flower, and seems expecting the sentence to be pronounced by the Great Judge—the penalty of the fatal deed. But why that start, and tear glistening in her eye, as the *rose* falls from her fingers? It is because she witnesses the flow of human blood for the first time; and she weeps as she thinks that even the rose of paradise must bear thorns, now, for ever!

Grows there a flower more lovely than that which fringes with purple the hills of Albyn, and seems the guardian spirit of Scotia's hardy mountaineers? Wherever the HEATH rears its head, there is the spirit of independence, which finds a home most congenial among rocky passes.

But shall we slight the angel of the flowers, or leave to the pens of poets the pleasure of writing on this sweet remembrancer? No! we cannot! though we shall touch it as lightly as may be, lest we should tarnish this ethereal gem. No flower, like this, speaks from heart to heart;—none but this was carved by angel hands from the cærulean arches;—no other would convey an idea of the intensity of Eve's feelings as she bade an eternal adieu to the heavenly garden, and, passing its portals for ever, sighed—FORGET-ME-NOT!

(*To be continued.*)

WATERING WINDOW-GROWN PLANTS.

IN watering window-plants, and indeed plants in any part of the house, as also those in a greenhouse, the work should be done always regularly, and for the winter months as soon after breakfast as is convenient. When I say regularly, I mean that you should look over your plants to see if they want water, or anything done to them. When you find a pot with the soil as wet as it was yesterday, or the day before, depend on it there is something wrong about it; and unless you find out what that is, and provide a remedy, the soil will turn sour in a few days, and your plant suffer. This is the exact opposite of the case of the soil getting quite dry; and when you know the remedy for the extreme cases, you will be more able to manage the intermediate degrees. The best cure for this wet pot is to turn the plant and soil out of it, and to put them into a fresh clean pot of exactly the same size, or, as a gardener would say, shift it to a dry pot. If you never saw a

plant “shifted,” this is the way to do it properly :—take hold of the plant-pot in your right hand, and cover the top of it with the four fingers of the left hand, passing the stem of the plant between the fore and middle finger ; then lower the left hand till the pot is turned upside down, and the soil and pot then rest on the palm of the left hand ; now take hold of the bottom of the pot with the right hand, and strike the rim of it gently against the window-sill, and it will easily part with the soil ; then, without moving the left hand, put the new pot over the ball of soil, and the work of shifting is finished. You might, however, try and find out the cause of the soil turning so wet, before you put on the new pot.—*Cottage Gardener.*

PROPAGATING THE CAMELLIA BY GRAFTING OR INARCHING.

BY A LONDON NURSERY PRACTITIONER.

THIS very popular family has always the best effect when cultivated in a house by themselves ; and as there are certain seasons in which this genus requires a treatment almost peculiar to itself, their separate culture is therefore the more necessary. The splendour and profusion of the blossoms of this genus do not only attract our notice, considered merely as an ornamental plant, but has a considerable claim on our more intimate regard, when we consider it as supplying us with one of the necessaries of life, and probably one of the most exhilarating and useful medicines of which our Pharmacopœias can boast. From the species *Camellia bohea*, *viridis*, and *sasanqua*, are obtained the well-known tea of commerce, which is imported by us from China, where these three species, together with *C. Japonica*, grow in abundance, and in that country attain the character of evergreen shrubs or low trees. From these species have been originated, by cultivation, the many varieties now cultivated. The most successful and generally adopted method of propagating this family, is by inarching or grafting ; by either of these means each variety is perpetuated, but new varieties are only to be obtained from seeds ; as these seldom ripen, at least in any quantity in this country, and few are imported in a fit state to vegetate, the propagation of new varieties is consequently a matter of some importance. As, in most other cases, it is from single flowering plants that seed are to be expected, although sometimes the semi-double flowers also produce them, and of these the common single red is the most prolific in affording seed. Sometimes seedlings so obtained are used only for stocks whereon to work other rarer kinds, although sometimes they are kept till they attain a flowering state to ascertain their relative merits. Stocks, however, are for the most part obtained by nurserymen from layers of the common single red, which they have often planted out in pits for this purpose, or from plants originated from cuttings of the same or equally common sorts. Camellias are sometimes budded, but for the most part are either grafted or inarched, in either case the process of tongueing is dispensed with as weakening the stock ; and that mode of grafting, termed *side-grafting*, is preferred.

It may be observed that, of all the stocks for this or any other purpose, those obtained from seeds are the best; but in regard to Camellias, as the seeds are two years in coming up, cultivators seldom wait till such stocks are of proper size to be operated on. Sometimes the double Camellias are obtained from cuttings, but this is both a tedious and precarious method of increasing them.

As to the proper season for grafting or inarching Camellias, the spring is the best, and just at that time when the plants have done flowering and are beginning to grow. This state of vegetation does not always take place at precisely the same time, as some cultivators force their Camellias into bloom very early; such, therefore, should be operated upon not by the exact period of the year, but by the state of the plants. Some will be fit for this process in January, February, March, and April. Those, however, which are operated on in March and April will have the better chance to succeed, although those which are operated on in February answer pretty well.

During the time the process is going on, the house should be kept rather closely shut up, and the atmosphere kept rather damp; however, these must not be too freely indulged in, as in the former case the plants would be liable to being drawn up weak, and consequently become straggling and of bad habits. The time that elapses before a union of the scion and stock completely takes place is in different sorts, and more particularly in regard to the state of health and vigour in which the plants may be, as well as the favourableness or unfavourableness of the season. Observation alone can dictate when the clay, and afterwards the bandage of matting should be removed. There is an evil in allowing either to remain on too long, as well as taking them off too soon; however, there is less danger to be apprehended from their remaining on a week or even two too long, than in taking them off a week too soon. Some cultivators adopt the *Graffe Blaikie* mode of inarching with much success, and others also practise the mode recommended by Mr. Murray, of Glasgow, by inserting the lower extremity of the scion into potato or small turnip. Camellias will form a union when the branches are of considerable size; and, as we have already noticed, very large plants may be speedily formed by inarching several whole plants upon one common stock. This process is now becoming prevalent round London; and when the operation is properly performed, and the plant afterwards properly cultivated, specimens of large size may be expected to become more common than they have hitherto been; and certainly one or two large specimens of this plant, where there is convenience for keeping them, are better than a number of small ones, which will take up the same room, and never can produce so imposing an effect as is the case with large specimens. Upon one or two plants may thus be cultivated the whole collection of varieties and species now known. In grafting Camellias much care should be taken to perform the operation neatly, so as to leave as little appearance of the place of union as possible. I recollect when this plant was much less common than it now is, and the methods of propagating it less understood, that some cultivators, to hide its deformity in the stem, performed the operation very close to the surface

of the pot in which the stock grew ; and when the union had taken place completely, they used to replot them into deeper pots so as to bury the wound under the mould. A practice so unskilful was of course unsuccessful ; the plants being thus too deeply potted did not prosper, and, as might be expected, deterred many from purchasing, from an idea that the plants were either short-lived, or would not grow without the care of a proficient person. The case, however, is otherwise ; scarcely any plant is easier than the *Camellia*, although it must be admitted that, to grow them in the first degree of excellence, much judgment is required. *Camellias*, like most other plants, have their periods of growth and also of rest ; during the former state they cannot hardly be watered over much, and during the latter they will soon languish if too bountifully supplied. For this no rules can be laid down ; experience and observation on the part of the cultivator alone can be a safe guide.

PLANTING FLOWER GARDENS.

THE time for planting and bedding out plants, in the places where they are to form the great display of the flower-garden, is fast approaching ; and it cannot be too strongly urged upon those who have this work to do, that system in arranging the colour is absolutely essential to complete success. It ought to be no satisfaction to a gardener that his grounds look well, while it is easily demonstrated that they might have looked better. By those who have paid much attention to this part of the gardener's business, it must have been often noticed that different *artistes* produce very different effects with the same plants ; and this upon a careful examination will be found to arise more from the judicious arrangement of the colours than from any other circumstance. It is also easily seen that this subject receives very little attention generally, although nothing can be more important ; thus what can be more beautiful than some of the white *Verbenas*, or the yellow *Escholtzia*, but place these two sorts together, and the pure white of the *Verbenas* is quite destroyed. Neither should colours be placed, as many persons suppose, in violent contrast, because richness of effect is not produced by contrast but by harmony. Thus the scarlet *Verbena* or *Geranium* harmonizes with the purple *Verbena*, or any of the blue *Lobelias* ; these again with the *Erysimum* or any orange-coloured flower. The new *Geranium lucea rosea* will harmonize most delicately with any flower of a pure white colour ; for that purpose it will be almost invaluable, while the great want of a good violet colour to harmonize with the numerous yellows is likely to be supplied by the *Plumbago Larpentæ*. In some cases, however, especially on gravelled terraces, complementary or contrasted colours are desirable ; and these are much more easily managed, there being an easy and well-known method of finding the true constant to any colour, which is this ; take a piece of paper, of the colour of the flower for which it is desired to find the contrast, or a petal of the flower itself, cut a small circle out of it, which lay upon a sheet of white paper, gaze on it steadily for a minute, and then, without allowing the

eye to close, look upon another part of the paper, where a circle or spectrum of another colour will be distinctly seen; and this will be found the true contrasting colour. Without attending to these rules the beautiful variety among our bedding out plants is almost useless; but with care every shade of colour will be made to add to the beauty of the whole.

DIRECTIONS FOR PRESERVING PLANTS.

BY A LADY.

It is unnecessary 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 who has made considerable progress in the study of Botany. But the beginner requires to be informed that nothing can more materially aid him in his endeavours to become familiar with the objects which vegetation presents to his view, than such a collection, to which he can at all times refer, either for refreshing his memory or for instituting a more minute examination than he had previously made. Plants are generally preserved by drying, and a collection of this kind is called a *Hortus siccus* or *Herbarium*. Various methods are in use for drying plants, but the following being among the most simple and efficacious, and attended with little difficulty, is here preferred.

The articles necessary for the accomplishment of the object in view are, a quantity of smooth soft paper, of large size (sixteen quires perhaps); 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 weight 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. 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.

Let us now suppose 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. 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.

Plants, viewed with reference to drying, may be divided 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 three 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, 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 three days after they have been deposited, and after dry 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.

Having in this manner collected a certain number of plants, the collector has now to arrange them. For this purpose he has to 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 plant or 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, or in a chest. To prevent the attacks of insects, it is necessary to keep beside it a piece of sponge soaked full of rectified oil of turpentine; and to ensure it against decay from damp, it ought to be kept in a dry and well ventilated place.

The above is an orderly method of forming a herbarium; but many other expedients are resorted to. Most plants dry sufficiently well between the leaves of old books, and many collectors save themselves the trouble of forming a neat collection, by huddling up their specimens in the least expensive or laborious manner.

Another method of putting up dried plants is the following:—The specimens are fastened to leaves of stout paper of uniform size; the species are then arranged in order, and all those of the same genus are placed within one or more sheets of paper, on the outside of which the generic name is written. The generic fasciculi are then collected into bundles, on which are written the names of the classes and orders. Some persons keep their specimens loose, within sheets of paper. This method is the most convenient for the minute examination of the plants, but has disadvantages which render it inexpedient in ordinary cases.

ZAUCHNERIA CALIFORNICA.

No plant can be more desirable for general cultivation in the flower garden than that, which is perfectly hardy, and continues in bloom constantly during summer and autumn, without the trouble even of a *Verbena*, which requires winter protection.

It was first discovered by the late Mr. Menzies, during the latter part of the last century, who reported it to be a plant of extraordinary beauty, with brilliant scarlet flowers, resembling those of an old *Fuchsia coccinea*, but in an upright position. When the Horticultural Society sent Mr. Hartweg to California, he was instructed to seek out this plant, which he found on the mountains of Santa Cruz, beginning to flower in June, but afterwards on the outskirts of woods and open dry places, blooming from June to November, during which time scarcely a drop of rain falls. The summer heat, however, of Monterey is seldom more than from 62 to 65 degrees during the day-time; and the rainy season commences in November, and continues for several days without ceasing, and finally terminates in March; shortly afterwards the prairies teem with floral beauty, and immense fields of such plants as *Escholtzia*, *Collinsia*, *Nemophila*, *Leptosiphons*, &c., appear in full bloom; but as the dry weather sets in soon afterwards, all soon becomes a dry barren waste, and only trees and shrubs remain green, except a few herbaceous ones in moist places, but the *Zauchneria* flowers in the greatest perfection. It grows freely in this country in any soil or situation in which a *Verbena* will grow, and is easily increased by the young shoots in spring or summer. It blooms from June to the end of the season. Seeds are freely produced too, and if they are sown and treated as half-hardy annuals are, the plants

begin to bloom by the end of June. It will make a fine bedding plant, its fine orange-scarlet flowers being highly ornamental. It grows bushy, from one to two feet high.--*Magazine of Gardening*.

ON DESTROYING THE WIRE-WORM.

Most *Ranunculus* growers have had to suffer by the attacks of wire-worms. The following simple plan has saved my roots from their ravages for seven successive years:—

I always prepare my compost early in the autumn, I lay it in large heaps, well exposed to the frost; in the winter, so soon as the frost is sufficiently severe to freeze these compost heaps to the depth of one or two inches, I then take off all the frozen parts, and remove it to an exposed situation, and I renew this operation every two or three days so long as the frost continues, until I have got as much as I require for the beds. In the month of February I break the soil fine, and fill the beds from twelve to fifteen inches deep, which I consider a sufficient depth for the roots of the *Ranunculus*. The beginning of March is the time which I prefer for planting; this is four or five weeks later than is generally practised. I always steep the roots in water for six or eight hours before planting them; by experience of this method I find that the roots begin to vegetate as soon as they are planted, and come equally as early into bloom as those which were planted much earlier, and by this mode of treatment I find that the crowns or tops of the roots are not so liable to be killed by the frost as those which are planted in January or February. The soil which I use for the growth of *Anemones*, *Carnations*, and *Pinks*, I treat exactly in the same manner, as I find that the wire-worm is equally as destructive to the roots of these as it is to the *Ranunculus*.

GRAFTING THE ROSE.

BY ROSA.

THE following method of cultivating the Rose by grafting, is very interesting and successful, as well as having the advantage of economy, as you make use of the cuttings of the pruned trees, which would otherwise be lost. It must be remembered, however, that it should only be practised upon free well-rooted stocks, as otherwise the delay in the rising of the sap, and the uncertainty of the supply, frequently defeat the purpose. Grafting, therefore, should succeed budding on the same stock, not precede it; as a bud failing on the stock, if the branch be not destroyed while the sap is up, leaves the stock still vigorous in the ground; if therefore you wish to try this mode, it should be upon stocks that have had a spring to root themselves.

The points to be desired are, that the barks of scion and stock should be cut quite smooth, and not separated from the wood they grow upon; that neither should be bruised; when they are put together they should fit close; a supply of sap should commence as soon as possible; that all sun, wind, and rain should be kept from the wound till healed, and

that no ligament should be removed, nor shake given to the parts newly placed in contact, till they are perfectly healed; any jar to the scion when placed is likely to defeat the purpose.

Grafting.—If you have a good choice of shoots in March from your trees, which you desire should not be wasted, examine your shoots after pruning each tree, select those which are the finest, and place their thickest ends (taking care that the produce of each tree be tied in a separate bundle and ticketed) in a lump of moist clay an inch deep, pinch the clay tight round them, and then put the lump of clay in a pot full of earth (leaving the shoots out) until ready for use. It must be remembered that at the end of each shoot there will probably be one or more buds open; these must be carefully cut off from the shoot or they will infallibly exhaust the others.

Let the shoots remain for three weeks in an outhouse, or any place neither very dry nor very damp, where neither wind nor sun can come in contact with them.

During the first week in March, cut off your stock (in which the sap should be beginning to rise) horizontally; make a slit in it straight downwards, of a couple of inches, or an inch and a half long, taking care not to injure the sides of the bark.

Take the shoot in the left hand, and leaving three buds upon it, or two if the stock be not large; cut the lower extremity of the shoot in the shape of a wedge, the back being rather the thinnest, and the lowest bud about half an inch above the thick end of the wedge. In doing which care must be taken that the bark be undisturbed, and each scion so cut that all the buds point outwards, or at any rate be so placed that the shoots from them may not interfere with each other.

With the end of your budding-knife, or a little wooden or ivory wedge, open the slit in the stock on one side, and then place the scion with the thickest part or front outwards in the other, taking care that the edge of the inner bark or liber of the scion touches the edges of the inner bark of the stock, all the way down; pull out the wedge and enter another scion in its place, the slit being kept open by the first; if the size of the scion be half the size of the stock, you may leave a shoulder to the scion, and thus increase the chances of success.

Any number of scions may be inserted in the same stock, but from one to four are all that are desirable in the present case, to cover well over the head of the stock, which is apt to receive much injury from the weather, if not carefully attended to.

The object of laying by the scions is that the stock may be the forwardest, and be enabled to supply the sap and force them forward at once, instead of lingering while they perish from exposure and want of nourishment.

When the shoots are on, tie up the whole with a bass ligament, to prevent the scions from ever shifting, and then cover the whole beneath the lowest bud with grafting clay, taking care to exclude air, sun, and rain. If the clay crack it must be renewed, not by shifting but by filling up the crack.

In about six months the clay may be removed, and the wound covered with mixture; this latter must on no account be omitted.

The choice of scions is regulated by the same rules as the choice of buds, only that in choosing scions some reference must also be had to the wood, which should have a sufficient thickness to keep it from getting dry easily, and to facilitate the operation of sloping the edges. The best buds are generally nearer the base of the shoot than the summit, but two or three scions may sometimes be got from a single shoot. No scion should be used when the buds upon it appear to have shrunk and lost their fulness, from having been laid by, and care should be taken on passing the bass ligament round the stock for the purpose of fixing the scions, that a piece of the bass be brought between the scions in such a manner as to protect the cleft in the centre of the stock from the clay, and to leave the vacuum to be filled up with sap.

Should any graft fail, which will be seen in a longer or shorter space of time, according to the weather (*viz.*, in moist, dull, growing weather it will soon show, in that which is dry, windy, or cold there will be delay), you have still the resource of knocking off the clay and reserving for use the fresh buds which start from the stock, in which case cut the stock off immediately above them, and bud in the following autumn as usual.

Grafting the Rose, however, leaves a worse wound to heal over than budding, unless the scion be nearly the same size as the stock, or two or three scions of free-growing sorts be entered in the same graft; there is also this disadvantage, that the portion of the scion that is entered in the stock is smooth, and consequently does not from time to time furnish new wood, whereas in budded Stocks, shoots occasionally spring from the inserted eye (and that sometimes years after it has taken), thus renewing the tree by preventing it from straggling, as well as giving it a more perfect and handsome appearance.

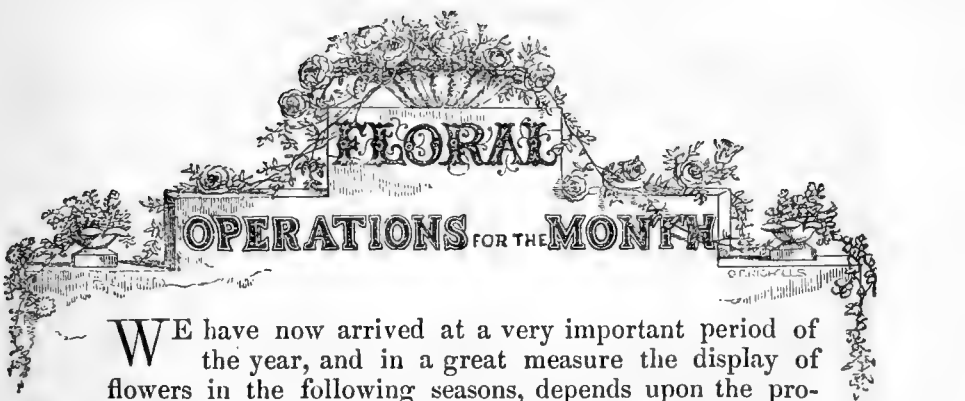
The advantages of grafting are, that it clears your garden of wild-growing Stocks, promises fair for instant success, especially when the scions are from hardy sorts.

ON PLUMBAGO CAPENSIS.

BY COMMELINA.

As there appears to be no reply to the query of E. G. in February Number, page 37, I take the liberty of offering the result of amateur culture of the *Plumbago Capensis* for some years in a greenhouse of very moderate warmth.

E. G. does not tell us at what time last year he pruned his *Plumbago Capensis*. If he shortened the shoots of the same season, he probably cut off all the wood from which flowers might have been expected. The plant will answer well in common greenhouse heat under the following management:—After it has flowered, and when amateurs are putting their house in winter order, the straggling shoots should be shortened to within a few good eyes of the main stem. They will begin to push in February or March, and a little manure-water will then be of great use for some time. They require a good deal of peat in the soil, and good drainage.



FLORAL
OPERATIONS FOR THE MONTH

WE have now arrived at a very important period of the year, and in a great measure the display of flowers in the following seasons, depends upon the provision now to be prepared. There is, therefore, a special demand upon the mind, and manual exertion too, to see that the proper kinds and quantities of seeds are sown, and plants in due preparation. Plans of flower-gardens, &c., should be sketched on paper, and the appropriate regulations for future arrangement and plants required be put down; this attention is of much assistance.

IN THE FLOWER GARDEN.

Last month was the best time for grafting shrubs, ornamental kinds of trees, as Thorns, Limes, &c., but any late-growing kinds that have been omitted may still be done; the earlier the better. The increase of Shrubs, &c., by layering, should be done as early as possible, such as Rhododendrons, &c.

Annuals, hardy, such as Clarkia, Nemophila, Larkspur, &c., may be sown in the open bed. 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 proportionate portion over, and then press it closely upon them, which will assist a more early and certain vegetation. If strong frost occur, it is advisable to cover a garden-pot over during the night, and remove it in the morning. Seeds of *Biennials*, too, should now be sown in beds, such as Hollyhocks, Sweet Williams, Scabious, Canterbury Bells, &c. Also seeds of *Perennials*, as Phloxes, Campanulas, &c. Finish planting out Biennials and Perennials, and dividing large patches of border plants. Hollyhocks must be put in immediately; water them as soon as planted. Newly-budded trees, that is those budded last season, should be looked over, and if any portion of the stock be pushing shoots, they must be rubbed off, so that the entire strength should go to the new shoot engrafted.

AURICULAS.—Give air freely on all suitable occasions, to prevent the flower-stems being drawn up weakly. They must, however, be protected against strong wind, dust, and frost especially. The blossoms will soon be opening, no water must be allowed to fall upon them, and they must be shaded from hot sun by canvas. A stage of shelves inclosed in a wooden frame or similar provision, having the bottom shelf two feet or so high, and gradually rising, &c., also to be properly shaded, is an erection indispensable to showing them to advantage.

POLYANTHUSES, too, require similar attention to the Auriculas. Neither kinds should be allowed to droop for want of water; and the stems, if by casualty they are too weak to sustain the truss, must be supported by a neat stick, &c.

PINKS.—If beds of them were not made in autumn, and omitted too last month, they ought to be done immediately, if required to bloom the coming season. A loamy soil, made of turfs a few inches thick, and well rotted, with an equal portion of old decayed cow-dung, is admirably adapted for their growth. It should be nine inches deep, and have a good drainage below. The plants must be removed with as much of the ball of soil as possible, and be planted six inches apart. High raised beds are not beneficial except in low wet situations. Where a compost, as above, is not at hand, six inches thick of old cow-dung should be dug in with common garden soil. Protection from cold winds is necessary; this is readily done by a hedge of fir, yew, broom, or furze branches. Autumn-planted beds should be top-dressed with a little rich soil, and the plants be made firm in their places; a few small sticks stuck around amongst the shoots will prevent twisting off.

RANUNCULUSES and ANEMONES.—When the plants make their appearance, and are risen an inch or two high, care must be paid to have the soil pressed closely around them with the hands, stopping up any holes made by worms, &c. A top dressing too of rich compost, free from wire-worm, is very beneficial. If common large worms exist in the bed, they may be collected by the hand at night, or pure lime-water poured between the rows will kill the worms, and not injure the plants. If allowed to remain, they are very injurious. Often stir up the soil between the rows. Showers of rain are very beneficial for their growth; if none fall, occasional watering with soft water in the morning should be given. Well-water is injurious. Weak manure-water occasionally poured between the plants contributes to vigour. If severe frost should occur, cover at night, and *protect from wind*.

TULIPS.—Stir the surface of the bed an inch deep. Protect from *hail*, *FROST*, and *strong wind*, also from the mid-day sun, say from ten till four o'clock. A hooped framework to support a canvass cover is essential to proper protection, and so fixed as to be readily removed, or put over when danger is apprehended. Keep the soil firm around the stem, and mind that water does not lodge in the heart of the plant where the infant flower is, or it will be damaged; gently open the leaves to admit the water to drain off.

CARNATIONS and PICOTEES.—If not potted off the end of last month, they should be done immediately.

HYACINTHS should be protected from frost, sun, and wind; secure by tying to proper supports. Stir up the surface soil.

PANSIES in beds must have the soil pressed around the plants, and a top dressing of rich soil an inch or two thick will be beneficial. New beds of them should also be planted.

CHRYSANTHEMUMS.—Procure pieces of the shortest of the young shoots from the base of the old stems, with as much root as practicable; pot them in very small pots, and place them on a gentle bottom heat till they are well rooted; then gradually harden them, and pot them on during the summer, according to the size the plants are required. You may do this as soon as you please. If there are not short pieces, take off the tops of the shoots and plant them as cuttings.

ROSES.—Now plant out the tender China and Tea, or Bourbons, &c.

IN THE FORCING FRAME.

Balsams, Cockscombs, Globe Amaranthuses, &c., that require potting off, or re-potting, should be duly attended to; also Thunbergias, Browallias, Lobelias, Brachycoma, &c. Seedling Fuchsias, Verbenas, Petunias, &c., should be potted off singly. Dahlias too should be placed so as not to be drawn up weakly. Achimenes must be potted off singly. (See Articles on Culture in previous Numbers.) Tender Annuals, as Stocks, Zinnias, &c., should be placed in a cool frame or pit to prevent them being drawn up weakly. Where it is practicable to prick out, such as Stocks, Asters, &c., upon beds, and protect with frames, it should be done; it gives a robust growth to them. Cuttings of Fuchsias, Petunias, Verbenas, and many other greenhouse plants, should now be put off. Young plants of Fuchsias now procured, if six inches high, will make fine ones for shows in summer.

IN THE GREENHOUSE AND COLD FRAME.

Admit all the air possible. Re-pot Lobelias, Tigridias, Geraniums, Verbenas, and other similar plants for beds. All other kinds of plants requiring re-potting should now be done (see Compost, &c., in last month's Calendar). Such as are straggling, &c., should be cut in to render them bushy. *Pelargoniums* will require particular attention in tying up, watering, and fumigating; if green fly be perceived, occasionally give a little manure-water. (See Articles on Culture in previous volume.) Camellias, when done blooming, examine the roots, and if necessary repot (see Articles upon, for soil, &c.); then place them in a warm part of the greenhouse, or forcing-house, giving due attention to watering, &c., till the wood is firm and flower-buds are set; they may then be removed to a cool pit, so as to be gradually hardened by more air, &c. Japan Lilies, &c., should be duly encouraged by re-potting, &c. Peat soil and sand is what they flourish in best. Cinerarias require particular attention in watering, &c.; also pot or re-pot young seedlings, &c.

Orange trees in a border or in tubs should have a portion of the surface-soil taken away, and a good top-dressing of mellow loam and leaf-mould, with a tolerable portion of sheep or pigeons' dung, is intermixed, and re-pot any that require it. A careful inspection of the greenhouse plants should be made to see which require re-potting, and do it at once, not waiting to some general performance; always attend to it when it is wanted. Azaleas, young plants that are beginning to push, let them be re-potted; such as have done blooming must directly be re-potted, and their growth afresh be gently promoted in a higher temperature for a short time. Any required to bloom late should be kept in a cool situation at present.

ERICAS.—Any requiring re-potting should be done directly; avoid too large pots with the less vigorous growers, but free growers will require room to extend in proportion. Do not elevate the collar of the roots higher than the rim of the pot, and allow a depth for water when poured in. Give air freely, but avoid draughts, especially from east and north. Calceolarias often require re-potting to have a vigorous bloom.

IN THE STOVE.

Aerodendron, Erythrina, Justicia, Eranthemum, Gloriosa, Ixora, Brugmansia, and similar plants, should duly be hastened on for exhibiting display for shows, &c. Achimenes re-pot. Gloxinias re-pot. Amaryllis, promote vigorous growth of.

SONGS OF THE FLOWERS.

NO. 2.—SONG OF THE VIOLET.

BY JOHN DUGGAN, ESQ.

“ Violets, dim,
But sweeter than the lids of Juno’s eyes,
Or Cytherea’s breath.—*Shakspeare.*

———“ The Violet,
With lips with morning wet,
Utters such sweetness from her little shrine.”

Leigh Hunt (from the Italian.)

What flower 'neath the sky is so happy as I?
Or can boast half so many true lovers?
First, the gay humming-bee in the morning courts me,
While in music he o'er my heart hovers:
Then, on velvety wings, the pied butterfly clings
To my leaves, where he flutters in gladness—
As I turn my bright eye, lo! the golden moth nigh,
Is paling with envy and sadness.

The bloom-covered Rose may her rich leaves disclose
To woo the embraces of morning;
But that I'd ne'er do—ah! sweet Rose, nor should you—
Such forwardness modestly scorning.
On the thin gossamere, from the pure atmosphere,
Come daintiest spirits that love me;
Then I laugh, and I sigh, and I wink my blue eye
At some jealous rival above me.

E'en the murmuring rill, whose song never is still,
Smiles for joy if I look on his waters;
While the fond birds, to me, in grove, bower, and tree,
Sing, “Thou'rt sweetest of Flora's sweet daughters.”
And my dear mother, Spring, oh! doth she not bring
To her favourite child all her treasure?
Eve's rich purple dye, her own redolent sigh,
And rare, beautiful gifts without measure.

Though the warm fragrant gale, love the Lily so pale,
And his odours around her be flinging;
Though with pride the leaves swell of the young Heatherbell
When in beauty she feels herself springing;
Yet, in garden and field, ev'ry flower must yield
To my joy, when the sweet South, at even,
Folds his plumes o'er my breast, and sings, sinking to rest,
“To me thy loved bosom is heaven.”





Fuchsia longiana var. *albiflora* A.D.



FLORICULTURAL CABINET

MAY, 1849.

ILLUSTRATIONS.

FUCHSIA CORYMBIFLORA ALBA.

THIS valuable acquisition to the lovely family of Fuchsias was raised on the Continent, and is now in the sole possession of Mr. John Salter, florist, of William-street, North End, Fulham. We have seen his stock of plants, and a floral specimen, but cannot do better than give its description as done by Mr. Salter, as follows:—

“This beautiful variety will be found one of the greatest acquisitions ever offered to the floricultural world; its easy culture, robust habit, and profusion of large and elegant corymbs of white and crimson flowers, cannot fail to render it a universal favourite for the conservatory or horticultural exhibitions. In habit it is more shrubby than *F. corymbiflora*, the growth more vigorous, the leaves broader, and of a light glossy green; the racemes quite as large, if not larger; the tube white; sepals well reflexed, showing a bright crimson corolla, which gives it a character totally distinct from any other of the tribe.”

This charming variety will be a lovely companion for the parent species—*F. corymbiflora*, their flowers producing a very striking contrast. We noticed several plants at Mr. Salter's, pushing numerous side shoots, and it appeared very likely, by stopping the lead, to form a bushy plant, and to have it bloom when not more than half a yard to two feet high. Some were showing blooming heads, which were about the height here stated.

The flowers, in their *infant* state, have a slight tinge of flesh colour, but this, Mr. Salter informed us, entirely disappears, and it soon becomes pure white. The specimen we saw was a clear white. It merits a place in every collection of this beautiful tribe.

Mr. Salter announces that plants will be sent out next autumn in strict rotation.

NOTES ON NEW OR RARE PLANTS.

ÆSCHYNANTHUS MINIATIS—VERMILION-FLOWERED.

A native of Java, sent by Mr. Lobb to Messrs. Veitch. It requires to be grown in the stove and in the shade. It is of a similar habit to the other species now usually in our collections. The flowers are borne in terminal clusters; tube an inch long, wide, of a rich vermilion-red, tinged with yellow in the throat and having purple bars. It is a very beautiful flowering species, well deserving a place in the stove. (Figured in *Pax. Mag. Bot.*)

BORONIA TRIPHYLLA.

The flowers are borne in profusion, of a rich rosy-pink colour, and the plant blooms through the winter. It deserves a place in every greenhouse.

CURCUMA CORDATA—HEART-LEAVED.

It is one of the Scitamineæ order of plants, and was discovered by Dr. Wallich in the bamboo woods of India. It is a stove plant, herbaceous. The flowers are produced in a spike; they are like a small Snapdragon, half-an-inch across the mouth; they just protrude out of the green bracts of the spike, and are yellow and deep pink. The crown of the spike is very beautiful, two or three inches of the bracts being of a rich violet colour, having a large deep blood-coloured spot upon the tip of each. (Figured in *Bot. Mag.*, 4435.)

DIPLADENIA UROPHYLLA—TAPER-POINTED.

A native of the Organ Mountains of Brazil. Mr. Lobb sent it to Messrs. Veitch. It requires to be grown in the stove. It is an upright-growing evergreen bush, not a climber. The flowers are produced three or four together, in short drooping racemes, at the axils of the leaves. The tube is about an inch and a half long, and at the widest part three-quarters across; outside of a pretty light yellow colour; the limb is five-parted, and spreading an inch and a half, of a rich rose; and the inside, or throat, a rich yellow. It grows freely in a well-drained soil of heath-mould, light loam, and a portion of sand. It requires a season of rest, and consequently little water at the period, but in the growing state it requires a good supply, and to be grown in a damp atmosphere. (Figured in *Pax. Mag. of Gardening.*)

ERIOPSIS RUTIDOBULBON—ROUGH-STALKED.

A stove orchidææ, from New Grenada. It has recently bloomed in the Royal Gardens of Kew. The scape of flowers was half-a-yard long, bearing a drooping raceme of flowers. Sepals and petals a dull orange-yellow, red-purple at the edge; lip white, with dark purple spots; the rest of the labellum is a dull orange-red, spotted with purple. A separate flower is an inch and a half across. (Figured in *Bot. Mag.*, 4437.)

ERIOSTEMON INTERMEDIUM—THE INTERMEDIATE.

A native of New South Wales. This pretty plant was exhibited at the Horticultural Society's Show, by R. Barclay, Esq., of Knott's

Green, Leyton, and was awarded a prize. It is a neat branching bushy shrub, two to three feet high, blooming profusely at this time in the Royal Gardens of Kew. The flowers are white, tinged with pink, when in bud, but white when expanded; in form like a small orange flower, half-an-inch across. It blooms copiously in the latter winter and early spring months. It merits a place in every greenhouse. (Figured in *Bot. Mag.*, 4439.)

LOBELIA DENSIFLORA—DENSE-FLOWERED.

A figure of it is in *Paxton's Magazine of Botany*, and was taken from a plant in bloom at the nursery of Messrs. Knight and Perry, of King's-road, Chelsea. The spike is usually about eight inches high; it forms a dense tapering mass of flowers, gradually lessening to the point. The blossoms are of a pretty blue, each flower about three-quarters of an inch long. (Figured in *Pax. Mag. Bot.*)

[We obtained the plant several years ago, as a hybrid which had been raised at Alton Towers, in Staffordshire.]

MAXILLARIA LEPTOSEPALA—NARROW-SEPALLED.

Mr. Purdie sent this plant from New Grenada to the Royal Gardens of Kew, where it has recently bloomed. The flowers are produced solitary, upon a scape which only rises about five inches high. The sepals and petals are very narrow, each about two inches long—a yellowish-white; lip white, beautifully veined with purple. (Figured in *Bot. Mag.*, 4434.)

ONCIDIUM FLABELLIFERUM—FAN-LIPPED.

A native of Brazil, from whence it was sent to Messrs. Rollisson, of Tooting. The flower scapes rise about half-a-yard each, bearing a head of numerous flowers. Sepals and petals broad—a chestnut-brown, with tiger-like stripes of purple; labellum large, spreading, fan-shaped—a bright yellow, thickly spotted on the lower margin with purple-brown. It is one of the most beautiful of its class; the large flowers two inches across; the fine tiger striping and spotting, the brilliant yellow and dark spotting of the lip, combine to render it highly ornamental and interesting. It ought to be in every collection. (Figured in *Pax. Mag. Bot.*)

PACHYSTIGMA PTELEOIDES—PTELEA-LEAVED.

A native of Jamaica, and for the first time is in bloom in this country at the Royal Gardens of Kew, where it has attained the height of eight feet. The flowers are produced in panicles, at the extremities of the shoots, about the size of a Buttercup—cream-coloured. (Figured in *Bot. Mag.*, 4436.)

PELARGONIUM, GEM OF THE SCARLETS.

The flowers are of a dazzling scarlet, with a clear white eye, fine round form, and borne in large trusses. The leaves are very distinctly horse-shoe marked. A prize was awarded for it at the Regent's Park Show last season.

SALPIZANTHA COCCINEA.

It is of the *Justitia* tribe; the flowers are tube-shaped, near two inches long, having a terminal spreading limb, of a rich bright crimson colour. They are produced in spikes of about six inches long. It is in bloom at Messrs. Henderson's.

STIFFTIA CHRYSANTHA—GOLDEN-FLOWERED.

Composita. Syngenesia Perdicea.

A native of Brazil, and a plant of it at the Royal Gardens of Kew is tree-like, and six feet high; it has recently been in bloom there. The flowers are produced in erect terminal heads of eight or ten in each. Corolla tube-shaped, nearly two inches long, of a pale orange colour below and becoming darker above. The whole head is enveloped in bristle-formed hairs. They are singularly pretty. (Figured in *Bot. Mag.*, 4438.)

AT THE ROYAL GARDENS OF KEW.

In the Greenhouse. (Climbers.)

HARDENBERGIA COMPTONIANA.—In profuse bloom, trained to a circular wire frame five feet high. The flowers are borne in racemes of five or six inches long; a beautiful deep violet-blue, with a white eye. Very handsome and interesting, it blooms, too, a great part of the year.

II. OVATA.—This, too, was trained to a wire frame four feet high, blooming profusely; the flowers are of a pretty rose, tinged with purple. Very neat.

H. MACROPHYLLUM.—Similarly trained. The racemes of flowers six inches long; a pretty light blue.

H. DIGITATA.—Similarly trained. Foliage very neat; flowers violet, in middle-sized racemes.

BRACHYSEMA LATIFOLIA.—Similarly trained. In fine bloom; its large pea-shaped crimson and velvet flowers produced a pretty effect.

KENNEDYA RUBICUNDA.—Similarly trained. Its pea-like red flowers, in full bloom, were pretty, but its show not near equal to the *Brachysema*.

CYTISUS FILIPES.—A standard on a stem two feet high. The fine head of pure white flowers in such profusion had a charming effect in its contrast with the rich green by which it was surrounded. It is a cheap, pretty plant, well worth growing, especially as a dwarf standard.

In the Greenhouse and Conservatory.

ACACIA VESTITA.—Flowers a bright yellow, with a small neat pine-like foliage. Very pretty.

A. LINEATA.—The flower heads are rather small, but of a rich deep yellow, and in vast profusion. The leaves are narrow, an inch long. This is particularly handsome, and ought to be in every greenhouse.

A. ROTUNDIFOLIA.—Flowers a light yellow, and the leaves small. Very pretty.

A. CELUSTRIFOLIA.—Flowers a pretty sulphur colour, and in very dense panicles. Leaves glaucous, two inches long.

A. PROMINENS.—Flowers a bright rich yellow, borne in profusion. Leaf narrow, an inch and a half long.

A. GRAVEOLENS.—Flowers nearly white; the leaves two inches and a half long.

A. SOPHORÆ.—A plant twelve feet high and nine feet broad. The flowers are produced in large branching heads, pale yellow, in profusion. Leaves broad lance-shaped, three inches long. It is a fine species.

A. VERTICILLATA.—Flowers a light yellow, and in profusion; leaves an inch and a half long. Very handsome.

A. LONGIFOLIA.—Flowers a light yellow, the spikes being erect; the branches are literally full. Leaves lance-shaped. It is a very beautiful species.

A. HYBRIDA.—Flowers a light yellow, globular-formed; pretty.

A. PRÆMORSA.—Flowers a pale yellow; a profuse bloomer.

A. PULCHELLA.—Flowers deep golden balls, very profuse. Mimosa-like foliage. A very beautiful species.

[All the above are additional to what we have noticed in recent numbers. They are especially handsome, each very distinctly varying from the other. Many of them shed a rich perfume. A collection of the best would very much enliven a greenhouse, and, blooming at the early part of the year, they are highly valuable.]

AZALEA SPLENDENS.—A purple-blush, with crimson spots. A profuse bloomer. Well worth a place in every greenhouse.

AZALEA, DUKE OF WELLINGTON.—A light rosy-red, the upper petals blotched and spotted with deep crimson. The flowers are nearly circular, not equalled in form by any other we have seen. It ought to form one of every collection.

EPACRIS ÆRIFOLIA.—Flowers bell-shaped, white, with dark anthers, the contrast appearing beautiful. They are borne in spikes two feet long, in great profusion.

E. ALBA-ODORATA.—Flowers bell-shaped, white, with dark anthers. Spikes two feet long, in great profusion. Very pretty.

E. MAGNIFICANS.—Flowers bright rosy-red before opening, then changing to a pretty pink. Handsome.

E. COCCINEA.—Flowers deep scarlet-red; tube an inch long. Very pretty.

[In addition to the above Epacrises, we have in this year's numbers described others, from which, if desirable, a selection can be made of the most beautiful, and of distinct character. They are charming ornaments for the greenhouse, and may be procured very cheap.]

CYTISUS FILIPES.—A standard plant, two feet high, with a fine head, in profuse bloom. The profusion of snow-white flowers, on pendent shoots, had a very neat appearance. It may be grafted or budded upon young Laburnums.

INDIGOFERA GRACILIS.—Flowers borne profusely in racemes about three inches long, of a bright rosy-pink. Very neat and pretty.

GOODIA PUBESCENS.—Flowers pea-like, yellow, with a dark eye. Very pretty; well worth possessing.

ZIERIA.—A new species. The flowers are white, much like those of the Lauristinus, and in similar-sized corymbose heads. It is very neat and pretty.

PENTSTEMON CLOUSII.—Rich scarlet, with a white inside. Very handsome.

BRODIAEA CALIFORNICA.—Brought from California by Mr. Hartweg. It is a larger plant than the well-known *B. grandiflora*. It is hardy, and requires to be treated in the same manner as the Scillas. The star-shaped erect flowers are of a pale blue, with darker streaks up the centre of the petals. It blooms from July to December, if protected by a hand-glass from frost. It bloomed in the garden of the Horticultural Society.

NEW PLANTS NOTICED.

PELARGONIUM, SCARLET PERPETUAL.—It is well known to be difficult to have the Scarlet Geraniums, as they are commonly called, to bloom in winter. Mr. Glendinning has met with a variety which he informs us blooms well throughout that period of the year. It was raised by a gentleman's gardener in the country, who has been paying particular attention to this fine class of flowers. As it blooms well in winter, no doubt it can be made to bloom all the year. It is not yet ready for sale.

GLENNY ON FORM.

The Forms of Flowers.—It will be conceded at once, by all who cultivate flowers, that there are certain points which florists aim at, and which are independent of, if not opposed to, all botanical interest. We have endeavoured to lay down principles that may be understood by all classes, and at the same time account for the supposed eccentricities which distinguish what are called florists' flowers. One of the great features of the modern school, never thought of by old florists, is, that all flowers should be circular. This might seem well in a Rose, or a Dahlia, but how does it accord with a Pansey, a Geranium, or a Verbena, which are flowers with naturally unequal divisions of five petals? or how does it appear plausible with the Cineraria, which is naturally a starlike flower? Why, the general principles which have governed these decisions are, a flower is rich in proportion to the quantity of surface within a given circumference. Suppose the circumference to be half-a-crown, there cannot be a vacancy without detracting from the beauty; hence the Pansey, Geranium, or Cineraria, that just reaches with the tips of its petals the edge of that circle, and has deep indentures where the petals lap over, or join, is less rich than one of the same flower would be, if its petals were sufficiently widened to fill up the circle entirely. Many persons admire the broad petals without knowing why; but the real reason is, because there is a larger surface

of the flower within the given circumference. In fact, whatever exhibits the nearest a circle by reason of widened petals, and little or no indentures, pleases the multitude, who may at the same time be ignorant of the reason they are pleased. Again, suppose the one and sufficient reason for the preference given to the quantity of surface within a given circumference did not exist. The eye is never pleased with angles, indentures, serrated edges, nor roughness, from the infant to the aged lover of flowers, whether acquainted with the properties or otherwise. Let a serrated Carnation and a rose-leaved one be placed side by side, and the rose-edged flower would be selected, because it is more pleasing to the unpractised eye. It is true that "the child will stretch forth its little hand for a daisy, but it will drop the daisy for the buttercup;" almost like an infantile choice to decide the leading points of form in flowers: roundness, doubleness, smoothness, thickness—these are qualities which assert their own superiority over deep indentations, singleness, roughness, and flimsiness. There are exceptions in regard to doubleness, because it is the nature of some flowers to be monstrous when double, and perfect in their singleness. The *Auricula*, *Polyanthus*, *Pansy*, and *Tulip*, derive all their beauty from the surface of their petals; their texture and the marking constitute their beauty, and everybody can understand the superiority of the circular forms over any other; even the *Polyanthus*, which is by nature scalloped and laced, is the better in proportion to the bluntness of the scallops, and the shallowness of their indentations. If we had to illustrate the fact that the beauty of a form depends on its approach to a complete circle, we should draw a series of circles, and then within these circles draw the flower of a *Geranium*, a *Pansy*, a *Cineraria*, a *Verbena*, and any other flowers as they were before the florist took them in hand, and make the extreme edge touch the circle. It would be seen that in consequence of the narrow petals which scarcely touch each other anywhere, a good portion of the surface within the circle would not be covered by the petal, and in proportion, as much of the surface was uncovered, the flower would look mean. We would then draw others as we can now find them, with their petals, widened, and considerably less of the surface vacant, and every one would confess the superiority; and we would finish by drawing imaginary flowers that entirely filled up the circle. It would be seen that however hopeless might be the task of raising such, the perfection of form, if it could be produced, would not be disputed. All parties would be agreed upon the circle being the true perfection of a flower, and the gracefulness of the curve would be recognized as the true form in all other respects. A double flower should be circular in the rise of the centre. The *Tulip* should be a portion of the hollow globe, on the same principle as a double flower should be a portion of the solid one, whether that be a half or two-thirds, or any other portion as dependant on the flower. If a *Pink*, a *Carnation*, or a *Picottee*, in which the petals have a distinctive character on the face of them, a half is the proper proportion, because all the other petals are smaller than the outer ones; but if there be nothing distinctive on the face, two thirds will be better, as is the *Ranunculus* and *Dahlia*, but spherical the face should be,

whether it be the one or the other, for spherical is the true face for the display of colour, and the richness of the flower.

HARDY HERBACEOUS PLANTS,

THEIR BEAUTY AND VALUE.

BY MR. CHITTY, STAMFORD-HILL.

IT was a gratifying circumstance to find some beautiful varieties of a most useful class of plants so well represented in the February number of the *CABINET*. The numerous species and varieties of *Potentilla* deserve to be introduced into the flower-garden wherever practicable, on account of the surpassing beauty of many of them, the length of time they continue to flower, and the ease with which they may be cultivated.

But the object of the present paper is not so much to recal attention to the above-mentioned genus exclusively, as to the opening remark in the number referred to, viz.,—"The hardy herbaceous perennial flowers form a permanent, valuable class." Such is really the case. A garden containing a well-selected variety of the most useful perennials is at all times a subject of interest, even in the winter season, when their flowers and leaves have passed into decay, and there remains nothing to indicate their existence but the stubs of their flower-stalks, or a stout stick, or label marking their locality. The spots so marked are regarded with interest by the cultivator, because objects are buried there that will, with the revivifying influences of spring, burst forth with renewed vigour, and bloom, and beauty, for his gratification.

Scarce any of the enjoyments of a garden are to be surpassed by that which is realized on witnessing the successional development and growth of a border of perennial plants during the early days of spring, when the mind is feasting itself with the assurance that in a few short weeks or months these bursting treasures will flower with their wonted splendour, affording gratification to every beholder. Again, it may be said that these are objects of "permanent" interest, because, although the flowers of a perennial plant may be exceedingly fugacious, yet the root remains, to excite solicitude for its future well-being, and to give pleasure from the idea of having it in possession.

In these days there is a danger of neglecting this important class of plants, a main object with flower-gardeners appearing to be the preservation and raising a sufficient quantity of soft-wooded plants for display in the beds and borders during the summer months, and securing a sufficiency of ornamental plants for the decoration of the conservatory, greenhouse, &c., to the partial, and, in some cases, almost entire neglect of the subjects under consideration.

With a sufficiency of room, and a little management, a continual display of the most interesting and beautiful kind may be kept up from the earliest days of spring until quite late in the season. The first appearance of spring will be indicated by the *Snowdrop*; *Crocus*, with its many beautiful varieties; *Hyacinth*; *Narcissus*, in several varieties; early

Tulip, &c. Among bulbs—*Arabis alpina*; *Pulmonaria*, several species; Primrose, especially the double varieties; *Polyanthus*, many beautiful varieties; *Orobus verna*, with very many others too numerous to mention. As the season advances, larger-growing and handsomer species and varieties come into flower; and many of the kinds that flower in the height of summer, such as *Aconitum*, *Delphinium*, *Lychnis*, *Phlox*, *Campanula*, *Mimulus*, *Lilium*, &c., vie in beauty with many of the denizens of the greenhouse and stove. For growing upon rock-work, many of the perennials are admirably adapted; *Saponaria ocymoides*, *Arabis alpina* and others, *Aubrietia purpurea*, *Phlox procumbens*, *Lychnis maritima*, are examples of such as are most suitable for this purpose. Many of those which possess trailing habits are also well worthy of being grown in pots, for the purpose of decorating vases, &c., when in bloom. Where a small piece of reserve ground can be spared for the purpose, it will be found a very useful practice to cultivate a number of the most showy perennials in pots, for the purpose of standing in the most conspicuous parts of the garden when in bloom. Many, also, of the more tender kinds, that will scarcely endure the cold and wet of our winters in the open borders, may be preserved and grown in pots, and made to contribute, when in bloom, to the general ornament. For the preservation of many very handsome plants, such as *Lychnis fulgens*, *Delphinium Barlowii*, *Hulmei*, and *Sinensis*, *Linum monogynum*, and very many others that will not endure the wet of our winters in most parts of the country, a covering of boards, or of some other material that will effectually exclude the rain, is all that is necessary, full exposure being absolutely requisite at all times, except during rain or severe frost. The object of this paper is not to give directions for the culture of these plants, but I must here be permitted to protest against a practice very often adopted with reference to many of the strong-growing perennials, namely, that of cutting round them with a spade when grown too large, and leaving the internal and exhausted part to grow, while the outer and healthier portions are destroyed. The more excellent way is to take off the outer portion, which contains the strongest and best buds, and if it is desirable or necessary to replant in the same situation, to dig up and bury deeply the old portion, and replant the part taken off upon it.

If the hints now thrown out should be the means of reviving attention in any instance to a class of plants worthy of notice, the object of the present paper will be answered. The great error into which cultivators of perennials appear to have fallen is this, that when once inserted in the ground they require no further attention. To this neglect must be attributed the scarcity and almost entire loss of many valuable plants; whereas, to keep up a stock of perennials, continual renewal must be had recourse to, either by seeds, or whatever may be the mode of increase of the plant concerned. Only by these means can a collection be maintained in vigour, and in a condition to yield increasing interest to the cultivator.

CULTURE OF ALPINE PLANTS.

BY AN AMATEUR.

THESE very interesting plants have long been great favourites of mine, and it has afforded me great pleasure to observe that the last two seasons nearly all the principal horticultural and floricultural societies in and around London, also in the country, have admitted them to form a class for collections of which prizes were offered and awarded. At the Chiswick, Regent's Park, and Surrey Gardens shows, very extensive collections were exhibited, and they attracted the particular attention and admiration of visitors. Let this class of plants be examined closely, and perhaps there does not exist a more lovely group in Flora's train.

The Alpine tribe of plants is composed of a general assemblage of such as are dwarf, small, and some requiring particular care in cultivation. The greater part are natives of Alpine situations; many on the hills of our own country; some, however, inhabit our woods, and others are arenarious, sea-side, or bog plants. In fact, a collection of Alpines 'properly consists of such plants only as grow on high mountains, whether of this country, America, Switzerland, or others. They are universally low, bushy, and mostly evergreen. In some of their native situations they are covered with snow the greater part of the year, and consequently never experience excess of heat or cold. In consequence of their vegetating at so great an altitude, they are surrounded by a light, thin atmosphere, mostly charged with moisture. The soil in which they grow is soft, black, and peat-like, filling up the crevices of the rocks, or forming a thin stratum on the surface. In England, Alpine plants are often planted out on rock-work and in shady borders; but experience shows that they never succeed well or long in such situations; we therefore should endeavour to imitate their natural habits, and plant them in pots, protecting them in winter from too much wet, by placing them in a cold frame or pit, where they ought to be firmly plunged in coal-ashes. In addition to the glass, a covering of mats should be added in frosty weather, and, if very severe, left constantly on. This month they will begin to show signs of vegetation, and should be carefully repotted, dividing such as it is desirable to increase. The pots in which they are placed should be 60's, and most efficiently drained. The soil in which most of them will thrive should be composed of one-half light sandy-loam, and one-half good peat; if the loam be rather strong, a quantity, not more than one-sixth part, of fine white sand should be added, and a little well-decomposed leaf-mould will be a beneficial addition. As they are repotted they should be again placed in the frame, to protect them from heavy rain until they have taken root. Some few of them are annuals, and some of the perennials will have shed their seed during summer, and then die; it is therefore advisable to let the pots in which they grow remain undisturbed for a time, and in all probability a stock of young plants will make their appearance. Seeds of any kind which have been saved should now be sown in pots of finely-sifted soil, scattering them thinly on the surface, that the plants may have room to attain a considerable

size before they are potted off, as they are very liable to damp off if potted when small. The summer station for Alpines should be chosen with an aspect as near north as possible, and where they will not be exposed to the sun more than two hours in the morning; but they must by no means be under the shade or drip of trees. They should be placed on, or plunged in, finely-sifted coal-ashes, and every means taken to keep worms from them. As there is no class of plants which are sooner destroyed, either by drought or excess of heat, too much attention cannot be paid to watering them, in order to keep them, and the ground around them, constantly moist; but they should never be indiscriminately watered all over with a coarse-rosed watering-pot, or exposed to heavy rain. In the month of November they should be placed in their winter quarters, at which time the pots should be carefully examined, and any that are infected with worms should be turned out of the pot, and the worms picked out, without disturbing the boles. After they are placed in the frame or pit, all the air possible must be given them in fine weather, and they must be carefully and sparingly watered, examining them frequently, and removing all signs of damp or mould that appears.

An extended descriptive list of Alpines would not be suitable for one number of the CABINET, but the following genera contain a large portion of the best and most showy species:—Alyssum, Anagallis, Anemone, Arabis, Arenaria, Asperula, Aubrietia, Bellis, Bulbocodium, Campanula, Cerastium, Coronilla, Cyclamen, Cypripedium, Crucianella, Dianthus, Draba, Dryas, Dracocephalum, Elichrysum, Epimedium, Erica, Fumaria, Gentiana, Galium, Geranium, Gysophilla, Geum, Hepatica, Helianthemum, Hieracium, Iberis, Iris, Jasione, Lamium, Lathyrus, Linaria, Lithospermum, Lotus, Lychnis, Lysimachia, Myosotis, Mesembryanthemum, Ophrys, Orchis, Orobus, Oxalis, Papaver, Phlox, Polygala, Potentilla, Primula, Pulmonaria, Pulsatilla, Pyrola, Ranunculus, Saxifraga, Scilla, Sedum, Sempervivum, Silene, Soldanella, Spargula, Stellaria, Trillium, Veronica, Viola, Vinca. To these may be added the numerous dwarfs of the Ferns and Mosses.

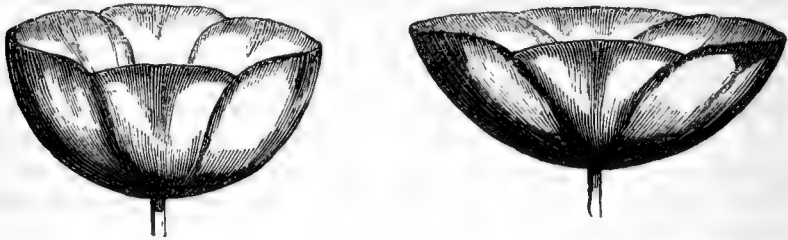
Most of your readers are acquainted with these various families of plants, and the nurserymen who keep large collections of herbaceous plants would be able to make a selection of the best for any person not acquainted with the general species.

PROPERTIES OF THE TULIP.

MR. GLENNY insists that anything between the half and the third of a ball is the perfection of a Tulip, and instances the diagram which we have here copied in illustration.

He claims to have been the first to publish the fact (for he will call it nothing less) that a Tulip ought to be a portion of a hollow ball, or, in other words, spherical, so far as it goes. He denies that the Tulip is one jot better or worse in shape whether it is half a ball in the morning or expands to the third of a larger ball at noon or in the afternoon; and if the Tulip will not expand to the third of a ball

without quartering (that is, showing vacancies between the petals), he condemns it. Some writer on the subject, nevertheless, ventured to denounce Mr. Glenny's proportions—making an eighth more or less to one or the other, and calling it his standard. He ventured also to accord to Mr. Groom the credit of deciding upon some other proportion; but Mr. Groom never mentioned a hollow ball, on the contrary, maintains the old doctrine of a shoulder instead of the easy curve. The first annexed cut shows Mr. Glenny's extreme depth—half a ball, and the second shows it expanded to a third—its extreme shallowness.



ROSES.

CULTURE IN POTS.—The first thing that should be attended to is to provide a good heap of soil for the plants to grow in. All like a rich soil, which should be made light for the delicate-rooting varieties, and more tenacious for the robust hardy kinds.

To form a light soil, procure one barrowful of seasoned turfy-loam, half a barrow of well-decomposed stable manure, half a barrow of leaf-mould, and silver-sand in proportion to the texture of the loam, which will in no case require more than one-fourth of its own bulk.

The heavy soil may be composed of one barrow of stiff turfy-loam, one barrow of night-soil that has been mixed with loam and laid by for a year, half a barrow of leaf-mould, or well-pulverised manure, and sand as before recommended. The addition of about one-sixth of a barrow of burnt earth will be found to improve both composts. The materials should be thrown together at least three months before required for use, and turned frequently, that the integrant parts may become well incorporated, and ripened by exposure to the sun and air. The sieve is unnecessary, for as large pots are principally used, the coarser, in moderation, the soil is, the better will the plants thrive.

Roses intended for growing in pots may be either on their own roots or on short stems; the tea-scented and Chinese kinds are undoubtedly better in the former way. Roses cultivated to bloom in their natural period cannot be placed in too airy a situation, therefore keep them either plunged or placed on the surface, with moss or cinder-ashes about the pots, in an open spot in the garden. Whichever way is adopted, two things are to be guarded against—the ingress of worms from the ground, and the egress of roots from the hole at the bottom of the pot. If the roots find their way into the ground, there will be few formed in the pot; and the result will be, a more vigorous, but

less perfect, growth; and if the plants are required to be removed at the time of flowering, they will receive a severe check. Both of these occurrences must therefore be prevented, by placing the pots on inverted seed-pans.

The aim throughout the growing season should be to get a few stout well-ripened shoots by autumn—shoots that will bear strong pressure between the finger and thumb, without giving any indication of softness, for it is these which will produce strong and perfect blooms. The way to accomplish this is to place the plants a good distance from each other, and as the young shoots form they should be set wide apart, that they may enjoy full sunlight. From the earliest period of growth, it is necessary to look them over occasionally, with the design of encouraging such shoots as maintain the best position, and checking those whose tendency is to exclude others from a fair rate of growth, and destroy the symmetry of the plants. Weak shoots should be cut out, and disbudding practised freely. If two or three eyes burst from the same point, threatening to crowd across each other, a portion should be at once removed.—(*Paul's Rose Garden, a publication well worth procuring by all Rose growers.*)

TEA-SCENTED ROSES AS CONSERVATORY CLIMBERS.—The following kinds of Roses are suitable for the purpose:—Abricate, fawn, with apricot centre; Julia Mansais, pure white; Belle Allamande, cream, shaded with blush; Bougere, rosy-bronze; Baret, rosy-purple; Clara sylvain, pure white; Delices de Plantier, coppery-rose; Devoniensis, pale yellow; Eugene Desgaches, clear rose; Goubalt, bright rose, centre buff; Lynnais, rosy-lilac, very large; Madame de St. Joseph, salmon-pink; Marie de Medicis, rose, with centre fawn; Niphetos, pale lemon; Originale, blush, with rose centre; Safrona, apricot, changing to buff; Souvenir d'un Aine, salmon and rose-shaded; Triumph de Luxemburg, coppery-rose. Any of these will grow ten or more feet high, and by giving them a season of rest, in withholding water for the time, then gradually supplying them, at any desirable period, even winter, a fine display may be had.

FINEST KINDS FOR SUCCESSIVE BLOOM.—

1. SUMMER ROSES, flowering in May and June.

Provence—Unique.

Moss—Alice Servi, Celina, Comtesse de Noe, White Bath.

Damask—Madame Hardy.

White—Le Seduisante, Sophie de Mavoilly.

French—Boule de Nanteuil, Latour d'Auvergne.

Hybrid Provence—Emmerance, La Volupte, Princess Clementine.

Hybrids, various—Chenedolle, Coup d'Hebe, William Jesse.

2. AUTUMN ROSES, flowering from July to October.

Damask, perpetual—Mogador.

Hybrid, perpetual—La Reine, Baronne Prevost, Duchess of Sutherland, Lady Alice Peel, Louis Buonaparte, Madame Laffay, Mrs. Elliot, Geant des Batailles.

Bourbon—Arosa, Coup d'Hebe, George Cuvier, Madame Nevard, Queen, Somnet, Souvenir de Malmaison.

Noisettes—Aimée Vibert.

China—Cramoïse Supérieure, Madame Brecon, Mrs. Bosanquet, Comte de Paris, Eliza Sauvage.

Tea-scented—Nephethos, Safranot.

SALVIA GESNERIFLORA.

LAST summer one of our correspondents requested us to state what treatment must be pursued to induce this very splendid plant to flower. Till this application was made to us, we were not aware of any difficulty relative to its blooming. With us it has flowered profusely, and its large brilliant scarlet blossoms were highly ornamental.

We inserted our method of treatment in the Magazine for September last, page 100. In Mr. Paxton's *Magazine of Gardening and Botany* for the present month, the following remarks on this fine *Salvia* are inserted:—

“*Salvia Gesneriflora*.—Several specimens of this Heath we remarked coming freely into flower in the gardens of the Dowager Duchess of Northumberland, Sion House. This species is not very generally cultivated, owing to the nature of the plant not being thoroughly understood, particularly its period of flowering, which is during the first three months of the year. Mr. Iveson, the gardener, informed us that the young plants were turned out into the border during summer, to allow for full scope of growth, and, before frost, taken up, potted, and placed in the greenhouse; and during January, when other species of *Salvias* are going out, this commences and continues flowering for three months. The flowers are a bright scarlet, produced in pendant masses.”

With us, as also in the Royal Gardens of Kew, it continued to bloom till August, and no doubt, if suitable attention were paid, plants might easily be brought to succeed others, so as to have it in bloom all the year. It deserves to be in every greenhouse or conservatory.

This, as well as *Salvia splendens*, *fulgens*, *speciosa*, *coccinea*, *pseudococcinea*, and *splendens nana*, are very valuable plants for the greenhouse, sitting-room, or conservatory. They produce a beautiful effect through autumn and winter, their brilliant blossoms being highly ornamental, and some of them fragrant. They are all easy of cultivation, and by stopping the leading shoots of plants in summer, causing them to push lateral ones, the season of bloom may be retarded to almost any period desired. We have long been surprised that these fine plants have not been more generally cultivated, especially for winter ornaments, when all flowers are valuable. They may be procured at a very small cost, and, being readily propagated, a stock of kinds once obtained can be easily kept. Besides these advantages, some of them are splendid ornaments for the open beds and borders.

ON REVIVING WITHERED PLANTS.

BY FLORA.

IT may perhaps be useful to state the method I have adopted to recover withered plants. I lately received some Pinks and Carnations from a

friend, which had been packed at least seventeen days before they came to hand, and had travelled upwards of 160 miles. When I opened the parcel, the Pinks were very much withered; indeed, the grass had nearly become hay, and the earth and moss round the roots were perfectly dry: but the Carnations, though in a very bad state, were looking a little greener than the Pinks. I immediately placed them, as they were, with the moss around them, in a pan of spring water, into which I had dissolved some nitre—about a small teaspoonful to a quart. Here they remained for twenty-four hours, at the end of which time the Carnations had entirely recovered their fresh green appearance, and in forty-eight hours the Pinks looked nearly as well. I planted them immediately on taking them out of the water, and they are now looking as well as any others I possess. A quicker method is stated to be effectual, but this I never tried; it is as follows:—“Camphor is dissolved in alcohol until the latter is saturated; the alcohol is then put into soft water, in the proportion of two drops to half an ounce. Withered or apparently dead plants put into this liquid, and allowed to remain there from two to four hours, will revive if they had not been completely dead before being put in.”

ON THE NERIUM OLEANDER, &c.

IN the two last volumes of this Magazine there have been inserted some queries, remarks, and instructions on the culture of this lovely tribe of plants. It cannot be too strongly recommended, and any information tending to its improved cultivation we are glad to obtain. The general complaints have been that the plant did not bloom freely; the flower-buds dropped off, the plant becomes a naked, straggling, unsightly object.

In its native climate and situations, the Oleander is found growing on the margins of or near to lakes, rivers, brooks, &c., where the soil generally consists of the sediment deposit left by the muddy waters which have overflowed the banks. The summers are hot and dry, and winters comparatively cool. It generally commences blooming at the time of the overflowing of the waters, and this excess of water contributes to promote the vigour and constancy of bloom. When the blooming season is over, the several months of drought follow, and the ground becomes parched, during which the Oleander has its period of growth at first, and that of rest follows. It begins to move afresh when the autumnal rains descend, and in *our* winter months the flower-buds are formed in those milder climates. A rich strong loam is what the plant requires, plenty of pot-room; and when the flower-buds become exposed, the pots should be placed in pans, and a fresh supply of water be daily given, and occasional syringing over head. Mr. Beaton observes in the *Cottage Gardener*,—

“The reason why the Oleander refuses to blossom, is either the want of sufficient heat, light, and air, while it is making its annual growth with us in summer, or for want of the necessary supply of water at the same time; and it must be the want of abundance of water at the roots that causes the flower-buds to drop off without expanding.

After the summer growth is finished, there is no better place for the Oleander to stand than in the full sun out of doors, and, if possible, having the shelter of a house or wall on the north side. Oleanders require very little water from the end of September till March; indeed merely enough to prevent the soil from becoming powdery.

“ Without a peculiar mode of pruning, it is impossible to keep their heads from becoming straggling and out of bounds after a few years; and, as they flower on the ends of the shoots made last year, we must not cut off their points in order to get a bushy head, for, if we do, we cut away the flowering parts. Therefore to keep a large plant in good flowering order, one-half of the flowering branches must be cut down every year to the last joint from the old wood, as soon as the flowering is over for the season. Now as the young shoots start off in threes round the flowers, and begin to lengthen long before the flowers expand, such of the shoots as you intend to cut down ought to have the three points of the shoots round the flowers stopped as soon as they appear. This will throw the whole strength of the branch into the flowers, and will also cause the bottom eyes to push out three strong shoots, as soon as cut down after flowering.” If there be too many new shoots, thin them at an early stage. Dwarf bushy plants of the Neriums may readily be produced by an annual attention to pruning, and to bloom vigorously from one foot high and upwards as desired.

This tribe of plants is a great favourite with our continental gardening neighbours, and considerable efforts have been made to increase the number of kinds by hybridizing; we have received a number of their best varieties, but in the nursery collections there, upwards of sixty varieties are found, comprising purple, white, rose, pink, scarlet, yellow, sulphur, &c. All are lovely, ornamental, fragrant, and deserve every attention in cultivation; succeeding admirably in the dwelling-room, greenhouse, or conservatory.

GOLD AND SILVER FISH.

IN a recent number of this Magazine, some particulars of the breeding of these fishes were asked for. A friend of mine, who has had much opportunity of obtaining information, has sent me the following remarks:—“ It is a well known fact, that warmth adds much to their tendency to increase, hence their abounding in such numbers in ponds in Lancashire and other parts of the country connected with steam engines, where the water is kept at a high temperature. Although this is evidently congenial to their habits, so far as regards the rapid increase of the species, a high temperature is not however indispensable even for this purpose. I found them to multiply in great numbers in pools and ponds, where the water was at all times of the ordinary temperature. I believe, however, that their tendency to increase is greatly promoted by a circumstance which it is my present purpose to notice. In a small ornamental pond in my pleasure ground, in which I have for many years kept some gold fish, (*Cyprinus auratus*,) I have been in the habit of annually placing a bundle, of about fifteen inches in diameter, of birch twigs, and fastening them to the bottom

and at the side the most exposed to the sun. That the fish would not have produced spawn had the birch twigs been omitted to be placed in the pond, I by no means wish to assert; I am, however, fully persuaded that since I adopted this means, they have become more prolific. The spawn has on all occasions, without an exception, been deposited in these twigs. It does not appear to be of so much importance to the spawn itself, as to that of affording protection to the fish in their earlier stages of growth. For about three weeks they may be seen hovering around the vicinity of their birth-place. Seldom venturing more than a few inches beyond the outer edge of the bundle of twigs." I have found that spring water is too cold for them, and often contains some mineral that is injurious.

ABRONIA UMBELLATA.



MR. HARTWEG discovered this charming plant growing on the sea-sands at Monterey, in California. It is a creeping plant, producing long, rapidly extending shoots, which bear a profusion of flowers. It has very much the habit of the Verbena, and the umbels of flowers are very similar. They are of a pretty rosy-purple, with a lighter centre, and are exceedingly fragrant, especially in the evening. It is a free grower, and does well either in pots or in the open ground; in fact, it requires the same treatment as the Verbena.

Our bedding plants have, within a few recent years, had many valuable additions in the lovely *Cuphea platycentra* and *strigulosa*, *Anemone japonica*, *Heliotropium Voltairianum*, and *Triumph de Leigh*; various *Lobelias*, *Salvias*, *Bouvardias*, *Selugos*, &c. All are valuable, especially so for objects of admiration from a sitting-room; but the *Abronia* has an excellency beyond the others in its delicious perfume, and if planted near a dwelling-room, its very agreeable sweetness may be enjoyed. It is a charming plant for a basket (see the figure at the head of this article), or grown in pots, extending over the sides and hanging gracefully. It is readily cultivated, easily increased, and good to preserve.

THE SWEET VIOLET.

It is such an universal favourite that it should always be sown, or planted, near walks, clumps, at the edges of belts and plantations, in wildernesses, in large borders under the trees by the sides of drives up to a mansion, and in all the otherwise neglected places about an estate. The air should be redolent of its sweets, it should occupy a space in all the shady nooks, for the drawing-room should be supplied each morning with abundance of its flowers, and no place where they will grow should be without them; once sown they require no more care in those waste places, because every plant that thrives will spread enormously, and if they be not burned up with the sun they are sure to flourish. How many fine estates abound in shady walks and drives, totally neglected as to flowers and other attributes of a garden, where one day to turn the soil here and there, and bestow a few plants or seeds of the Violet, would give a charm to many wealthy people wholly unknown. The general disposition to do no more than they are obliged to do, operates greatly against the preservation of those natural beauties which, however insignificant in themselves, yield a charm in combination with other features. A bed of Violets near a mansion, surrounded by gorgeous exotics and fragrant aromatic plants, might indeed seem nothing, if not out of place; but in the retired shades of the richly-wooded domain, with nothing but the humble Daffodil for its companion, the Violet asserts its empire and maintains its sway. Never then neglect the Violet. The chief sorts are single and double-flowering, white, purple, dark blue, and pale blue.

FLORAL EXHIBITIONS.

THE ROYAL SOUTH LONDON SOCIETY held their first exhibition for the season, on the 17th instant, at the Horns Tavern, Kennington. The stove and greenhouse plants exhibited, were, in every instance that we noticed, well grown specimens of their kinds, and reflected much credit to the growers. The florists' flowers were more numerous than we recollect to have seen on any previous first show. The Cinerarias were numerous, well grown, and in the seedlings there were some valuable acquisitions to this charming tribe of flowers.

In AURICULAS, the first prize was obtained by W. Ginger, Esq., for the best pair, Taylor's Glory and Page's Champion. J. Chapman, Esq., second, for Dickson's Duke of Wellington and Hogg's Waterloo. Mr. Edwards was third, with Waterhouse's Conqueror of Europe and Cleggs's Crucifix. For four varieties, W. Ginger, Esq., again received the first prize for Kenyon's Ringleader, Stretch's Emperor Alexander, Dickson's Duke of Wellington, and Taylor's Glory. J. Chapman, Esq., the second, for Hogg's Waterloo, Hedge's Britannia, Waterhouse's Conqueror of Europe, and Smith's Waterloo. Mr. Edwards was third, with Dickson's Unique, Page's Champion, Waterhouse's Conqueror of Europe, and Clegg's Crucifix. Mr. James Dickson exhibited four magnificent plants, Dickson's Duke of Wellington and

Unique, Page's Champion, and Taylor's Glory. They were awarded the first prize in the nurserymen's class. Dr. Bushell took the second prize, with Page's Champion, Dickson's Duke of Wellington, Metcalf's Lancashire Hero, and Taylor's Glory. Mr. Gaines the third, with Wild's Bright Phœbus, Gaines' Elegance, Stretch's Emperor Alexander, and Smith's Waterloo. An extra prize, offered by Mr. Dutton for the best three of Oliver's Lovely Anne, was awarded to Mr. James Dickson. Other extra prizes for these plants, were taken by Mr. James Dickson and J. Chapman, Esq. First class certificates were given to Mr. Dickson for two seedling Auriculas, named Sir Charles Napier and Freedom.

In CINERARIAS, Mr. Robinson took the first prize, offered by Mr. Ivery, of Peckham, for the best eight, with well-grown specimens of Ivery's Conqueror, Colossus, Attraction, Desirable, Pet, and Brilliant, Henderson's Beauty of St. John's Wood, and Royal Crimson. A prize was awarded to Mr. Mockett for the following eight—Ivery's Colossus, Purple Prince, and Defiance, Henderson's Beauty of St. John's Wood, Royal Crimson, Vernate, Bendisi, and Coronet. In the Dealer's class, Mr. Henderson, of Wellington-road, took the first prize with twelve magnificently grown plants; viz.—Rosette, disk dark, the remainder a brilliant rose, one inch across; Consuell's, disk light, the remainder blue, one inch across, a good shaped flower; Wellington, disk dark, the petals white tipped with bright rose, one inch across; Alboni, disk buff, petals white tipped with purple, one inch across, a fine formed flower, and very pretty; Zenobia, disk very dark, surrounded with red, the remainder a violet colour; Coronet, disk dark, surrounded with white, and tipped with deep rose, one inch across, good form; Annie, disk dark, surrounded with pure white, the rest a bright violet; Cerito, disk buff, surrounded with white, and bordered with a pretty lavender-lilac, a first-rate variety, and worthy a place in every collection (see figure in our Magazine, last June); Blue de Ciel, disk nearly white, and the petals a fine rich blue, one inch across; Emperor, a large flower of bright rosy crimson colour, very showy, and a good form; Diana Vernon, a rich purple, good form, middle sized flower; Fair Rosamond, disk nearly white, petals pure white tipped with pink, one inch across, and fine form. Mr. Ivery was second, with twelve well-grown plants—Nymph, Coronet, Emma, Satellite, Countess of Zetland, Prime Minister, Pre-eminent, Pride of Surrey, Red Rover, Red Rover, Maritima, Beauty of Peckham, and Attraction. In Seedling Cinerarias, first class certificates were awarded to the following:—Henderson's Pauline, Perodi, Adela Villiers, Carlotta Grisi, Ivery's One in the Ring, Kendall's Richard Cobden, Hamp's Abdalonymdies, Ambrose's Modesta, and Alba Purpurea. We made notes of the following exhibited by Mr. Henderson:—Madame Rosate, disk very dark, surrounded with white, and the remainder a pretty lavender colour, fine form and of first rate excellence. Pauline, disk a buff colour, and the remainder a rich bluish purple, fine petal and form, first rate, flower large, Adela Villiers, disk drab colour, surrounded with white, and the remainder a bright purple; the petals are numerous, being narrow, but fine

shape, free from notches at the end; so regular are the petals arranged, that the flower appears as a circle filled up, it is a pretty variety. *Flora M'Ivor*, disk dark, and the remainder a pretty crimson, fine form, and first rate. *Madam Perodi*, disk black, surrounded with pure white, and the remainder a bright rosy-purple, flower one inch across, a very pretty variety. The above are of the dwarf class of growth, from nine inches to a foot high, and profuse bloomers. *Mr. Pond*, of Bath, exhibited *Bride*, the rising disk is of a buff colour, surrounded with white, and the rest of a handsome pale lilac; the petals are of excellent form, and being new in colour, renders it a valuable acquisition, one inch across. *Bridesmaid*, the disk is dark surrounded with white, and the ends of the petals blue, a neat variety. *Compacta*, disk dark, next white, and petals tipped with purple; flower three-quarters of an inch across, a second-rate flower. *Lilac perfection*, disk surrounded with white, and the remainder a beautiful lavender-lilac colour. The plant is a dwarf grower, free bloomer, and the flower is an inch across, it is a first class flower. *Sir Charles Napier*, a bright crimson, blooming profusely. *Queen of May*, disk very dark, surrounded with white, the remainder a bright purple, very neat and pretty, also a good formed flower, one inch across. *Formosa superba*, disk dark, the remainder a rich crimson-purple. Fine formed petals, and very showy. The following were shown by Messrs. *Pond, Ivory and Son*, and others:—*Pre-eminent*, disk a yellowish colour, and the petals a beautiful violet, three-quarters of an inch across, fine form and very pretty, worth a place in any collection; *Emma*, disk very dark, surrounded with white, and bordered with light blue, one inch across, very handsome; *Beauty of Peckham*, *Attraction*, *Maritima*, *Pride of Surrey*, *Red Rover*, *Prime Minister*, *Countess of Zetland*, *Satellite*, *Nymph*, *Defiance*, *Vernalis*, and *Beauty of St. John's Wood*.

PANSIES.—*Mr. Edwards* took the first prize for twenty-four blooms, with *Hoare's Superb*, *Mary Jane*, *Mrs. Hamilton*, *Miss Edwards*, *Constellation*, *Supreme*, *Climax*, *Caroline*, *Duke of Norfolk*, *Curion*, *Perseus*, *Wonderful*, *Aurora*, *Zobeli*, *Prince*, *Lady Sale*, *Prince of Orange*, *Leonanta*. *Mr. Over* took the second prize, with *Beauty Supreme*, *Madonna*, *Duchess of Norfolk*, *Model of Perfection*, *Cossack*, *Cypress*, *Perseus*, *Almanzor*, *Rainbow*, *Tryfosa*, *Dr. Wolff*, *Goliah*, *Excellent*, *Fair Flora*, *Attila*, *Euclid*, *Wellington*, *Duke of Norfolk*, *Mrs. Hamilton*, *Perfection*, *Exquisite*, *Climax*, *Arethusa*, *Duchess of Rutland*. *Mr. Harms* was third, with twenty-four blooms of similar varieties, or nearly so. *Mr. Turner* took the first prize in the Dealer's class for twenty-four blooms, viz.:—*Almanzor*, *Duke of Norfolk*, *Climax*, *Rainbow*, *Mrs. Hamilton*, *Inventor*, *Perseus*, *Charmer*, *Addison*, *Miss Edwards*, *Attraction*, *Arethusa*, *Duchess of Rutland*, *Zobeli*, *Aurora*, *Ophir*, *Model of Perfection*, *Supreme*, *Duchess of Norfolk*, *Candidate*, *Constellation*, *Prince*, *Example*, *Mrs. Beck*. *Mr. Thomson* was second, with *Mrs. Hamilton*, *Duke of Norfolk*, *Rainbow*, *Almanzor*, *Constellation*, *Celeste*, *Model of Perfection*, *Milo*, *Cossack*, *Supreme*, *Aptemus*, *Privateer*, *Aurora*, *Madonna*, *Perseus*, *Fair Flora*, *Superb*, *Polyphemus*, *Penelope*, *Caroline*, *Duke of Richmond*, *Waterloo*, *Prince*. *Mr. Bragg* received the third prize.

TO BLOOM THE CLEMATIS SIEBOLDII IN PROFUSION
IN THE GREENHOUSE.

BY A PRACTICAL FLOWER GARDENER.

FEW plants are so ornamental as the *Clematis Sieboldii*; when properly cultivated and in profuse bloom, it is invaluable for adorning the greenhouse or conservatory. I used to retain plants in the greenhouse all the year, but they bloomed sparingly after the first season; but by the following method the plants bloom in vast profusion, and the white in contrast with the dark centre of the flowers is highly interesting and handsome. The following is the method of treatment I pursue:—

Towards autumn I place the plants out of doors, against the garden wall, when the pots are covered round the sides and over the surface with dry litter; the pots themselves are set upon slate to keep the worms from entering at the holes in the bottom. The stems of the plant, which are very slender, are of course by this time well ripened, and are trained over a wood trellis. The whole of the branches are securely tied, so that they do not receive any injury from the friction occasioned by the high winds. They remain here throughout the winter, and towards the end of March I take them into the greenhouse; they are, however, first shifted into fresh soil, and are kept in the greenhouse about three weeks, and from this department I remove them to the forcing-house; where they receive a slight degree of excitement, in being submitted to a temperature varying from fifty to sixty degrees Fahrenheit. This is the temperature I keep my forcing-house, in which I bring forward my early flowers. I ought to observe here that with respect to pruning, I do not find that this plant requires anything more doing in this way, than merely cutting out the dead parts of the slender twigs or stems. I never do more than this, but always cut away the old ties, and replace them with new ones. In doing this I may observe, that I would not advise that the whole plant should be untied at once, but that a few ties only should be cut away, and again replaced before any more are undone. Unless this be attended to, the little slender stems become entangled; and in replacing them, even with the greatest care, they are often broken and otherwise injured. This is an evil common to all plants of similar habits; and therefore I mention it with that view, as much as with reference to the plant in question. During the bright weather in summer, when this plant is come fully into bloom, it is removed to the greenhouse; and if an airy situation, partially shaded, can be given to it, so much the better. There is seldom any great necessity either for much tying of young shoots or pruning, as the plant blooms so freely that the luxuriance of the shoots are greatly checked, and in full bloom there is scarcely either foliage or shoots to be seen.

The compost which I grow my plants in is a strong rich loam, containing bone-dust, horn-shavings, and other stimulating manures; these are mixed up with the earth many months before it is used. The plants are grown in rather large pots, and very carefully attended to in watering.



MAY—the cheerful “merrie” month of May—once again unfolds her flowery mantle. Our beds and borders are now bespangled o’er with the varied and beautiful tints of opening flowers. The pits and greenhouses offer the garden their winter-stored subjects, already bursting into active growth, and eager to breathe the free and open air. Some caution and care must, however, still be exercised; the return of occasional sharp frost during the past fortnight reminds us that all danger is not quite passed, and that it will be advisable to be prepared with some protecting material to shelter, in case of need, such plants as are most susceptible of injury. Amongst the usual bedding plants, do not forget *Cuphea platycentra*, *Heliotropium Voltairianum*, *Plumbago Larpentæ*, &c. If not already decided upon, determine at once all your plans; pay particular attention to the arrangement of colours. A flower-garden may be richly furnished with plants, but be very ineffective if the colours are badly arranged. For producing brilliant effect in masses, reject parti-coloured flowers; such are never effective. Use pure and decided colours, such as brilliant scarlet, pure white, deep purple, bright yellow, &c.; those which are in close affinity kill each other. Take care not to mix plants which are of doubtful duration when in bloom with those of a more permanent character; remembering always that the beauty of a formal flower-garden depends upon its being in all its details a perfect work of art, in which no blemish should occur. There must be high keeping, symmetry, judicious arrangement of colours (traceable to fixed principles), or it will not form a satisfactory whole. Young gardeners should attend to this. Many persons plant their stock so thinly that their beds are not covered till late in the season; we advise thick planting for speedy effect.

Where annuals are required for late flowering, they may yet be sown; and hardy annuals that have come up too numerous should be thinned out, so as to retain but enough to be vigorous. Tender annuals, raised in pots or frames, should be taken, with as much soil to the roots as possible, and after the middle of the month be carefully planted out. After all planting is done, the next operations will be training and pegging down the plants; this is a tedious but most important process towards having well-furnished beds. Climbing plants will now require training from time to time, according to their growth.

FLORISTS’ FLOWERS.—Amongst these we may class the *Antirrhinum*; many of the kinds now in cultivation are exceedingly pretty, and deserve to be grown. Now is the best period to plant them out in beds, therefore, if not already done, no time should be lost in procuring such as

may be desired. *Auriculas*.—The blooming season of these favourites is now nearly over, and their growth commencing; they should therefore be immediately repotted, so that they may receive the benefit of additional stimulant, and thus more vigorous and much stronger plants will be obtained than if the potting is deferred until autumn. *Carnations* and *Picotees* are by this time in their blooming pots, and as they advance in growth attention will be necessary to stick and tie them up neatly. Stir up the surface soil of the pots, and add a dressing of mixed loam and well-decayed dung. *Cinerarias*.—As these go out of bloom cut down the stems, which will induce an abundance of shoots for increase. *Dahlias*.—The last week in the month is as early as it is safe to commence planting out. The young plants will be greatly strengthened by repotting them into larger pots, giving all the favourable air possible, in order to have them hardy when turned out. *Fuchsias*.—Repot and trim all the plants required for specimens; encourage their growth by frequently syringing them over-head, and take care immediately to stop such shoots as are of too redundant growth, so as to preserve the plant uniform. *Pansies*.—Cuttings put in last month, as directed, may now be planted in a shady bed, for summer blooming. Copious watering in dry weather will be necessary. Such as are grown in pots, for show, require particular attention, and by thinning out the side shoots much finer blooms may be had. In the seed-bed, any promising varieties should have a little dung placed around them, and watered occasionally, to promote their growth. *Pelargoniums*.—Such as have not been stopped back will now be coming into bloom. Keep them free from the green fly, by fumigating, washing them afterwards. *Pinks*.—As the blooming stems advance, they will require thinning out. Such as are not generally inclined to burst their pods may have all the stems but one removed. The more robust and very double kinds should have two or three stems left, according to the strength of the plant. Read's Jenny Lind and Turner's XX. are the best of the new ones, and will be conspicuous at the coming shows. *Ranunculuses*.—If dry weather sets in, water must be liberally supplied; apply it between the roots, and not over the foliage, and use rain-water if possible, preferring evening for the operation. *Tulips*.—The top cloth should at once be got on, to protect from storms of heavy rain and hail, and never let the sun reach the flowers after they show colour, but give all the air possible.

IN THE FORCING FRAME.

Continue to strike cuttings of stove and greenhouse plants, and pot off such as are struck. Plants intended to be flowering specimens for the greenhouse, such as Achimenes, Gloxinias, Gesnerias, &c., should be grown here and brought forward as rapidly as practicable. What are termed greenhouse annuals, as Balsams, Cockscombs, Salpiglossis, Rhodanthe, &c.; Thunbergias, &c., should be got on quickly. A strong stimulating soil, copious waterings, and ample pot room, together with bottom heat, are inseparable necessities to their successful cultivation.

IN THE GREENHOUSE AND COLD FRAME.

A free ventilation is of importance, and by closing with a humid atmosphere early in the evening, a vigorous growth will be best promoted. Give liberal shifts to such plants as require it, before the roots become matted, much injury is often done by deferring until a general shifting. Camellias, such as have formed their flower-buds, should be placed in a sheltered and shady situation out of doors. Ericas should have the ends of their shoots pinched off, to render them bushy and spreading. Climbing plants should be neatly tied as they advance in growth, and abundance of flowers will be the result. In order to prolong the season of bloom of a favourite flower, much, in many cases, may at this time be done; such as usually bloom during the early part of summer, may be made to flower at an advanced period, by stopping or pruning the growing shoots of a few specimens, thereby causing them to form lateral shoots, and consequently a more prolific, as well as later bloom. Shrubby plants of weak growth, and which naturally make long frail shoots, are much improved by bending down the branches, and fixing them to a wire attached to the rim of the pot, in this manner the nakedness of the plant at its base is hidden, and the check imposed on the ascent of sap, will induce an increased supply of shoots.

SONGS OF THE FLOWERS.

NO. 3.—CHORUS OF SPRING FLOWERS.

BY JOHN DUGGAN, ESQ.

“Some flowers o’ the Spring.”—*Shakspeare.*

“Joying to hear the birds’ sweet harmony.”—*Spencer.*’

O welcome sisters, once again we hail the bright’ning sky;
 Each heart is lightly leaping—joy lives in every eye—
 And ev’ry bud, and ev’ry flow’r, and ev’ry bird and bee,
 Are blossoming in gladness now; are singing merrily.

See rosy spring is smiling at her lovely children’s birth;
 And their beamy eyes of beauty glad their foster-mother, earth:
 And she kisses her sweet infants, and she dresses them in pride,
 And some she rears in garden-bow’rs, and some on mountain side.

Though bright the dreams of glory that through winter lit our sleep,
 While our kind and genial mother watched our slumber long and deep.
 O brighter are the faintest gleams that o’er our eyelids play,
 When morning from the East comes forth and wakens blushing May.

O happy! happy sisters! how beautiful we are!
 No chill, ungentle breezes, our loveliness to mar.
 Fond bees are humming o’er us; sweet birds, to cheer us, sing;
 And all the world doth truly love, and welcome flowers of spring.





Lycopodium bella?



FLORICULTURAL CABINET

JUNE, 1849.

ILLUSTRATIONS.

HOYA BELLA—THE BEAUTIFUL HOYA.

THE old well-known *Hoya carnos*a, with its pendulous corymbs of wax-like flowers, replete with honey, and filling the house it inhabits with its rich but peculiar fragrance, is too well known to need description.

Many newly-discovered species have of late years been introduced, and some have flowered; but with two exceptions none have equalled the old favourite above mentioned.

Our present subject, however, is superior in every point of view; the flowers, for delicacy and beauty, surpass all the kinds yet known. The habit of the plant is not climbing, nor does its general growth at all resemble that of *H. carnos*a; the branches are slender, numerous, and thickly clothed with small leaves, scarcely so large as those of the broad-leaved Myrtle, and not much unlike them in form.

The flowers are not only beautiful individually, but the corymbs are viewed to great advantage, from the circumstance of so large a proportion of green foliage forming a dense back ground; the petals are of a very pure white, and beautifully frosted; the central corona of fructification is of a rich carmine purple, and forms a very striking and lively contrast to the petals. Altogether it is a plant of first-rate importance in a collection, as the flowers endure in perfection for a long time, and are delightfully fragrant.

NOTES ON NEW OR RARE PLANTS.

BARKERIA MELANOCAULAN—DARK-STEMMED.

Orchidaceæ.

A graceful little plant. The flowers are borne on a pendant raceme from the apex of the stem; they are from twelve to fourteen in number,

an inch and a-half broad, about half an inch apart, and of a rosy-lilac colour. Native of Mexico. Introduced to the Belgian Gardens in 1848.

CATTLEYA AMETHYSTINA—AMETHYST-LIPPED.

Orchidaceæ.

A charming epiphyte, having considerable resemblance to the *C. intermedia* of English botanists. It has a short thick round stem, with a furrow on one side, supporting two lance-shaped, smooth, thick, fleshy leaves. The flowers, which grow from three to five in a short terminal raceme, issuing from a pale-coloured spathe, are large, and generally of a light pink or pale flesh colour; the sepals and petals are lanceolate, somewhat pointed at the tips, spreading, with a full streak of pale yellow down the middle, and faintly tinged with light green at the base and points; the lip is three-lobed; the side lobes are of a light pink, the centre lobe, the striking feature of the flowers, being of a rich violet colour; a narrow band down the centre, fading off to white at the extremity. Native of Brazil. Introduced in 1848 to the Belgian Gardens.

CATTLEYA ELEGANS—ELEGANT CATTLEYA.

Orchidaceæ.

A handsome and magnificent species in the way of *C. superba*. The flowers, which are produced on a short few-flowered raceme, are large, and of a bright rosy-pink colour, which merges into a soft pale yellow towards the base of the petals, there terminating in light green. The lip, or labellum, is three-lobed, the two side lobes being white, with a faint rosy tinge on the outside. The intermediate lobe is of a dark purple colour. Native of St. Catherine, in Brazil. Introduced to the Belgian Gardens.

CÆLOGYNE FULIGINOSA—DARK FLOWERED.

Orchideæ. Gynandria Monogynia.

A native of India. It was one of the plants derived from the Rev. Mr. Clowes' collection to the Royal Gardens of Kew. Each raceme of flowers has about four blossoms, of a rich ochre-yellow colour. The lip is large, of a dark purple-brown, with a yellow margin. A separate flower is nearly three inches across. (Figured in *Bot. Mag.* 4440.)

CYRTANTHERA CATALPÆFOLIA—CATALPA-LEAVED.

It is of the same natural order as *Justicia*. It was sent from Honduras to the Royal Gardens of Kew, where it displayed its large paniced heads of rich yellow flowers in the stove for a long time. It is a very handsome species, and would form a fine contrast with the fine old inhabitant of our stoves, *Justicia coccinea*. (Figured in *Bot. Mag.* 4444.)

DIPLADENIA NOBILIS, VAR. ROSEA NOVEA—ROSE-COLOURED VARIETY OF DIPLADENIA NOBILIS.

A handsome stove climber, differing from *D. nobilis* in having more tubular-shaped blossoms, with the limb more fully expanded, and in

the colour of the interior of the throat being of a deep rose colour ; the flowers borne in a racemose arrangement at the ends of the branches ; they are of a rich, deep, rosy-pink colour, and about two inches in diameter. Native of Brazil. Introduced in 1847 to the Belgian Gardens.

EPIDENDRUM SULPHUREUM—SULPHUR-FLOWERED.

The flowers are numerous, and produced in short racemes, usually from eight to ten in number, and forming a graceful panicle. The petals and sepals are of equal size, of a uniform sulphur colour. The labellum is three-lobed ; the two side ones red, and beautifully lined with rose-colour, which terminates at the column in red streaks. Native of Guatemala. In the Belgian Gardens.

PENTSTEMON OVATUM, VAR. ATRO-CERULEUM—DARK-BLUE VARIETY.

A very showy perennial plant, growing from three to four feet high. The flowers form a loose many-flowered leafy panicle, and are tubular, the tube being about half an inch in length, and separating into a five-lobed limb, of about half an inch in diameter ; the colour, as the name implies, is a fine dark blue, deepening near the extremities, and merging into a bluish green towards the calyx ; the throat is of a yellowish tinge. A very desirable species. Native of the mountains of Columbia.

THYRSACANTHUS BRACTEOLATUS.—A plant which formerly belonged to the *Justicia*. It inhabits New Grenada and the West India Islands. The flowers are borne in terminal panicles ; tube an inch long, terminating in fine deeply-divided segments, of a deep scarlet colour. The plant is half shrubby, grows from two to three feet high, and blooms freely. It has bloomed in the stove at Kew, and is very showy. (Figured in *Bot. Mag.* 4441.)

DIELYTRA SPECTABILIS.—We shall be glad to see this plant become numerous, so that it may be in every garden ; we may then hope to see it in its true character, as in China, forming a beautiful bush, overshadowed by the profusion of its large delicate rosy (*Fumaria* like) charming blossoms. It is well worth a place in every garden.

RHODODENDRON ARBOREUM HYBRIDUM.—We have seen a few noble plants of this splendid variety in bloom ; the large heads of rich scarlet flowers produce a most brilliant effect. It deserves to be in every garden or shrubbery.

GARDENIA STANLEYANA.—In the noble collection at Sion House, Dowager Duchess of Northumberland's, there is a splendid specimen in bloom, having about two hundred expanded flowers. The plant is about five feet high, and as much across.

MITRARIA COCCINEA.—In one of our volumes we figured this most beautiful flower. A handsome bushy plant was exhibited at the recent exhibition held in the Regent's Park Garden by Messrs. Veitch. Its large bulging tube-formed flowers, an inch and a-half long and half an inch across, of a rich scarlet colour, hanging on long footstalks, had a charming appearance. It deserves to be in every collection of greenhouse plants.

NEMOPHILA MACULATA.—This new species we recently figured; it blooms very freely, grows rapidly, and its lovely flowers please all who see it. It ought to be in every flower garden. Its well-defined rich violet-blue spots produce a beautiful contrast with the white ground.

AZALEAS.—The finest kinds at the exhibition at Chiswick, Royal Botanic, and the Royal South London shows are the following; any person desirous of possessing the best may rely on their being such:—*A. variegata*, *A. exquisita*, *A. optimata*, *A. macrantha purpurea*, *A. Bianca*, *A. Broughtonia*, *A. delicata*, *A. Gledstannia*, and *A. sinensis*. Numerous others were shown, as will be seen in the account in this Number; but the above were much superior to the others, having finer form, and the colours so very distinct in contrast with each other. We noticed in our May Number a variety, named the Duke of Wellington. This ought to be in every collection. The *A. sinensis* has flowers of a bright yellow colour, the upper part slightly spotted.

THE TULIP.

BY A CELEBRATED GROWER ON THE CONTINENT.

I AM glad to notice that this lovely flower has a share of attention given it in the pages of your Magazine. The florists of Great Britain have long been celebrated for growing it in great perfection, but not equal to what is done by others on the Continent. I have devoted many years to its cultivation, on a scale more extensive than any florist in your country; and as the period is arrived when the numerous varieties of this admired favourite are displaying their unrivalled beauties, I forward for insertion in your Magazine some remarks upon its history, descriptive properties, and the mode of culture we most successfully pursue.

The Tulip grows naturally on the Savoy mountains, and in the neighbourhood of Nice. It furnishes varieties, of which the two principal are, first, Bizarres; and, second, those on a white ground. The first are those which have a yellow tinge, mingled with other colours, but entirely exclude white.

They were in great esteem forty or fifty years back, but are looked on less favourably at present. Many persons, however, cultivate them still, to form a contrast, by their dark shades of colour, with those on a white ground. The last-named kinds, on the contrary, have not the slightest trace of yellow. Sometimes, indeed, at the moment of blowing, a few exhibit a pale shade of yellow; but the rays of the sun soon render them of a pure white. These are again subdivided into two classes: the first into tulips, on a white ground, streaked with red, pink, crimson, &c.; and, secondly, those on a white ground, streaked with violet, amaranth, purple, lilac, &c. The Tulips, commonly called Dutch, are the only ones now admitted into a choice collection, and of these there are about nine hundred good varieties.

In order to be admitted into this privileged class, certain conditions have been laid down by lovers of the flower, which the Tulip should fulfil, and to fail in even a single regulation is sufficient to cause it to be rejected. These conditions are, first, regularity of form; secondly,

harmony of proportions between the several parts ; thirdly, firmness of the stalks and petals ; and, fourthly, on each of these a union of at least three colours clearly defined.

With respect to the first condition, it is indispensable that, from the point of junction, the petals should bend themselves gracefully about a third part of their height, and then describe a straight line to the top, so as to form a sort of cup with a circular opening. The summit of the petals must not be in the slightest degree blunt or jagged at the edge.

Referring to the second condition, the width of the flower ought to be about three-quarters of its height. The nicest harmony of proportions ought to reign, not only in the different parts of the corolla, but also between this latter and the stem. The bulk of this ought to be co-ordinate, both with its own height, and with the colour of the corolla. Thus a flower, with breadth equal to its height, a long stem supporting a diminutive flower, or a fine corolla inserted into a weak, bending, or ridiculously short stem, are blemishes which the severe taste of good judges proscribe as fatal.

As to the third law, we may remark that strength and straightness of stem are indispensable. Here the petals must be well furnished, for they then resist more easily the power of the solar rays.

To satisfy the fourth condition, it is necessary that at least three colours should appear, harmoniously combined, so that the eye may love to rest on the union. They must be well defined, bright, and formed into regular designs ; they must continue perfect up to the time of the flower going off, without running into each other from the effects of rain, or becoming weak and dried from the rays of the sun.

Tulips are obtained in two different manners—by seed and offsets. Experience proves that any variety of Tulip is not reproduced by seed ; and hence amateurs always have recourse to this mode of propagating it when they desire to obtain new kinds, which kinds they denominate Conquests. In order to obtain the accomplishment of their wishes with more certainty, they take care not to employ any seed but that which comes from Tulips having the bottom of the petals of a pure white, because the colours of Tulips proceeding from such seed develop themselves more rapidly than those produced from other seed. Tulip seed ought to be placed in the earth about the month of October, in ground well prepared for its reception. It should be protected from the frost by layers of leaves or mats. When carefully attended to, the plants will appear above ground towards the end of February. From the size of a pea the first year, the root will increase considerably in the two following springs. At each of these periods, when the young leaves are faded, I spread over my plants about an inch of earth, such as covered the seed originally, and the bulbs remain untouched. This I allow a second winter, when the bulbs being a good size, I take them up, and afterwards treat them as others. When I replant I place them at a depth of three inches, and two or three inches apart. Latterly, each year, I replant them in fresh ground, convinced by experience that they reach perfection sooner by changing the soil, particularly if it has been well manured and fertilised by having grown other plants.

No matter what care may have been devoted to the seed, few perfect flowers are obtained in the first blow, which does not usually take place before the fourth year; in the following years gradual amelioration of the colours take place, and those which at first were vague and indeterminate, finish at last, though in no fixed time, by assuming clear and distinct characters, until they reach all the perfection of which they are capable. Every Tulip produced by seed, and as yet in a state of immaturity, is called a breeder, and in this state may continue from two to ten years. From the first blowing all flowers whose form is ill made, or whose petals are thin, or whose stem is weak and bending, or is tinged with yellow, are thrown away. When the petals fall, the seed-vessels are broken off in order to give more strength to the root. After the fourth year, the roots are treated as those of a collection already formed. The offsets of a Tulip always re-produce a plant identical with that from which they proceed. The period of their coming into bloom is from the first to the fourth year. They are planted in September, about three inches apart, in proportion to their size, in ground prepared the month before. A great number would perish from being dried up, if planting them was delayed to November. In taking them up and replanting, the same order is observed as is followed in an established collection. The advantage of offsets is great, as they serve to repair losses which a severe season or accident may cause to the old collection. In a Tulip collection, the size of the roots is a matter of importance. It has been remarked that some of them, of a large size, produce petals which are not properly proportioned. Most frequently they become open and loose, whilst, when the roots are of moderate size, the flowers are perfect. Experience, however, is the safest guide in selecting the roots.

It is not sufficient to unite the most beautiful Tulips in the same place, as if they are thrown together by chance or without harmony. Not only must the heights agree, but also the colours. Art in this respect comes to the embellishment of Nature. In order to display as much as possible the richness and value of a fine collection, the following precautions ought to be attended to, as they will be found to facilitate the labour in a high degree:—

If, for instance, I have three hundred Tulip roots to plant, whose height and colour I am perfectly acquainted with, I provide six drawers with fifty compartments in each. In these I place the roots, in some position where the air will have a free access. I place the drawers in a case, one over the other, with a space between to let in the air, and the whole is surrounded with a wire grating to keep away rats and mice. As I know accurately the classification of my Tulips, according to height and colour, yet I place the roots in proper order in the compartments. Its first series hold those whose stem is highest, and which are planted on the top of the bed: the other compartments hold others less high, until all are filled. The colours alternate as symmetrically as possible, so that the same colour never appears twice together, either longitudinally or transversely. It will result from this disposition of the plants, that, in looking at the bed obliquely, they appear like a draught-board, with lines formed of an uninterrupted

colour. When I have properly arranged the roots in these compartments, the next step is to choose out a piece of ground, not moist, open, exposed to the south-east in preference to the south-west, and distant at least fifteen feet from any wall or hedge. I find it best to give the bed a certain inclination, in order first to see the position of the flowers more easily, and next to facilitate the flowing off of rain or other moisture. When I make a second bed, I place it opposite and parallel to the other, with a walk of about four feet between, and with the lower part of one bed next to the lower part of the other. By this means the two beds incline towards each other. In order to renew certainly the principles which are indispensable to bring tulips to perfection, the earth is changed every two years; and in order to preserve to the plants the second year a vegetation as favourable as the first, it is well watered with liquid manure, poured over the ground in July or August; and in order that every particle of the earth should be impregnated with it, the whole soil is dug up in a month after, and well mingled together. This is far preferable to mixing up dung with the soil, as is usually done. I find the flowers are equally fine, and of much clearer and finer colours. When the earth is properly prepared thus, from the 12th to the 20th of November, the planting of the roots takes place. The bed is carefully measured, and the roots placed at equal distances. A small portion of sand placed at the bottom of each hole, and the root covered with a little, allows the moisture to pass through it quickly, and the roots are protected from insects. When the roots are placed thus, they are covered by the hand with a small quantity of earth; not pressing it too closely, as if done so the earth is rendered too compact by the pressure, so that the roots do not vegetate easily; and the plant is liable to be injured by moisture, which finds some difficulty in passing through. The edges of my beds are supported with stone, which keeps out all insects.

Tulips, from being exposed to the intemperature of the atmosphere, are subject to certain diseases, which it is of consequence to prevent. From the middle of February to the middle of April they have generally to encounter snow, hail, and cold rains. The cups formed by the young leaves, at the bottom of which the bud lies shut up, get filled with rain; and the result is, that the water remains there until it insinuates itself into the interior of the root, and often spoils it, or impedes its opening. To obviate any inconvenience arising from exposure to the weather, it is necessary to shelter the flowers with a covering of canvas, which, by means of cords and pullies, I can extend or roll up at will. The bed is covered with this in unfavourable weather, but exposed to the rays of the sun and to gentle rain. When the flowers are open the covering is kept over the bed during rain, and from nine to four o'clock in case of sun. By this means the duration of blowing is prolonged, and the beauties of the flowers can be admired without any exposure to rain or sun.

When the flowers are open I take a particular survey of my stock to see that each kind is true to the catalogue register, and regulate if required. When the bloom is over the seed-vessels are cut off, in order that the roots may profit by the sap, which otherwise would have

been absorbed. The time for taking up the roots is easily ascertained. When the stems roll themselves round the fingers without breaking, then I am certain that the time for taking up has arrived. This takes place generally towards the end of June, and I am careful to observe the same order as was adopted in planting them. Too tender to resist the action of the sun after being taken from the ground, the roots are liable to perish by being exposed to its rays, so that care is taken to avoid such injury.

In taking them up I gently uncover the ground at the sides of the roots, and then uncover them; after they have been deprived of their shoots, of their dry skins, and separated from their offsets, I place them in cases destined to receive them. I then leave them to dry in the shade, from morning to evening, for four or five days. During a month I occasionally expose them to the air, in order to guarantee their perfect dryness, and thus contribute to their better preservation. Some other remarks on florists flowers I reserve for future occasions.

ON TRANSPLANTING LARGE EVERGREEN TREES AND SHRUBS.

BY R. GLENDINNING, F.H.S.

LARGE Hollies, Yews, Cedars, and similar ornamental evergreens, intended for immediate effect, should have their roots pruned any time before they begin to grow. In some instances it will be better to dig a trench within a reasonable distance from the bole of the tree, so as to retain a ball no larger than can be transplanted. This trench should be cut sufficiently deep all round the tree, and as much under it as may appear necessary, to get at the principal roots, which should be cut through, and the soil again filled in. The wounds will be completely healed by the autumn, and numerous rootlets sent out into the loose soil. The plant will be checked in its growth, and may probably become a little discoloured if it has previously been in a vigorous state of growth. As to the proper season when the operation of transplanting should be conducted, the winter months, or from the end of October to the beginning of April, is the usual time recommended for planting; but for large plants, from six to thirty feet in height, the best time is early in the autumn, when the young shoots begin to attain a certain degree of consistency; then the operations ought to be conducted with all possible expedition. The end of August is a good time to begin, September being the safest month in the year—selecting such plants to commence with as have matured their shoots. Another and a very important advantage is, that the force of the sun during summer, although now on the decline, has warmed the earth to a considerable degree and depth, so that the mutilated roots are comparatively situated on a bottom heat, which rapidly promotes cicatrisation, and frequently aids the emission of young spongelets during the current autumn. The exact period to commence these operations must, however, always be determined by the nature of the season, and the state of maturity the current year's growth has attained; in some

seasons an earlier beginning may be made than others; some kinds of plants also ripen their wood much earlier than others. In hot and dry autumns some of the larger specimens will flag and droop. To guard against injury from this, water the roots well at planting with pond water; and plants of rarity may be occasionally syringed in the evening for a time after being planted. This, however, will not be required if the weather be moist or cloudy. The plants must then be securely staked, and ultimate success is certain.—*Jour. Hort. Soc.*, iv. 41.

ON DRYING AND PREPARING SPECIMENS OF FLOWERS, &c.

AT this delightful season of the year, when all vegetation appears to teem in profusion with beauty and loveliness, no pursuit appears to me more interesting and pleasing than the study, culture, and preservation of flowers. My mind has been quickened in such pursuits again and again as the revolving seasons arrived. I have lately obtained a neat volume on Field Botany, by Agnes Catlow, and published by Reeve and Co., London, which has much pleased me, and in my way-side field and wood perambulations I have found very useful. The introductory remarks are so interesting, and I think will be useful to the youthful readers of the CABINET, that I forward them for insertion in the next Number:—

“ If a science is worth learning, it is wise to begin properly, and study the alphabet as it may be called; and although I have said there is no ‘royal road’ to botany, I have endeavoured to render all as easy and simple as possible in this little treatise on the subject, by using English words instead of the technical terms wherever it is practicable.

“ No one must expect, if they pursue botany merely as a relaxation from more important studies, to be acquainted with it in a season. Botanists have been pursuing it for years, and, if asked, would say they knew but little compared to what they wished to know: it would, therefore, be presumptuous in the young to expect that, after a few trials only, they are to understand the subject thoroughly; for as it is impossible to arrive at a knowledge of any science or art without great pains and considerable industry (and botany is not an exception), the learner must be resolved to meet and overcome obstructions, which at the commencement appear rather alarming; but with a little attention the first difficulties will be found to vanish, for every step will smooth the way for another. When a little knowledge is obtained, the study becomes more and more interesting every day; each new plant is examined with eagerness, and the investigation is no longer toil, but positive pleasure.

“ If the possessor of this book will, therefore, at once follow the plan laid down, considerable improvement may be attained in a short time. Botany is easily pursued by those living in the country, and is not an expensive pleasure; whilst the thoughts connected with it are pure and refreshing, forming a delightful relaxation from more serious duties. It has the advantage of healthiness, for plants must be searched

for out of doors ; exercise is, therefore, united with study, which is an object in the present state of education. All children are fond of flowers ; and one-half the design of teaching them Botany is that of exercising their understandings, accustoming them to attention, and giving them fresh instances of the wisdom and goodness of God. If the minds of children were more turned to these pursuits, and that curiosity about the things of nature which is implanted in their dispositions gratified, there would be less complaint amongst young people of the dulness of a few weeks' sojourn in the country than is now too frequently the case. The close examination necessary to discover the genus and species of a plant makes us acquainted with many beauties concealed from general observation, either by their situation or minuteness. We cannot pursue knowledge of any kind without enlarging our views, as well as acquiring new ideas ; and Botany has the great advantage of elevating the mind whilst it improves and cultivates the intellect.

“ What can add so much to the pleasure of a ride or walk in the country as a knowledge of the plants seen in the woods and hedges ? or what more instructive to a child when it has gathered a pretty bunch of flowers than to point out to it the extraordinary beauty of the minute parts, the contrivances for the ripening or preservation of the seed, or the uses of its roots or juices ? Many useful moral lessons may be given to the young in a country walk if this pursuit is understood and appreciated. Some persons are disposed to think it a useless study, and to laugh at those who pursue it zealously, and ridicule them for showing great delight at the discovery of a new plant they have not before met with ; but if they will compare this enthusiasm with their own in any favourite study, they will find the feeling similar. Unfortunately, it is the custom to look on weeds with contempt, and to forget that they are equally the work of God with the planets or suns, and that every insignificant herb is a fresh proof of the wisdom and goodness of God in the creation.”

If the perusal of the above operate on the minds of the readers, especially the young, as it has done on mine, I shall expect they will be led to the all-interesting and useful engagement in providing specimens of flowers. I have read some observations on preparing a *Hortus Siccus* which have appeared in previous Numbers ; but feeling persuaded the following particulars, which contains remarks all others have omitted, will be useful, I send them as a necessary appendage :—

Procure specimens as old as possible, so that the colour is not faded ; the more they are expanded the better, as the sap and juices are more absorbed by development ; gather them, if possible, when perfectly dry, and be sure they are so before you proceed to press them. New Holland papilionaceous plants, *Ericas*, and many dry hard-wooded greenhouse plants will require to be dipped in hot water as far as the leaves, but not the flowers ; lay them carefully spread out in any old book or album, between sheets of tissue paper, and gently press them for twenty-four or forty-eight hours ; then remove them into fresh places on the paper—fresh paper will be best ; this will prevent any of the sap and moisture becoming mouldy and destroying the colours,

which will be the case if they are not removed : after replacing them carefully, and altering the position of those that may be twisted or not laid out properly, put a heavy weight upon them, and keep it one week in a cool airy place ; after this remove the weight and open the leaves, but not so as to derange the specimens, and let them dry off with the book closed ; when they are perfectly dry, arrange them, and fasten them on sheets of paper with gum arabic dissolved in water. It is more difficult to dry stove than greenhouse plants, and it is very difficult to dry Orchideæ : our common Orchis, and many other British plants, are difficult to manage. I have succeeded well with Orchis and Cypripediums, by spreading about half an inch of silver or common dry sand on a board quite level, laying a sheet of blotting paper on it. I then lay on the specimen and turn the upper part of the paper over it, and on the top add two or three (or more, if a very juicy specimen) sheets of paper ; take an iron half heated, and press slowly and carefully on the paper, so as to dry up the juices as fast as the heat drives them out : if too much heat is applied, so as to draw the juices too fast, they will return to the specimen, and turn it black ; when the principal part of the sap is drawn off, replace the specimen on dry sheets, properly arrange the leaves and flowers, and apply double the quantity of heat ; after drying the remaining moisture, leave the iron on the specimen till quite cold, and after exposure to the air for a day in a cool shady place, the process will be complete. Grasses are very easy to preserve, and only require attention as to the time of gathering ; this ought to be just before the flowers expand, as the pollen spoils them ; they only require dipping in hot water, and placing out between leaves, without any tissue or blotting paper. The same applies to the Ferns ; they want, especially some of the largest, a stronger or heavier weight to press them. Many of the Lichens and Mosses will not require pressing at all, at least most of those whose fructification lies in the bosom of the leaves, are spoiled by pressure ; others are larger, and it will be necessary slightly to press them, in order to make them lay flat ; it requires taste to lay them out on paper ; the best plan is to throw them into pure water, which will open them out beautifully, and they may then be carefully laid on wet paper, and half dried before they are removed. The Algæ may be beautifully dried in this way. The Lichens may be pressed a little harder, and it will add beauty to the cryptogamic collection, especially the little *Cenomyce coccifera*, whose little scarlet tips are as brilliant when dried, if gathered when fully developed, as they are on the heaths.

SLUG TRAPS.

I VENTURE to send you the following letter, which I have just received from my brother, whose residence is about a mile from this place, not with a view to communicate a contrivance with which you are unacquainted, but to show the great danger our gardeners will have to encounter if they are not admonished to adopt precautions in time against so destructive a pest, the vast numbers of which I attribute to the mildness and dampness of the winter. As far as my observation

goes, this description of slug abounds as plentifully in our fields as in our gardens, for on receipt of my brother's letter I directed my man to spread two dozen slices of turnips in a field where I have sown parsnips and planted potatoes, and the next morning he brought me 186 slugs, which had sheltered themselves under these traps. The letter is as follows:—

“ I send you a description of a snail which the gardener and farmer with us find so destructive to their crops, and also of the traps by which we have succeeded in diminishing their numbers. The snail, or, as it is here called, the slug, is about the one-fifth of the size of the black snail. His back is of a darkish tinge, and his belly of a dirty white, or brownish. The traps consist of circular slices of white turnip, about half an inch in thickness and three or four inches in diameter. My experiments with these traps only began on Tuesday last. They were conducted by my servant, who brought me four or five largish turnips (the larger the better), and cut them in slices as above-mentioned, forming forty-one slices, or traps. Each slice, or trap, was placed at a distance from its neighbouring trap of about fifteen feet. The traps were set on ground planted with beans, though they are not so fond of this vegetable as of peas, and more so of kidney beans. They have also a great liking for the early cabbage; they have devoured mine of this year. They have no objection to a lettuce, nor any to the early turnips, as the farmers find to their cost; in short, there are few vegetables they will not devour. They begin upon them, to wit, turnips, &c., as soon as they appear above the ground. They will also attack the potato under ground, but this oftener occurs in frosty weather, when they are more under the surface of the earth than upon it. I have mentioned that these traps were set for the first time in my garden on Tuesday last, and they are so inviting to this kind of snail, for shelter and food, that on Tuesday night, or early on Wednesday morning, there were 400 caught; on Thursday morning, in the same traps, there were 360; on Friday morning, 200; on Saturday morning, 200; and on Sunday morning only 50, in all 1210. I am inclined to think the few that were caught on Sunday morning not altogether owing to the numbers that had before been taken, but also to the night being frosty; they are not so much inclined to seek for food above the surface, and do not move far for it. When the slices or traps are raised, some of the snails are found adhering to the slice, sucking it with their mouths expanded like a leech. They make small holes in the sliced turnips, not unlike what would be if a small scoop had been used. I omitted to say that the traps are put in my strawberry-beds, where many are destroyed—some satisfaction, when I think of many of my finest ripened strawberries they have sucked or scooped out, leaving only a part of the outside of the strawberry. That it has been this description of snail who was the depredator, I offer this further proof. It is my practice to put cut grass around each plant before the strawberries begin to ripen, to prevent the heavy rains from splashing up the dirt upon the strawberries; but when they are ripe, and particularly those that were the finest, I have found them with holes, and sometimes all the pulp sucked or scooped out, leaving, as I

have said, only a part of the outside, and I have wrongly attributed it to the frog, for, on turning up the grass around the strawberry plant, I have almost always found a snail underneath it; add to this, upon finding some of the plants dead or in a sickly state, I have taken up such plants, and found under or amidst the roots one of these snails; hence the traps are set amongst the strawberry-beds, and thereby I have caught many."—(*Gardeners' Chronicle*.)

EDGING OF THE PINK.

In another Magazine a writer on the properties of the Pink objects to the white lacing of the flower, and advises all growers for showing to discard such. He says there should be no white margin beyond the coloured lacing; and he asks why there should be a white margin to a Pink any more than to a Picotee or a Tulip. Dr. Horner, of Hull, has answered his question by saying, simply because a Pink is not a Picotee nor yet a Tulip. Dr. Horner regards the white margin at the outside a Pink as we do, a leading feature and property in its excellence. It is well Dr. Horner checked such a whimsical fancy at its outset.

LATE-BLOOMING ROSES.

A CORRESPONDENT in the *Florist* states, that having planted some Roses very late in spring, and the tops had been cut in very close, they were planted in a very rich loamy soil, watered daily, and the result was a flourishing bed of Roses in fine bloom up to December 8th, when he gathered a fine bouquet of flowers. The following were among the varieties grown, all of them being hybrid perpetuals:—Baronne Prevost, Mrs. Elliott, Robin Hood, Geant des Batailles, La Reine, Dr. Mars, Comte Montalivet, Duchess of Sutherland, Marquis Bocella, Madame Laffay, Comtesse Duchatel, Rivers, and Sidonie. He further suggests the propriety of taking up some suitable Rose-plants in February, and after cutting in some of the strong roots (not small ones), laying them in a border with a north aspect, where they should remain till late in April, at which time they should be replanted in any other situation desired, in a very rich loamy soil, cutting in the heads closely. The result will be a fine display of Roses in November. Such plants will endure the removal for several successive years.

[We have adopted this system for many years, but took up the plants before the middle of October. They then pushed fresh fibres before winter, and at the time of planting in April were provided with a good supply of new rootlets (the removal of the plants does not injure them), which soon push afresh into the soil, and the new shoots (which are the blooming ones) are much more vigorous than any we have taken up in February.]

IMPREGNATION OF TULIPS.

MR. SLATER, of Manchester, writes in the *Florist* that he prefers obtaining seed from breeder Tulips, rather than broken flowers, the former being more vigorous, and producing much finer seed; and he has proved that it is an idle tale to say that plants raised from seed saved from breeders never break into colour. One year he had five *bloomed-broken* the first time, and the last season several more. During twelve years he never seeded but one broken flower, viz., Lillard Violet, and he now has thirty varieties broken in his best bed, to bloom this season, and thousands of seedlings yet to bloom.

After a flower is impregnated with the pollen from another, he covers it with Nottingham net-lace; this protects from bees or flies conveying an admixture of pollen. To prevent the seed-vessel being injured by an excess of rain, he has a piece of glass fixed horizontally in a stick or piece of wood, so high as to be an inch above the seed-vessel; this protects from rain, whilst it admits the necessary light and air.

Persons desirous of raising seedlings should sow, every year, in February, and in four years expect the bloom.

[We have many valuable articles of Mr. Slater's on the Tulip in previous volumes of our FLORICULTURAL CABINET, which all Tulip-growers would do well to read, treating, as he does, the Tulip in every stage. Equally useful and interesting are the communications on the same subjects, which were received, and inserted, from Mr. William Harrison, of Felton.]

VERBENAS.

CULTURE IN BEDS.—Several of our correspondents have complained that their Verbenas grow too much like a carpet of grass, having but few flowers. There are some of the kinds which have a strong tendency to rooting at every joint which comes in contact with the earth. To prevent this, chop into short pieces some stiff branching heads of Thorn, or Sloe bush, and after having put out the plants in the bed, spread the surface over with the prepared pieces, the shoots of the Verbenas will run along their surface, and amongst the pieces, they will not come in contact with the soil, their extra vigour will be checked, and the plants will bloom profusely. The twigs will soon be hidden by the plants.

RAISING SEEDLINGS.—The seed should be sown in shallow pots, plunged in a gentle hot-bed early in March. When the seedlings are three inches high, transplant them three or four together, into pots four inches wide. Nip off the tops to make them bushy. When the planting season arrives, the seedlings may be planted out also in a bed, in some retired part of the garden. Select the best as they flower, and take cuttings of such as appear good. Number and describe them in a small book, so that you may know how to arrange them the following year.

CULTIVATION OF THE FUCHSIA.

At a late meeting in the study, Exotic Nursery, Chelsea, Mr. Mason read an essay on the cultivation of the Fuchsia. He advised the plants to be struck from cuttings by the latter end of January, either in 2½-inch pots, singly, or a quantity in 5-inch pots. The former method was preferred, as by it the plants were ready for shifting as soon as they were well rooted. The soil he considered best for the successful cultivation of the Fuchsia was two parts of good maiden loam in a decomposing state, one of peat or leaf-mould, and one of good rich manure, with a portion of silver sand, and a small quantity of bone-dust. This latter was considered to be of the greatest advantage, its mechanical agency ranking with that of charcoal, and its manuring property being too well known to require comment. As soon as the young plants were sufficiently strong, and their roots had reached the sides of the pots, they were to be shifted into 5-inch pots, and moderately watered and plunged in frames, giving them a gentle bottom heat; air was to be given moderately on mild days, for a few hours in the middle of the day, but great care was advised to be taken at this season not to admit too much, especially when the wind was keen; for in such cases the young leaves are apt to be so much injured as to retard the growth of the plants. The frames were to be covered up at night in proportion to the heat of the beds and the state of the weather, so as to maintain at least 60° Fahrenheit. By the end of April, if all had gone on well, the plants would require shifting, and this Mr. Mason considered ought to be the final shift for the season. He stated that the cultivator should be acquainted with the number of plants required, and the purposes for which they were intended, in order that he might be able to select the strong-growing kinds for such places where large plants would be required, and the more delicate varieties for the drawing-room, conservatory, &c. It was recommended that those intended to make large plants should be shifted into 9 or 11-inch pots, giving a moderate drainage of potsherds, and covering the latter with a little rough peat; the soil to be pressed very lightly with the hand, and with care, so as not to injure the roots. The plants when potted, it was said, should be removed to the greenhouse, and placed as near the glass as possible; the night temperature of the house to average from 55° to 60° Fahrenheit, with a rise of 10° by day of solar heat. Plenty of air was to be given when the weather would permit; and while the plants were in a growing state, care was to be taken not to let them get too dry; for, if this happened, the ripening process would take place, the plant would be thrown into a flowering state before it had acquired sufficient size, and would ultimately be of little or no use. Syringing both morning and evening was considered to be of the greatest importance. In training, to insure a handsome plant, only the leading shoot was to be tied up, all the side branches being allowed to grow without stopping, except in cases where a strong shoot was taking more than due precedence of the others. As the plants advanced in size, it was advised that they should be thinned out, so as to admit all the light possible. Liquid manure was to be applied as soon as the plants began to bloom, provided they had filled the pots

with roots; if the plants began to flower in a small state, the flowers were to be pinched off. Fumigating was recommended to be frequently performed, to keep down green-fly. It was stated that by the end of June the plants would have attained a good size, that they would exhibit a beautiful pyramid shape, and that they would be covered with flowers, provided the rules above laid down had been strictly observed. At this stage of their growth as much air as possible was to be given both night and day, and syringing withheld. The plants might then be removed to any situation required; and, with due attention to watering, it was said they would continue to bloom abundantly until the end of the season.

THE HYDRANGEA WITH BLUE FLOWERS.

HAVING at various times seen some magnificent plants, blooming most profusely, and bearing large heads of the most beautiful blue flowers imaginable, at Clifton Hall, near Nottingham, the seat of Sir Juckes Clifton, Bart., we made application to Mr. Florendine for information relative to his system of management; he has kindly sent us the following communication:—

“ In March I take strong cuttings, and plant them in a pot of peat soil (that which does not abound in sand I consider preferable), and place them in a cucumber-frame till they are well rooted, when they are potted off in three-inch pots, using similar soil, and replaced in the frame for a few days. I then remove them to a greenhouse or vinery. In the latter I find them attain the greatest perfection, both as regards size and colour.

“ In the next place, I may observe that the liquid with which these plants are watered is made by dissolving three ounces of alum in two gallons of water, to which I add half an ounce of soda; and I take care, from the time the cuttings are put in till the period of blooming, that they are always watered with the above solution, which I consider the principal cause of their assuming the beautiful colour they do.

“ In order to ensure large plants and fine colours, the plants should undergo several shifts, or repottings, as they grow freely, and the roots soon fill the pots.

“ I have at this time a plant with eight bunches of blue flowers, produced by the above treatment; and I strongly recommend your readers to give the system a trial, feeling assured it will answer their expectations.”—*Midland Florist*.

ON RESTORING GREENHOUSE PLANTS.

A CONSTANT subscriber will be obliged by the following inquiries being answered or referred to in the valuable pages of the FLORICULTURAL CABINET.

Our Chorozemas have become shabby plants with bare stems, flowering just at the extremity of the shoot. The same with the following plants:—*Pultænea stricta*, and *subumbellata*; *Eutaxia myrtifolia*; *Dillwynia*

rudis, and ericoides; *Lalage thymifolia*; *Mirbelia dilitata*; *Bossæa districta*; *Hovea mucronata*; *Brachysema platyptera*; *Cyclopea genistioides*, and *Bæckia virgata*, is becoming so after blooming well in autumn.

The inquirer has found in the CABINET most of the above flowers named, and some coloured exquisitely, but not any directions as to their culture. They are wished to flower well in a greenhouse, averaging in winter from 45 to 55 degrees of heat.

An *Acacia macrophylla* is flowering, but has bare stems low down, how can it be avoided?

A small *Magnolia conspicua* is standing on a lawn, soil rich and loamy; it is looking mossy and not healthy, what can be the cause?

A list of fifty of the best Annuals to make a small garden gay, mixing with Geraniums and Verbenas would greatly oblige?

Also a list of the best plants for a new piece of rock-work?

REVIEW.

Flower Gardening for Ladies. By J. B. WHITING. Bogue, London.

THIS is an excellent publication, by a clever practical gardener, and has our cordial recommendation. The following specimen will show somewhat of its utility.

“PELARGONIUM.—This genus furnishes a number of admirable flower-garden plants, which are popularly known as Scarlet Geraniums, Horse-shoe Geraniums, Ivy-leaved Geraniums, and variegated Geraniums. Of the first class we have not seen a better variety for a low bed than General Tom Thumb. Its foliage is a shining light green; its flowers bright scarlet, and numerous; and its habit dwarf and spreading. It is, however, rather tender in constitution, and therefore requires a little more warmth in winter than most others. The Bath Scarlet and the Frogmore Scarlet are two older sorts, which bloom freely, and are fine in colour; and the same may be said of Mrs. Mayler, Punch, and the Huntsman, with many other varieties of more modern origin. The Horse-shoes are distinguished by a dark mark on the leaves, of the form of a horse’s shoe. Some of these, as Pre-eminent and Cottage Maid, have the bright scarlet flowers of the preceding kinds, but those usually called by this term are descendants from *Pelargonium zonale*, an African species, and are known by gardeners as the Red Horse-shoe, which has crimson red flowers; the Purple Horse-shoe, which has red flowers, suffused with purple; and compactum, which has close heads of red blossoms. The true Ivy-leaved Geraniums are considered distinct species by botanists. One kind (*Pelargonium lateripes*) has reddish flowers; another (*P. scutatum*) has nearly white blossoms. The latter is sometimes employed for bedding, when its long flexile shoots should be pegged down; but both species are chiefly used for hanging over the sides of elevated boxes, baskets, or vases. Many varieties of variegated-leaved Geraniums are cultivated; the best of these for our purpose are the Red-blossomed, which has leaves margined with white, and deep coloured

small flowers; and Mangles', which has leaves edged with clearer white, and flowers of a delicate pink colour. Another variety, known as the Cup-leaved, has pretty pink flowers; but the plant is more delicate than the two preceding sorts. A new kind has lately been raised (and is in the possession of Messrs. Lee, nurserymen, Hammer-smith), which has bright scarlet flowers, and promises to be a great acquisition to this tribe, if it should not prove too tender for bedding. A very distinct and desirable Pelargonium has become extensively known within the last year or two under the name of Lucia rosea. Its leaves resemble those of the scarlets, and so also do its flowers in form and style, but the colour is a delicate pink. To form large bushes for dotting about the lawn, or for single plants to fill large vases, several scarlets of very robust growth are cultivated, of which those called Smith's Emperor and Smith's Superb will be found as good as any. All these can be readily propagated by cuttings during the growing season; and they generally produce seed freely, from which new varieties might be raised. We prefer cuttings to pot singly in small pots and sandy soils, keeping them close and warm till rooted, and cautiously avoiding over watering; for as the shoots are rather succulent, an over supply of moisture is certain to rot them. In autumn, when the beauty of the flower garden is over, the old plants should be taken up with good roots, and potted, cutting their heads well in; they ought then to be put under glass, and encouraged to push young roots; and, if properly managed during winter, they will form healthy plants for turning out into the beds again in the following spring. A stock of young plants ought, however, to be maintained, to supply deficiencies, as some of the old ones will unavoidably die. Some of the hardier varieties may be wintered in a cellar, by merely covering their roots with soil; and when the weather is sufficiently settled in spring, they can be transferred direct to the flower-garden, without the trouble of potting them. We have found the Red Horse-shoe and the Red-blossomed Variegated bear this treatment best. A new class, designated fancy Pelargoniums, has lately become popular. The best for bedding are said to be Diadematum, Diadematum rubescens, Rouge et Noir, and Queen Victoria. These, with such other varieties as are found to succeed planted out, would form a novel and interesting bed in a warm situation."

ROYAL BOTANIC SOCIETY, LONDON.*

THE first exhibition of the season took place at the Society's Garden, Regent's Park, on Wednesday, 16th of May, and we proceed to give a report of the various collections:—

In collections of FIFTEEN HEATHS (amateurs), the first prize was awarded to Mr. Mylam, gardener to S. Rucker, Esq., Wandsworth; second to Mr. Smith, gardener to S. Quilter, Esq., Norwood; third to Mr. Williams. These collections were composed as follows:—

* Taken from the *Gardeners' Journal*.

	Mylam.	Smith.	Williams.
<i>Erica propendens</i>	*2ft. by $1\frac{1}{2}$	*4ft. by $3\frac{1}{2}$	*3ft. by 3
<i>vasiflora</i>	3	* $1\frac{1}{2}$ $1\frac{1}{2}$	*2 $1\frac{1}{2}$
<i>mirabilis</i>	*2 $1\frac{1}{2}$	—	—
<i>depressa</i>	* $2\frac{1}{3}$ $1\frac{1}{2}$	—	2 2
<i>metulæflora</i>	*2 $1\frac{1}{2}$	—	—
<i>perspicua nana</i>	*3 $2\frac{1}{2}$	* $4\frac{1}{4}$ $3\frac{1}{2}$	* $1\frac{1}{2}$ $1\frac{1}{2}$
<i>mutabilis</i>	* $2\frac{1}{2}$ 2	* $1\frac{1}{2}$ $1\frac{1}{2}$	—
<i>intermedia</i>	$3\frac{1}{2}$ $2\frac{1}{2}$	—	—
<i>denticulata mosehata</i>	* $2\frac{1}{2}$ $2\frac{1}{2}$	—	—
<i>Humeana</i>	$3\frac{1}{2}$ $3\frac{1}{2}$	—	—
<i>ventricosa coccinea minor</i>	* $2\frac{1}{2}$ $2\frac{1}{2}$	—	—
<i>tortulæflora</i>	* $1\frac{1}{2}$ $1\frac{1}{2}$	—	—
<i>Cavendishiana</i>	* $3\frac{1}{2}$ 3	* $3\frac{1}{2}$ $3\frac{1}{2}$	* $3\frac{1}{2}$ $3\frac{1}{2}$
<i>elegans stricta</i>	*3 $2\frac{1}{2}$	—	—
<i>ventricosa alba</i>	*3 3	—	—
<i>nitida</i>	—	*4 $4\frac{1}{2}$	—
<i>elegans</i>	—	*3 3	—
<i>delecta</i>	—	$2\frac{1}{2}$ $2\frac{1}{2}$	* $1\frac{1}{2}$
<i>fastigiata lutescens</i>	—	* $2\frac{1}{2}$ $2\frac{1}{2}$	—
<i>Westphalingia hyd</i>	—	* $4\frac{1}{2}$ $3\frac{1}{2}$	*4 4
<i>vestita var. alba</i>	—	* $2\frac{1}{2}$ 2	* $3\frac{1}{2}$ 3
<i>Beaumontia</i>	—	* $3\frac{1}{2}$ $2\frac{1}{2}$	$2\frac{1}{2}$ $1\frac{1}{2}$
<i>ventricosa hirsuta alba</i>	—	—	*3 $3\frac{1}{2}$
<i>Blandfordiana</i>	—	—	3 $2\frac{1}{2}$
<i>flavoides elegans</i>	—	—	* $4\frac{1}{2}$ $2\frac{1}{2}$
<i>vestita rosea</i>	—	—	$2\frac{1}{2}$ $1\frac{1}{2}$
<i>mundula</i>	—	—	$3\frac{1}{2}$ $2\frac{1}{2}$
<i>halicacaba</i>	—	—	*3 2
<i>ventricosa breviflora</i>	—	—	* $3\frac{1}{2}$ $3\frac{1}{2}$

In the nurserymen's class of twelve there were four competitors, viz., Messrs. Veitch and Son, of Exeter (1st); Messrs. Rollisson, Tooting (2nd); Messrs. Fairbairn, Clapham (3rd). The following were the principal plants in the two first collections:—

	Veitch.	Rollisson.
<i>Erica depressa</i>	* $2\frac{1}{2}$ by 2	$2\frac{1}{2}$ by $1\frac{1}{2}$
<i>suaveolens</i>	3 3	—
<i>ventricosa superba</i>	$2\frac{1}{2}$ $1\frac{1}{2}$	—
<i>coccinea</i>	* $2\frac{1}{2}$ $2\frac{1}{2}$	—
<i>minor</i>	* $2\frac{1}{2}$ $2\frac{1}{2}$	2 2
<i>Cavendishiana</i>	* $3\frac{1}{2}$ $2\frac{1}{2}$	* $2\frac{1}{2}$ $1\frac{1}{2}$
<i>Beaumontia</i>	—	* $2\frac{1}{2}$ 2
<i>perspicua nana</i>	—	2 2
<i>primuloides</i>	—	* $2\frac{1}{2}$ $1\frac{1}{2}$
<i>fastigiata lutescens</i>	—	2 $1\frac{1}{2}$
<i>mirabilis</i>	—	* $2\frac{1}{2}$ 2
<i>vestita alba</i>	—	* $3\frac{1}{2}$ 3
<i>delecta</i>	—	2 $1\frac{1}{2}$

In the collections of six the competition was spirited, there being nine exhibitors. Extra prizes were awarded to Mr. Green and Mr. Bruce (equal), and one of the same value to Mr. Cole, a second to Mr. Taylor, and a third to Mr. May.

GREENHOUSE AZALEAS, which formed an important feature in the exhibition, were all fine examples of horticultural skill and good management. The first prize, in collections of ten, was awarded to Mr. May; second, to Mr. Green and Messrs. Fraser (equal).

	May.		Green.		Fraser.	
	Feet.		Feet.		Feet.	
Azalea indica Rawsonii . .	3	by 3	—		—	
lateritia . . .	3	3	—		*3	by 4
Lawrenceana . . .	*2½	2½	—		*3½	3½
exquisita . . .	*3	2½	—		—	
præstantissima . . .	3½	3	*3	by 2½	—	
sinensis . . .	*3½	3	*3	1½	—	
magniflora . . .	*3	2	—		—	
variegata . . .	*3	3	—		*4	3
coronata . . .	*3½	3	—		—	
macrantha purpur.	*2	1½	—		—	
triumphans . . .	—		*4	3	*3	3
splendens . . .	—		—		4	3½
purpurea superba	—		—		*4	3
fulgens . . .	—		—		*3	3
Smithii coccinea	—		—		5	3
Broughtonii . . .	—		—		*2	2
rubra pleno . . .	—		5	3	—	
alba superba . . .	—		*4	1½	—	
rosea punctata . . .	—		*4	2½	—	
optima . . .	—		*3	1½	—	
Gladstonesii . . .	—		*4	3½	—	

PELARGONIUMS.—Mr. Parker, gardener to — Oughton, Esq., of Roehampton, and Mr. Beck, of Isleworth, each showed six plants in 11-inch pots; the former grower's collection comprised—Arabella, Superb, Orion, Adonis, Rosy Circle, Pearl; the latter—Gulielma, Negress, Blanche, Centurion, Rosamond, and Cassandra. They were awarded equal prizes. Mr. Gaines, of Battersea, came in second with six plants in 11-inch pots—Vesta, Negress, Prince Alfred, Cotherton, Emma, and Queen of Bourbons. Mr. Richwood, gardener to — Louis, Esq., of Roehampton, claimed the 3rd prize for six plants in 11-inch pots—Conquering Hero, Camilla, Magog, Zamzummum, Wizard, and Matilda. — Cock, Esq., received the gold medal for twelve plants in 8-inch pots—Painted Lady, Paragon, Cassandra, Sylvia, Forget-me-not, Hebe's Lip, Pearl, Negress, Orion, Gulielma, Bertha, and Mount Ætna. Mr. Staines, of Middlesex, came in second with twelve plants in 8-inch pots—Forget-me-not, Bianca, Pearl, Negress, Vesuvius, Camilla, Hebe's Lip, Orion, Titus, Arabella, Muster, Gulielma. Mr.

Beck, of Isleworth, was awarded the first prize in the Nurserymen's Class, for twelve plants in 8-inch pots—Rosamond, Refulgent, Blanche, Delicatissima, Cavalier, Cassandra, Ruby, Mont Blanc, Centurion, Capella, Gustavus, and Pointer. Mr. Gaines came in second with the like number, in similar-sized pots—Rosy Circle, Forget-me-not, Voyager, Negress, Pearl, Sir W. R. Gilbert, Salamander, Ajax, Brockie, Marian, Mrs. Brock, and Brenhilda.

Fancy varieties.—R. Moseley, Esq., of Maida Vale, took the first prize for a collection of six plants in 8-inch-pots—Lady Flora Hastings, Yeatmaniana, Nosegay, Statuiski, Jehu Superb, and Anais. Mr. Staines came in second with ditto ditto. Lady Flora Hastings, Statuiski, Queen Victoria, Madam Meillery, Matilda, and Yeatmaniana. In the Nurserymen's Class, Mr. Gaines, of Battersea, was awarded the first prize for six plants in 11-inch pots—Madam Meillery, Ibrahim Pacha, Lady Rivers, Ytolinski, Anais, and Reine des Français. Mr. Ambrose, of Battersea, claimed the second prize for his collection, of like numbers, and of similar size—Nosegay, Ibrahim Pacha, Anais, Lady Rivers, Queen Victoria, and Madam Meillery. Mr. Staines showed six small specimens of Cape Pelargoniums—*Campylia palida*, *Glorianum*, *Multiflora*, *Abba*, *Tinctum*, *Delicata*. Wm. Hoyle, Esq., obtained first-class certificates for three seedlings, selected from ten exhibited—Prince of Orange, Christabel, and Satisfaction. Mr. Gaines also obtained a prize for his seedling fancy Pelargonium—Hero of Surrey.

ROSES.—*Amateurs.*—Mr. Terry, gardener to Lady Puller, for eight plants in large pots, took the first prize, for—Mrs. Bosanquet, La Reine, Meillery's Laboutlay, Comte de Paris, Bouquet, Pactole, Valmouge, Lamarque. Mr. Slowe, gardener to W. Baker, Esq., came in second for the like number—Auberon, Princess Helena, Pactolus, H. P. Rivers, Prince Albert, Celestial multiflora, Marquis Bocella, Melanie cornu. Mr. Rogers, gardener to — Bradbury, Esq., exhibited eight plants, for which he was awarded the third prize—Edward Jesse, Smith's Yellow, Armosa, Madame Laffay, Auberon, Mrs. Bosanquet, Duchess of Sutherland, Chenedole. In the Nurserymen's Class, Messrs. Paul, of Cheshunt, took the gold medal for twelve plants in large pots—Madame de St. Joseph, Augusta Mouchelet, Mrs. Bosanquet, Paul Joseph, Baron Prevost, Auberon, Cell's multiflora, Armosa, Louis Buonaparte, Paul Penas, and William Jesse. Messrs. Lane, of Berkhamstead, came in second, with the like number of plants—Baron Prevost, Queen Blanche Fleur, Bouskian yellow, Velours episcopal, Chenedolle, Vicomtesse de Cazes, Armosa, Lady Alice Peel, Marquis Bocella, Edward Jesse, Harrisonii. Messrs. Francis, of Hertford, were on this occasion placed third; the twelve plants exhibited by them were—Margolen Luxemburgh, General Alard, Baron Prevost, Smith's Yellow, Charles Duval, Caroline, La Reine, Bouquet de Fleurs, Auberon, Souvenir de Mal Maison, Eugene Hardy, Mrs. Elliott.



FLORAL
OPERATIONS FOR THE MONTH
ORNITHOLOGY

IN THE FLOWER GARDEN.

THE recent fine weather would allow for the planting out in beds, &c., half-hardy as well as the tender annuals, Heliotropes, Pelargoniums, Verbenas, Petunias, Celsias, Zinnias, Stocks, &c. ; but any omissions should be attended to at once.

We have frequently called the attention of our young readers to the desirability of paying strict attention to the judicious arrangements of flowering plants, as regards height and harmony of colouring. It is true that, of late years, this subject has become a matter of study amongst gardeners, and great changes for the better have taken place in this respect ; still we are far from supposing that we have arrived at perfection. Always bear in mind—if beauty, order, and effect are desired—that attention to this, next to a well laid-out flower garden, is essential to their full developement. In producing well-arranged contrasts, the different shades of colour must be as distinct from each other as possible: for instance, white should never be placed in contact with yellow, or deep blue with crimson; but white forms a good contrast with blue or red, blue to orange, yellow to purple or violet, dark crimson to light blue, and scarlet should be placed near those which have a profuse green foliage, as red and green form the best contrast. Orange and violet do well. Greenish-yellow and rose contrast well.

The only attention now required with such is to water freely, being careful it does not pass off, tie up, &c. Pinks and Carnations will require due care in securing, and by the middle of the month pipings of Pinks may be taken off, and towards the end layers of some early Carnations be made. Thin away extra flower buds. Dahlias will require securing, and thin out the shoots, so as only to retain about four or five. Stop the leading stem, to give support to the side ones. Cuttings will soon strike root. If the weather be dry, water duly, a good supply at once: a portion of mulchy manure, spread over the roots, is very beneficial. Seeds of Sweet Williams, Canterbury Bells, Scabious, &c., should now be sown for next year's blooming. Auricula and Polyanthus must be kept in a shady, but airy place. Prepare the compost for re-potting in next month. Sow seed as early as ripe. Pansey seed also sow. (See Articles on, &c.)

NEW FLOWERS.—Let attention be given to hybridizing, with a view to obtain improved varieties. Roses—maggots often infest the buds; carefully examine and destroy. Green fly, too, stop at first by fumigation, &c. (See Articles on.) Chrysanthemums: young plants should be prepared for the autumn. Violets for next year's blooming, attend to beds of, &c. (See Articles upon.)

IN THE GREENHOUSE, STOVE, &c.

The greenhouse plants which are placed out of doors will require to be duly watered, for if allowed to flag the result is the leaves are damaged. Moss sprinkled between the pots keep the soil cool.

The house will now have to be kept gay and sweet by Balsams, Globe Amaranthus, Coxcomb, Brachycoma, &c. Re-pot as required, to keep the plants in a growing state. Achimenes will now be coming into bloom; they repay for every attention. Cuttings of nearly all greenhouse plants should now be put off: May and June are the best months for that purpose. Cinerarias are highly ornamental, and well worth encouraging. Cuttings of Roses may be put in, and will soon strike. Camellias that have been forwarded by forcing the shoots and buds should now be placed in a cooler situation, to give vigour to them. When the grass of Ranunculus or Tulips is quite dead, the roots may be taken up. Pelargoniums, as they go out of bloom, must be prepared for another season. (See Articles on, &c.)

ERICAS.—The early blooming kinds should be draughted out, and others may follow them as fast as they go out of bloom. Examine the plants very carefully, and see that they are in a proper state as to moisture; and if you are an exhibitor, never put a plant of this or any other kind into a van without previously giving it a good soaking of water. The young plants which are not blooming had best be placed in a pit where they can be exposed or not, as may appear necessary. Stop such as require it boldly back, and train them so as to form a proper foundation for a good specimen. As the principal specimens go out of bloom they may be removed to a shaded situation to make their growth, being previously cut in if necessary. Supports for an awning must be placed over them, so that in case of heavy storms or continued rain, they can be protected a little. Clear weak manure water may be used occasionally for the free growing kinds. With regard to ventilation there is no fear of your over-doing it after this time. Re-pot any requiring it, but do not over-pot; the one-shift system is injurious to nearly all the tribe, the only exceptions are those of rapid growth and robust habit. Rough peat and silver sand, with bits of stone, &c., and a liberal drainage, are requisites. Epacris, &c., should also be duly attended to in re-potting, &c.

AZALEAS in the forcing pit must be kept shaded during bright sunshine, and a moist growing atmosphere must be maintained around them. Water freely with weak guano water, and sprinkle the vacant parts of the house or pit daily, but not upon the bloom. As the plants go out of flower place them in heat, to perfect their wood for next year's blooming. (See Articles on in previous volumes.)

SONGS OF THE FLOWERS.**NO. 4.—THE SONG OF THE WALLFLOWER.**

BY JOHN DUGGAN, ESQ.

“Why loves my flower, the sweetest flower
That swells the golden breast of May,
Thrown rudely o'er this ruined tower,
To waste the solitary day?”—*Langhorne.*

“Lonely and sweet, nor loved the less
For flowering in the wilderness.”—*Moore*.

Who loves not the Wallflower, pretty and gay?
Whose breath's mild and sweet as the kiss of young May;
Whose colours are simple as village maid's gown,
Where yellow is chequered with streaks of deep brown.

I bloom in the garden, field, dell, grove, and bower;
I bloom on grey rock; oft on mouldering tower
I wave my lone leaves to the night wind's sad sigh,
And I mourn as I think that thus all things shall die.

Yet I love the old tow'r and its ivy-prankt wall
More than bower of beauty by soft waterfall;
And the moss-ravelled stone, as it crumbles away,
Though it leave less to love, do I love less? Oh! nay.

And I love the churchyard, where the beautiful sleep;
And I deck the lone grave where the widow doth weep;
And my heart feels delight when she kisses my leaves,
For I know that her sorrow some solace receives.

And the poor man's green plot, how I love to adorn!
There his children caress me at ev'ning and morn;
And should I feel thirst, or but sun-weary look,
Lo! they bring me fresh show'rs from the clear cooling brook.

I have been in the palace, pavilion, and hall;
I have shone 'neath gold lamps in the beauty-throng'd ball;
And I've hung o'er the couch where affection lay dead,
Till my leaves 'gan to wither upon the cold bed.

Yet the untended couch I would rather bestrew
With my leaves' balmy odours when dripping with dew,
Than shine in the ball-room 'neath rich censers' glow,
There beauty is false, and affection's vain show.

Still I love those green bow'rs which spring decks in her pride,
And my rich-robed co-mates, though my garb they deride;
And I'm cheerful and gay, be it sunshine or storm—
When their soft hearts are cold, my brown bosom is warm.

Young Rose woos the day; the proud 'Tulip men's eyes;
Daffodil and Anemone fair ladies' sighs;
And the Cowslip delights in the daisy-starred lea;
Ah! the mouldering tow'r or grey ruin for me.

You may smile at my choice; but when flowers decay,
Who shall speak of their bloom when they've faded away?
Yonder time-braving tow'r will in gratitude tell
How the Wallflower lov'd 'mid its ruins to dwell.





1. *Tyso's Flaminius*
2. *Wright's Prince's Royal*



FLORICULTURAL CABINET

JULY, 1849.

ILLUSTRATIONS.

RANUNCULUSES — TYSO'S FLAMINIUS, AND KILGOUR'S PRINCESS ROYAL.

AT the floral exhibition recently held at the gardens of the Horticultural Society at Chiswick, a fine collection of very superb Ranunculuses were shown by Mr. C. Tyso, florist, of Wallingford in Berkshire. The greater portion were seedlings that Mr. Tyso had raised. By favour of Mr. Tyso we obtained specimens of several of the very best kinds in cultivation, amongst which were the two we now figure; others we shall give in a future plate.

The collection exhibited were admired by every person viewing them, and most deservedly so, we never recollect seeing so fine an assortment on any previous occasion.

Mr. C. Tyso is entitled to the thanks of all who saw the flowers for his skill displayed, and for favouring the visitors with so fine a collection of these most lovely flowers. They highly merit a place in every flower-garden, and we hope attempts will be extensively made to promote the same. The tale of difficulty in culture has deterred multitudes from growing the Ranunculus, but they are easy of culture, and we could furnish the names of individuals who grow them extensively and with the greatest ease. A celebrated grower has drawn up the following particulars of his very successful mode of culture:—

The situation best adapted for Ranunculus beds is an open level site, free from eddy winds and fully exposed to the sun.

Preparation of the Beds.—It is of great importance to have the beds prepared in a proper manner. I strongly recommend this work to be done in August, not later than the beginning of September.

My reasons for this early preparation are twofold. Fine weather may almost be depended on at this period, for the purpose of having the soil thoroughly sweetened, by turning what is intended for the surface of the beds frequently to the action of the sun. It also allows

ample time for the consolidation of the beds, so as to make them retentive of moisture, to insure a strong bloom.

There must be at the least two feet of good soil in depth; if there is not, the substrata will require to be removed and replaced with rich soil of a retentive nature.

My practice is to remove the surface of my beds annually to the depth of nine inches. The subsoil is then turned up a whole space in depth, and well broken. I usually allow my beds to remain in this state for a day or two, to sweeten the subsoil as much as possible by exposure to sun and air. I then throw into the beds about four inches of old cow-dung not less than one year old, breaking it well. I then sprinkle over it some new slackened lime finely sifted; shake up the dung so that the lime may penetrate through every part of it to destroy all the worms; after this rake the dung level, and fill up with the soil intended for the surface; as the beds subside fill up with soil reserved for the purpose.

The benefit resulting from the use of lime is, it corrects the acidity in the dung, and the cultivator will not be troubled with many earth worms in his beds, casting out his roots and making their ugly casts on the surface, also making the soil pervious to the drying winds of spring.

For my subsoil I use a rich clayey friable loam, very retentive, but I prefer a rich light soil for the surface.

During the preparation of the beds destroy everything that appears in the shape of vermin in the soil; soil for the *Ranunculus* cannot be too free from these pests. If there is wire worm spare no labour to eradicate them, catch them and break them, give them no quarter, for they are the most destructive enemy that the florist has to encounter.

The best edging for the beds is a neat wood, one rising about two inches above the level of the path; it harbours no vermin, and its utility will be perceptible when we come to the planting time.

Rake the surface of the beds occasionally, and during frost break the surface with a spade and pile up the frozen clods to allow the frost to penetrate as far as it will, but don't disturb the dung. Rake the soil level when a thaw takes place; this helps to keep the soil sweet, and destroy any vermin that may be in it.

Planting Time.—The time for planting will vary in the different portions of the island. In the southern part, spring is earlier by a fortnight than where I reside. A few degrees of latitude makes a sensible difference in climate, therefore cultivators must be guided by the climate of their respective locality.

After the middle of February, when the surface soil will rake easily, and the weather is dry, I commence to plant. The beds must be full up to the wood edge, and quite level. This is best done by a piece of board extending across the bed; and two persons causing it to rest on the wood edge, and drawing it from end to end, will speedily remove any surplus soil and leave the bed perfectly level. Then mark on the wood edge the rows, say four inches and a half apart for the old varieties, and five and a half for the new. If the beds are four feet wide,

twelve or fourteen roots of the old sorts may be planted in each row, but ten of the new will be found sufficient, in consequence of their more vigorous habit. The best way to plant is to mark across the surface for each row. Then excavate with a trowel to the depth of one and a half inch. To insure the exact depth, I use a piece of wood with a notch cut at each end, the requisite depth, which is pressed into the drill till the projecting parts rest on the wood edge, (the back of it serves for levelling the beds.) In planting the roots keep the crowns up, press the claws into the earth firmly to prevent worms casting them out, but take care not to break them. Two persons, after a little practice, will plant a large quantity in a little time by this process.

Management from Planting Time till Blooming Time.—The roots, after having been in the ground for a few days, swell to three times the size they were when planted. Should very wet weather occur and afterwards sudden and severe frost, which is often experienced at this early season, there is danger of some of the roots being destroyed. In this case, it is advisable that some old mats or dry litter of any kind should be laid over the surface of the beds to prevent the frost penetrating to the roots. The beds can be cleared when a favourable change takes place. By the middle of April the plants will all be up. They frequently rise so strong as to displace the soil about them. Look over them and take the displaced soil, break it, and put it about the neck of the plants. When the foliage of the plants has attained to the height of two or three inches, then is the proper time to stir the surface of the beds, do this carefully to the depth of two inches between the rows, but don't go so deep close to the plants. Break the soil fine and keep it level. Take care that the plants are not disturbed nor their foliage injured. See that the soil is gently pressed around the neck of the plants to keep out the drought. Persons who grow Auriculas will find it good practice to reserve a portion of their old compost, and after the beds have been stirred, strew it equally over the surface to the thickness of about a quarter of an inch. This serves for a top dressing, and gives the beds a neat and finished appearance, and helps to keep out the drying winds of spring.

During April and May, should the weather prove hot and dry, it will be of advantage to the plants to water occasionally; this must be gone about with judgment, for in the event of frost taking place through the night, the foliage would suffer and the plants receive a check. When there is no appearance of frost, water liberally with rain or pond water administered between the rows with the pipe of a watering pan held low, so as not to make holes in the soil. Spring water should never be used till it has been long exposed to sun and air to soften it and raise its temperature.

Look over the plants occasionally previous to the bloom, for at this time they are liable to receive damage from cuckoo spit harbouring in the foliage, and a small destructive caterpillar that lodges in the embryo blooms, eating out the whole of the petals and leaving nothing but the empty calyx.

Blooming.—According to the season being forward or the reverse,

the flowers will commence to bloom from the 7th to the 21st of June. They will then require to be covered through the day to shade them from the sun, exposure to which spoils their beautiful colours. This is best done by having a low stage rising about two and a half feet at the sides of the beds and four feet in the centre. The awning is easily managed, when tied to two light rollers; in this form it is put on and taken off in an instant. When the sun is powerful, keep it down on the side next the sun near to the ground, but on the other side it may be partially rolled up to admit air, and should visitors arrive to see the bloom, the roller can be fastened to posts so as to enable visitors to walk under it, without exposure of the flowers to the sun. In fine weather the awning may be taken off at night and put on in the morning. Never allow the blooms to be exposed to the rain. During the bloom, water may be given every night as formerly recommended, but when the bloom is on the decline, cease to water. By using these precautions the bloom may be kept in perfection for a period of three weeks or more, to the great delight of all beholders, for there is nothing in nature more dazzling and striking than a mass of choice *Ranunculus* in full bloom. The recollection of a sight of the kind is lasting. The reason why I recommend a low stage is to prevent the flower stems being drawn. This is uniformly the case when a high stage is used.

Maturing the Roots.—When the bloom is past, the object then is to have the roots ripened in fine condition. Let the beds be exposed to the full action of the sun; but it will be advisable to keep up the stage and have the awning in readiness to cover with in the event of wet weather setting in, for there is danger of the tubers beginning to grow again. Should the beds become saturated with moisture during hot weather, a gentle rain will do no harm, but avoid too much. Should the tubers of any unfortunately start, my practice is to thrust a trowel diagonally into the soil, cutting the fibres of the plant a few inches below the surface, and gently raising the ball a little above the level of the bed. This practice I generally find successful; but should the plant thus treated continue to grow, my next resource is to take up the ball and put it into a carnation pot, among some dry soil, and put it under glass. Should this fail, and the root is valuable, let it grow on, but put it into a greenhouse or frame where it can be protected from the risk of frost till the root attains to maturity.

Taking up the Roots.—Cultivators who have valuable collections should never wait till the foliage of the whole are withered before they commence taking up; my advice is to look over the plants every day, and take up all whose foliage is withered, and continue doing so till the whole are secured. Clean the roots from soil; cut off the flower-stems and foliage with a pair of stout scissors close to the crown; shorten the fibres and place the roots in the bags or boxes appropriated for keeping them in, in a dry airy situation out of the sun. In the course of two or three days after taking up, look over the roots, they will then be in a soft and partially shrivelled state; then is the proper time for separating the roots without danger of breaking

them. Mouldiness must be guarded against, by turning the roots occasionally till they are perfectly dry. Keep them in a dry place till planting-time comes round again.

Raising Seedling Ranunculus.—The soil I use is rich maiden loam; in summer it is exposed to sun and air till it is quite dry; it is then broken fine by hand, and all worms and extraneous matter removed; it is then kept in a warm dry place till wanted. About the beginning of January I begin to prepare my boxes for sowing. I do this by mixing some finely sifted leaf-mould, also in a dry state, with the prepared loam, searching carefully for worms. This mixture is placed in the lower part of the box. On the upper the fine loam alone is placed so as to be in contact with the seed. Fill the box within half an inch of the top, then press the surface level with a piece of smooth board. The best time for sowing is about the end of January. Previous to doing so, moderately saturate the soil with tepid water through a very fine rose, that will cause the water to fall like dew. Should the watering occasion any inequalities on the surface, fill them up and press all smooth again with the board. The best way to sow the seed is to take but a few in hand, and let them fall singly if possible, distributing them equally just clear of each other over the surface of the box. When this is done, cover the seeds lightly with some of the fine mould till they are hid; then give another watering: this will bring many of the seeds into view. Cover those that are exposed and place the box into its situation. The best situation is the front shelf of a greenhouse, or, for want of this, the window of a fire-room looking to the south. Water every second day at first, and cover any seeds that appear: when the sun becomes powerful give daily waterings.

Guard against frost, for should the soil be frozen while the seeds are germinating, they will to a certainty be destroyed.

In four or five weeks, according to the amount of sunshine, the young plants will begin to appear. In coming up, many of them will appear with the bran of the seed attached to the young leaves, displacing the soil about the neck of the plant. In this case some of the fine soil will require to be let fall about the plant to fill up the cavity. Many of the young plants will also (like the *Auricula*) throw themselves out. Look over the box occasionally, and put those that are out into the soil again, by making a small cleft, and pressing the soil gently about the neck of the plant. When the plants have about three leaves, turn the box every second day, to prevent the plants being drawn. About the third week in March top-dress the box. First, remove carefully, without injury to the foliage or pulling up the young plants, all the green slime on the surface. Replace this with some finely-sifted old cow-dung in a dry state; let it fall equally among the plants, then give a good watering; after the top dressing they will have quite a gay appearance, and will begin to grow rapidly.

The first week in April the box may be removed to a cold frame, where it may have sun and air. Protect at night from frost.

About the end of the month, when danger from severe frost is over, the box may be removed to some sheltered situation where it will get

the morning sun till near noon. Water daily during dry weather till the foliage begins to wither. When this takes place let the box become dry. Should wet weather occur just when the young roots are attaining to maturity, it will be advisable to place the box under glass. Take up the roots as the foliage withers down, and place them in a paper-bag in a dry place, where they may remain till the following February, when they are to be planted in the open ground and treated like the general stock. As the young roots are in general very small, be careful not to break them when planting: fix the claws firmly into the soil, and be certain that the crowns are uppermost. They may be planted a little closer than large roots; but small as the roots appear when planted, very few will miss blooming. It is rather a tedious process the planting a quantity of such small roots, but the enthusiastic florist will not complain at cold fingers and the time taken up to do this work correctly, for he expects to be rewarded with some fine new flowers to gratify him for his trouble and procure himself a name that will be famed among cultivators.

It too often happens that some of the young plants bloom in the seed-box: it is generally August or September before they do so. When this occurs, and there is a fine sort among them, there is no other way to preserve it than removing the box to a greenhouse or frame, where it should be kept dry and protected from frost till the root is matured.

These observations contain the practice I adopt, and I have no doubt that, if followed out, the youngest tyro may command success.

It may be asked, why all this trouble with the preparation of the soil? The answer is, experience has taught me that *Ranunculus* seed sown in soil whose temperature has not been much lowered vegetates much better than in soil that has been exposed to frost and rain through a part of the winter. Let any person try the difference; they will find that three seeds for one will vegetate in the prepared soil compared with seed sown in ordinary soil; besides, the larvæ of worms, &c., that may remain in the soil when laid past, will all be hatched by the time it is put through hand the second time. They will then be detected. A single worm getting into a seed-box will come up to the surface through the night, and, by disturbing the seeds, will cause much mischief, if not destroy the whole.

Such is my mode of culture, resulting from the experience of many years. I can with confidence recommend it as safe and practicable. There are few persons now alive who have made more experiments in the culture of the *Ranunculus* than I have, but the method of culture now detailed is the only safe one that will insure fine blooms and healthy roots.

NOTES ON NEW OR RARE PLANTS.

ABRONIA MELLIFERA—THE HONEY-SCENTED.

A NEW species of this beautiful tribe of plants lately introduced to the gardens of the Horticultural Society, at Chiswick, by their collector, Mr. Hartweg, from California. It has not yet flowered in this

country, but it is said to have bright orange-coloured flowers, produced in umbels like the Verbena. Both the above *Abronia* and *A. umbellata* grow best when cultivated in a light sandy peat, intermixed with a little decayed vegetable mould and loam.

ASYSTACIA SCANDENS—THE CLIMBING.

Synonyme Ruellia quaterna.

A remarkable African climbing plant, introduced to this country by Mr. Whitfield to the fine collection of stove plants at the Earl of Derby's gardens, Knowsley Park. The flowers are borne in terminal racemes. They are tube bell-shaped two inches long, and nearly as much across the mouth, which is five parted. They are of a creamy-white colour, with a slight blush tinge. (Figured in *Bot. Mag.* 4449.)

CALANTHE VESTITA—THE CLOTHED.

A terrestrial orchideous plant, introduced from Moulmein by Messrs. Veitch. The flower scape rises a yard high, terminating with a spike one foot long of beautiful delicate flowers, of a pure white stained at the centre with crimson. Each flower is about three inches across. It is a handsome stove-plant. (Figured in *Pax. Mag. Bot.*)

**DENDROBIUM CAMBRIDGEANUM—DUKE OF CAMBRIDGE'S
DENDROBIUM.**

Orchideæ—Gynandria Monandria.

Introduced from India to Chatsworth, where it has bloomed; also recently in the Royal Gardens of Kew. The stems are pendulous, and so are the flowers, which are of a deep rich golden yellow, with a large blood coloured blotch upon the lip. Each blossom is about three inches across. It is a very handsome flower, and deserves a place in every collection. (Figured in *Bot. Mag.* 4450.)

LAPAGERIA ROSEA—ROSE-COLOURED.

Smilacæ. Hexandria Monogynia.

This most beautiful flowering plant is a native of Chili, from whence it was sent to the Royal Gardens of Kew. Messrs. Veitch have also received it from their collector, Mr. Lobb, but it has not bloomed in either place. From dried blooming specimens, aided by coloured figures made in the native locality, a coloured figure is given in the *Botanical Magazine* for last month. It is a climbing plant growing many feet high, branching. The flowers are produced at the axils of the leaves, only one at each; pendulous, of a lily-like form. Each blossom is three inches long and about two and a-half inches across the mouth, of a deep red rose and crimson shades, beautifully spotted with white inside the flower. It is specially handsome, and deserves to be in every greenhouse. It will probably flourish in the open air, or pit-frame, similar to the Chilian *Alstroemerias*. It is easily cultivated, growing freely.

SOBRALIA MACRANTHA—LARGE-FLOWERED.

Orchideæ. Gynandria Monandria.

This fine species was collected in Guatemala, in Mexico, by Mr. Skinner, and has bloomed in the Royal Gardens of Kew. It is a magnificent blooming plant. The flowers are borne in terminal

racemes, the stems growing erect. Each blossom is eight inches across, of a rich deep purple-rose colour. The lip is five inches across, tubular at its base, but spreading broadly above, and having a pale yellow heart-shaped spot at the base. This splendid flowering plant has slender reed-like stems, growing from two to ten or more feet high. In a mixture of sandy-peat, light loam, and a little leaf mould, it grows admirably, and is easy of cultivation. It requires to be in a cool part of the Orchid-house. It deserves to be in every collection. (Figured in *Bot. Mag.* 4446.)

STEMONACANTHUS MACROPHYLLUS—LARGE FLOWERED.

Acarthaceæ. Didynamia Angiospermia.

A native of New Grenada, from whence it was sent to the Royal Gardens of Kew. It blooms in the stove during the whole summer season. It is a half shrubby plant growing a yard high, branching. The flowers are produced in long spreading panicles. The flowers very much resemble in form those of the well-known favourite *Ruellia formosa*. The tube is from two to three inches long, and across the expanded five-parted limb nearly two inches, of a bright scarlet colour. It is a beautiful flowering plant, easily cultivated, and well deserving a place in every collection. (Figured in *Bot. Mag.* 4448.)

RUELLIA PURDIANA—MR. PURDIE'S.

It is a stove-plant growing two feet high. The flowers are tubular-funnel-shaped, about two inches long and one and a-half across the (mouth) limb. They are of a rosy-crimson colour. (Figured in *Pax. Mag. Bot.*)

ALSTRÆMERIAS.

A. RUBELLA.—Sepals six, lower one wedge-shaped, of a pale rose colour; the two upper ones broader, of a rich orange-yellow, bordered with rose colour and striped with red.

A. LABIATA.—Lower sepals of a deep rose colour; upper ones a deep orange striped with dark red.

A. MARGINATA.—Lower sepals white margined with rose; upper ones pale yellow striped with red.

A. ALBENS.—Lower sepals white, tipped with pale rose colour; two upper ones dull yellow tinged and striped with deep rose.

A. PULCHELLA RUBRA.—Lower sepals pale rose; upper ones orange yellow striped with red.

These handsome hybrids are figured in *Paxton's Magazine of Botany* for June from specimens furnished by Messrs. Backhouse, of York. They flourish, as do other *Alstræmerias*, in a compost of rich turfy loam, peat, and sand, in equal portions.

VERBENAS.

The following are the best out of a number of French seedlings which we have seen this season:—

MADAME BRUNZOT (Chauviere), white with a deep crimson eye, large, of excellent form and very distinct; one of the best.

TALLEYRAND (Defosse), lilac shaded and streaked with blue-purple, good form, large trusser, and a very pleasing variety.

DIANA (Chauviere), lilac with crimson purple centre, good form and a large even trusser.

APOLLON (Dufoy), deep puce, of good average form, rich in colour, but a somewhat small trusser.

ELEANOR DE GUYANNE (Chauviere), blush, shaded and bordered with rosy lilac, very pretty, and of good size and form.

CHAUVIERII (Chauviere), bright vermilion red, mouth of the tube white, surrounded with a very dark ray; of medium size and tolerable shape.

BAUCIS (Chauviere), lively rosy-purple, with small white centre, new in colour and of good habit.

MONSEIGNEUR AFFRE (Dufoy), bright rosy-vermilion with a pale yellow centre, large and rather better than the average form.

MADemoiselle JAMET (Chauviere), flesh with bright carmine centre, large flower and a fine trusser.

ON PLANTING ORNAMENTAL SHRUBS IN MASSES.

BY A NOBLEMAN'S GARDENER.

FOR many years this highly ornamental and valuable class of plants has been a great favourite with me, and in the grounds belonging to the establishment I have the honour to be connected with, there is one of the finest collections of ornamental shrubs in Great Britain. The present season of the year is fruitful in their beauties, and I am compelled to forward a few thoughts on what has been my practice and recommendation with this charming tribe. I admire the grandeur of a large number of any particular ornamental species, or even of an entire genus, but I much prefer giving greater variety, by a judicious mixture of the different kinds of different families, such standing out amidst other and far varying forms and colours, produce by their contrast in form and colours a proportionate striking effect.

Sometimes the peculiar soil or situation which shrubs require, has to determine the manner in which they are to be grouped; and, singularly enough, it is found that those demanding these peculiar circumstances, can be associated in a general mass with the greatest propriety, or will, for the most part, look well in masses of one species, or of the members of one genus. Of these, the tribe for which heath-mould and a somewhat sheltered spot are desirable, may be brought forward as examples.

Cultivators scarcely seem yet to have appreciated shrubs at their full value for grouping purposes. They are commonly employed only at the margins of plantations to complete the slope from the trees down to the flower-borders or walks, or planted very sparingly as detached specimens. Their extreme suitableness for growing in beds, furnished with one or many species, and having no trees in their centre, nor herbaceous plants round the outside, is most strangely overlooked in the majority of places. In the secluded dells which may exist, or be made in large domains, such beds, scattered effectively over the turf with which the spot may be covered, have an air of little less than enchantment, and can be aptly stocked with all kinds of the tribe termed American plants. Lawns in the vicinage of plant-houses, too, or fronting small residences, or even around the most stately mansions,

may often be very delightfully decorated with plots of shrubs, which frequently look better than flower-beds, or groups in which trees, shrubs, and herbs are all associated. A Heath-garden, or an American garden, also, laid out in a very bold geometrical or irregular style, and traversed by grass or gravel-paths, the plants being arranged partly in single species and the rest more indiscriminately, is a highly pleasurable addition to an estate. There are, moreover, buildings of a floricultural or exclusively ornamental character ordinarily found in spacious gardens, in the front of which, something of the nature of a flower-garden is mostly requisite to connect them with the lawns beyond. Flower-gardens, particularly geometrical ones, are, we conceive, seldom appropriate to such spots, being too gay and artificial. And it seems to me that a few well-arranged clumps of shrubs would accomplish the harmonizing of so subordinate an edifice with the pleasure-grounds much more satisfactorily; and their fitness will be rendered the more complete if they are placed on the turf, instead of being separated by gravel-walks.

In the almost universal rejection of shrubs for such objects as have been suggested, it appears to have been forgotten that there are species which are nearly as dwarf as any herbaceous plant, and which grow as compactly, intermingle as readily, carpet the ground as thoroughly, and bloom as profusely, and many of them as durably, as the herbaceous hardy and exotic species with which beds are always supplied. They have, moreover, or at least most of them, the good quality of being ever-green, and thus of keeping the earth constantly and agreeably covered.

Recurring to the disposition of shrubs in frequent groups, made up of separate genera and species, it must be done judiciously, as chance and fortuity ought to be no part of a landscape gardener's dependence; and the admission of a principle in which all must rest on these, should be rejected. I allow that with American plants, excellent masses may be obtained by properly arranging the species of each genus in detached groups. Still, there are exceptions to this, and cases in which a mixture of different genera is more suitable, and a merely casual departure from the system I recommend is justifiable.

In regard to shrubs that constitute the boundary of a plantation, uniting it with the flower-borders, or making it slope towards the walk, the existing practice needs to be greatly modified. The assumption that plantations of any description should slope gradually down to the exterior edge or margin in an unvarying manner, is erroneous in principle, and unsightly in effect. It is to this mistake that the tame banks so common round the outside of shrubberies are wholly attributable; and to this is due their extreme dulness and meagreness. The outline of a mass of shrubs, or of trees flanked by shrubs, ought to be as diversified as art can make it. Tameness and uniformity are nowhere less tolerable. Large bushes, projecting forwards at different distances from each other and the verge; others, of various heights, standing out with the greatest irregularity in their rear; and occasional limited spaces, destitute of any shrub at all, should break up the flatness of a bank, and make it truly indefinable.

At the same time, however, there should be the general aspect of a descent to the boundary preserved. The irregularity we have advo-

cated may seem incompatible with any such appearance; but the desired slope is easily produced by letting the minor plants predominate, and making those which are to diversify it the fewest. It is surprising to persons unaccustomed to such work, how trifling a quantity of larger specimens will serve to give boldness, and undulation, and variety to a shrubby border; and the greater the number of species that is employed, the more perfect will be the fulfilment of that object. The correct estimate of beauty in this respect may be derived from analogy with another branch of the natural kingdom. In a rocky district, or an artificial rockery, it is not a straight slope from the walk or point of observation which pleases the eye. It is rather to rising eminences, and rugged protuberances and projections which almost impend over the observer, that he yields his admiration; while a perceptible descent is actually maintained from the back to the foreground.

However, where beds of low shrubs, not more than twelve or twenty feet in diameter, stand out alone on a lawn, or, indeed, where any group, the dimensions of which can be seen at a glance, is planted on turf, the outside of such beds or group ought to come down to the grass, so that the two may, as it were, insensibly pass into each other. To introduce higher shrubs around the edges of beds of that sort would be completely unwarrantable and subversive of good taste. Yet, the surface of the group ought not to appear as regular as if it had been cast in a mould, and the destruction of its formality by placing two or three taller plants near the middle, and a few more within two or three feet of the grass, so as to leave room for smaller plants to complete the slope to the latter, will be both proper and desirable.

As to the ground outline of masses of shrubs, that must be decided by the nature of the locality, and the express purport of the group. In a geometrical shrub-garden, the figures should not be very small nor very close, nor have many corners or points. A collection of beds disposed with more freedom ought to be formed by the same rules, and be divested of abrupt recesses, or sharp turns, approximating their contour as nearly as practicable to rounded and regular curves. The circle, the oval, and every irregular shape that at all resembles these, are beautifully suited to shrubs. When beds of them are thrown down upon the turf before a house or conservatory, or other building, to enliven and vary the scene, it requires the greatest care to avoid bringing them too forward, so as to interfere with the broad open glade that should always front such erections, and also to prevent them from taking the aspect of being ranged in anything like a straight line. To this end, no two should terminate at the same distance from the centre of the glade; or, to speak more definitely, that part of every one which is nearest the middle of the lawn should not be at an equal distance from it with the same relative part of any other; nor should there even be the semblance of such regularity. The proper mode, where at all possible, is to let each bed, as it recedes from the building, fall away likewise from the centre of the lawn; abjuring, however, all uniformity of distance. The glade will thus gradually expand till it is lost in the more ample pleasure grounds. I will give you a descriptive list of the shrubs I deem most ornamental and useful for the August number of this Magazine.

REVIEW.

The Rhododendrons of Sikkim-Himalaya, being an Account, Botanical and Geographical, of the Rhododendrons recently discovered in the Mountains of Himalaya, &c. By J. D. HOOKER, R.N., M.D., F.R.S., &c. Edited by Sir W. J. HOOKER, K.H., D.C.L., &c. London: Reeve, Benham, and Reeve.

THIS splendid publication is in imperial folio, with superbly coloured figures of ten, out of the eleven species of Rhododendrons discovered, one not being in flower when found.

It contains some prefatory remarks on the locality, and a historical sketch of the genus, with details on the distribution of these new plants, and descriptions accompanying the plates. It is really what the title of the work indicates, and executed in every particular most satisfactory. Every admirer of this noble race of plants should possess this very interesting publication.

We give a few extracts, which will enable our readers to appreciate it, and possessing it we feel assured would be delighted with it.

Dr. Hooker, now employed in a Government Botanical mission among the mountains of India, has discovered the species hereafter enumerated, and one of them is the noblest of all the tribe both in size, form, colouring, or fragrance; it is, too, an Epiphyte, that is, grows entirely on the trunks of trees, the roots running among the mosses or decayed parts of them, similar to most of our stove orchidææ. [There are in this country five other Epiphytal species, so that we now have six of this class of Rhododendrons, which but a few years ago was not known to contain one.—CONDUCTOR.] Of eleven species which Dr. Hooker obtained, nine were found to be previously unknown to the botanists of this country.

Darjeeling, the locality of the country in which these Rhododendrons were found, lies, we are told, in the Sikkim portion of the Himalaya; and is situated in lat. 27° N., and long. the same as Calcutta, from which it is distant about 380 miles. Its elevation above the sea is 7,200 feet. The mean temperature of the year is about 55° Fahr.

“The mountain Sinchul, upon a spur of which, looking north, Darjeeling stands, attains an elevation of 9,000 feet, and to the west of it, next Nepal, rises another conspicuous mountain, Tonglo, reaching a height of 10,000 feet. Due north of Darjeeling, at a distance of only 60 miles, the horizon is bounded by the great snowy range, having for its principal feature the peak of Kinchin-junga, which has lately been ascertained to be 28,172 feet in elevation, the loftiest mountain yet known in the world. Dr. Hooker thus describes his first impressions of this scene:—‘Much as I had heard and read of the magnificence and beauty of Himalayan scenery, my highest expectations have been surpassed! I arrived at Darjeeling on a rainy misty day, which did not allow me to see ten yards in any direction, much less to descry the snowy range, distant 60 miles in a straight line. Early next morning I caught my first view, and I literally held my breath in awe and admiration. Six or seven successive ranges of forest-clad mountains, as high as that whereon I stood (8,000 feet), intervened between me and a dazzling white pile of snow-clad mountains, among which the giant peak of Kinchin-junga rose 20,000 feet above the lofty point from

which I gazed! The heaven-ward outline was projected against a pale blue sky, while little detached patches of mist clung here and there to the highest peaks, and were tinged golden-yellow or rosy-red by the rising sun, which touched those elevated points long before it reached the lower position which I occupied.

“Such is the aspect of the Himalayan range at early morning. As the sun’s rays dart into the many valleys which lie between the snowy mountains and Darjeeling, the stagnant air contained in the low recesses becomes quickly heated; heavy masses of vapour, dense, white, and keenly defined, arise from the hollows, meet over the crests of the hills, cling to the forests on their summits, enlarge, unite and ascend rapidly to the rarefied regions above; a phenomenon so suddenly developed, that the consequent withdrawal from the spectator’s gaze of the stupendous scenery beyond looks like the work of magic.” Such is the region of the Indian Rhododendrons.

“The maximum of Rhododendrons appears to be in Asia, and their head-quarters are on the lofty ranges of the eastern Himalaya, where the mild and moist atmosphere is eminently suited to their habit.

“A certain degree of winter cold and perpetual humidity is necessary, but the summer heat is quite tropical where some of the genus prevail, and snow rarely falls, and never rests on several of those peculiar to Sikkim.” In the case of *R. Falconeri*, which grows on the summit of Tonglo, at an elevation of 10,000 feet, Dr. Hooker remarks, that the temperature of the earth in which it grew was, in the middle of May, at 27 inches below the surface, where the roots are chiefly developed, $49^{\circ} 5'$ at all hours of the day; that of the air varied from 50° to 60° .

These observations, and the mean temperatures previously quoted, show, as is well remarked in the *Gardeners’ Journal*, that spring and not mid-winter is the season of trial, not only in the case of the Indian Rhododendrons, but in that of very many other half-hardy plants from various parts of the world, especially from the mountain regions of India and South America. Comparing the figures just referred to, it will be seen that during the months of November, December, and January, the difference in the mean temperatures of London and Darjeeling is about 4° only, and the same difference is indicated for the months of July, August, and September. On the other hand, February and May, the transition months between winter and spring, and spring and summer, show a difference of 6° ; the spring months of March and April, a difference of 11° and 10° respectively; and in autumn, too, as shown in October, the difference is 9° . “Here,” as the journal above referred to observes, “we have a solution of the cause of our want of success in cultivating tender plants in the variable climate of Great Britain: our springs are late, and cold, and changeable; and while the winters and summers of Darjeeling and London differ but 3° or 4° , the springs and autumns show a difference of 10° and 12° . This accounts for the excitable nature and early growth of many of our half-hardy Indian plants, as well as the tendency of many such to grow to a late period of the autumn.”

But though we cannot hope to grow these fine things, except in some of the most favoured parts of England and Ireland, yet the discovery, and the probable speedy introduction of them, are matters of great horticultural interest. “It is true that plants originally tender

will always remain tender ; and there is, therefore, but small hope that we can ever accustom these glorious tree Rhododendrons to forget the earlier springs and autumns of Sikkim-Himalaya, and so perform all the necessary functions of growth within our four or five summer months, instead of extending it, as in India, over eight or nine ; but, nevertheless, the skill of the cultivator has already turned to his use the valuable property of colour in the tree Rhododendron of Nepal ; and he will assuredly try, nor is he likely to fail, to extract from these tender kinds a still richer product.

“ Only four species, *R. Dalhousiæ*, *R. Campbelliæ*, *R. argenteum*, and *R. arboreum*, grow near Darjeeling. The second and fourth form scattered bushes at 7,500 and 8,000 feet ; the *R. argenteum* is a small tree, at 8,000 or 9,000 feet.

“ It was on the ascent of Tonglo, a mountain on the Nepalese frontier, that I beheld the Rhododendrons in all their magnificence and luxuriance. At 7,000 feet, where the woods were still dense and subtropical, mingling with ferns, pothos, peppers, and figs, the ground was strewn with the large lily-like flowers of *R. Dalhousiæ*, dropping from the epiphytal plants, or the enormous oaks overhead, and mixed with the egg-like flowers of a new Magnoliaceous tree, which fall before expanding, and diffuse a powerful aromatic odour, more strong but far less sweet than that of the Rhododendron. So conspicuous were these two blossoms, that my rude guides called out, ‘ Here are lilies and eggs, sir, growing out of the ground ! ’ No bad comparison. [Above this occurs *R. arboreum*]. Along the flat ridges, towards the top, the Yew appears with scattered trees of *R. argenteum*, succeeded by *R. Campbelliæ*. At the very summit, the majority of the wood consists of this last species, amongst which, and next in abundance, occurs the *R. barbatum*, with here and there, especially on the eastern slopes, *R. Falconeri*.

“ The habits of the species of Rhododendron differ considerably ; and confined as I was to one favourable spot by a deluge of rain, I had ample time to observe four of them. *R. Campbelliæ*, the only one in full flower early in May, is the most prevalent. Some were a mass of scarlet blossom, displaying a sylvan scene of the most gorgeous description. Many of their trunks spread from the centre thirty or forty feet every way, and together form a hemispherical mass often forty yards across, and from twenty to twenty-five feet in height ! The stems and branches of these aged trees, gnarled and rugged, the bark dark coloured, and clothed with spongy moss, often bend down and touch the ground : the foliage, moreover, is scanty, dark green, and far from graceful, so that, notwithstanding the gorgeous colouring of the blossoms, the trees when out of flower, like the Fuchsias of Cape Horn, are the gloomy denizens of a most gloomy region. *R. Campbelliæ* and *R. barbatum* I observed to fringe a little swampy tarn on the summit of the mountain—a peculiarly chilly-looking small lake, bordered with sphagnum, and half-choked with Carices and other sedges : the atmosphere was loaded with mist, and the place seemed as if it would be aguish if it could, but was checked by the cold climate. *R. barbatum* had almost passed its flowering season ; it is a less abundant and smaller tree than the last mentioned, but more beautiful, with brighter green and denser foliage, clear papery light-coloured bark, the whole forming a more picturesque mass.

“ Along the north-east and exposed ridges only grow the *R. Falconeri*, in foliage incomparably the finest.”

Dr. Hooker found eleven kinds in the district which he explored, but of these, one was the *R. barbatum* of Wallich, a species already known and introduced to England, and proved to be capable of bearing our ordinary winters in the climate of Chester; and another was the original *R. arboreum* of Smith, a kind so mixed up in our gardens with the various hybrid or cross-bred races to which it has given rise, as to be now seldom recognised. We now only give an abbreviated abstract of the description given by Dr. Hooker of the remaining species.

Rhododendron Dalhousiae (Lady Dalhousie's Rhododendron).—A shrub six to eight feet high, growing on the trunks of large trees. The branches bear leaves and flowers only at their extremities. The leaves are few, four to five inches long, elliptic-obovate, somewhat leathery, and of a darkish green colour, paler beneath. The flowers grow from three to seven, in terminal umbellate heads, which spread wider than the leaves. The blossoms are bell-shaped, very large, three inches and a half to four and a half long, and as much across the mouth, white, with an occasional tinge of rose, very fragrant, the odour partaking of that of the lemon. The flowers in age become more rosate, and are sometimes spotted with orange. This is the noblest of the Rhododendrons. Native of Sikkim-Himalaya, at an elevation of from 7,000 to 9,000 feet; growing on the trunks of large trees. Flowers from April to July.

Rhododendron lancifolium (lance-leaved Rhododendron).—A shrub six to eight feet high, with spreading tortuous branches. The leaves are produced chiefly at the ends of the branches; they are three to four inches long, oblong lance-shaped, very pointed, and of leathery texture, green above, tawny beneath. The flowers grow in dense heads at the ends of the branches; they are of moderate size, bell-shaped, distinctly net-veined, and of a rich puce colour. Native of the interior: Sikkim-Himalaya. Flowers in May.

Rhododendron Wallichii (Dr. Wallich's Rhododendron).—A shrub growing from eight to ten feet high, with rugged tortuous branches. The leaves are mostly confined to the apex of the ultimate branches; they are three to four inches long, almost exactly elliptical, full green and glabrous above, paler beneath, and having a remarkably neat appearance. The flowers are large and handsome, growing in terminal heads, having six to eight in each; they are rosy lilac with deeper rose-coloured dots within the base of the upper lobe; they are bell-shaped, with a spreading five-lobed limb. Native of the interior of Sikkim-Himalaya. Flowers — ?

Rhododendron Campbelliæ (Mrs. Campbell's Rhododendron).—A tree growing frequently to the height of forty feet, forming a large spreading mass. The leaves are oblong-lanceolate, acuminate, leathery, green and smooth on the upper surface, and clothed beneath with a more or less deeply rufous or ferruginous tomentum. The flowers grow in dense compact heads, and are of a rich rosy-scarlet colour, spotted at the base of the upper lobe with dark spots, and around the bases of the remaining lobes with paler rosy spots. Native of Sikkim-Himalaya, frequent, growing at an elevation of from 9,000 to 10,000 feet. Flowers in April and May.

Rhododendron Roylei (Dr. Royle's Rhododendron).—A small shrub

with oval or elliptic leaves, three to four inches long, clothed beneath with an ochraceous-brown pulverulent substance. The flowers grow from four to eight in a loose head; they are campanulate, with a slightly spreading limb of five rounded lobes, ending in an acute point; the colour is brownish red, the lobes of the limb just tipped with bluish green; in its unexpanded state the corolla is iridescent with blue; the tube of the corolla is striated within. Native of Sikkim-Himalaya, on the mountains of the interior. Flowers in April and May.

Rhododendron cinnabarinum (cinnabar-leaved Rhododendron).—A small shrub with slender tortuous branches, bearing leaves from two to three inches long, of an acutely ovate-lanceolate form, green and glabrous above, and beneath often reddish and dotted with little scales. The flowers are small, funnel-shaped, with five spreading rounded acute lobes; they grow in small compact heads, and are of a cinnabar colour. Native of the “Sub-Himalaya mountains, interior of Sikkim.” Flowers in April and May.

Rhododendron eleagnoides (oleaster-leaved Rhododendron).—A small much-branched shrub, with small obovate-trapezoid leaves, covered with minute silvery leprous scales; these leaves are a quarter of an inch long, plane, leathery. No examples of this curious little species were found in flower. It is a little alpine, growing in the vicinity of the snow; and is “apparently single flowered, and calyculate.” Native of the mountains of Sikkim-Himalaya, at an elevation of from 14,000 to 15,000 feet.

Rhododendron argenteum (silvery Rhododendron).—A fine tree growing thirty feet high, with spreading branched trunks. The leaves are very beautiful in the young state, enveloped at first in pinkish-brown scales, which are so large and closely imbricated as to resemble the cones of some species of pine; at first the leaves are erect and silky; when mature they are very large, six inches to a foot long, obovate-oblong, leathery, green above and silvery-white beneath. The flowers grow in large terminal heads; they are broadly campanulate, two to three inches long, with a limb of five short bilobed segments, spreading, two to two and a half inches in diameter; they are always white, unspotted, very handsome, and only second in size to *R. Dalhousiæ*. Native of Sikkim-Himalaya: summit of Sinchul, Sirradah, and Tonglo, at an elevation of from 8,000 to 10,000 feet. “On Sinchul, the higher parts of the mountain, at from 8,000 to 9,000 feet of elevation, are more or less clothed with it: on Tonglo, as it approaches 10,000 it is suddenly replaced by *R. Falconeri*.”

Rhododendron Falconeri, Hooker fil. (Dr. Falconer’s Rhododendron).—A fine tree growing thirty feet in height, the trunks often two feet in diameter, the branches few and spreading. The young leaves are clothed with velvety down, and when in the bud are concealed by downy glutinous scales. When perfect, they are from eight inches to a foot in length, obovate-elliptic and obtuse, very coriaceous, glossy green above, and beneath, except on the thickly-netted veins, clothed with a dense pale-ferruginous down. The flowers grow in heads of moderate size, but composed of numerous rather small but densely placed flowers, which are white, bell-shaped, with a limb of ten rounded lobes. One of the most striking and distinct of the genus. Native of Sikkim-Himalaya; summit of Tonglo, at an elevation of 10,000 feet. Flowers — ?

A LIST OF STOVE PLANTS,

THAT WILL PRODUCE A SUCCESSION OF BLOOM THROUGHOUT THE
YEAR.

BY A NOBLEMAN'S FLOWER GARDENER.

January.

Centradenia rosea, rose
Rivina humilis, scarlet fruit.
Pitcairnia staminea, scarlet.
Eranthemum nervosum, blue.
Clerodendron fragrans, white.
Begonia incarnata, pink.

February.

Inga pulcherrima, scarlet.
Begonia manicata, rose.
Eranthemum pulchellum, blue.
Vriesia psittacina, yellow.
Passiflora kermesina, crimson.
Euphorbia splendens, scarlet.

March.

Combretum purpureum, purple.
Osbeckia chinensis, rose.
Gardenia Stanleyana, mottled
white.
Franciscea latifolia, blue.
— hydrangeiformis, blue.
Heliconia brasiliensis, yellow.

April.

Ixora rosea, rose.
Hippeastrum aulicum, red.
Gesnera discolor, crimson.
Porphyrocoma lanceolata, purple.
Begonia coccinea, scarlet.
Clerodendron hastatum, pink.

May.

Mussaendra frondosa, yellow.
Gesnera Douglasii, purple spotted.
Isotoma longiflora, white.
Achimenes longiflora, violet.
— grandiflora, rose.
Tabernæmontana coronaria, white.

June.

Gesnera Suttoni, scarlet.
Gloxinia maxima, blue.
Clerodendron infortunatum,
scarlet.
Allamanda cathartica, yellow.
Portlandia grandiflora, white.
Erythrina Crista-galli, scarlet.

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July.

Ixora grandiflora, scarlet.
Gardenia florida, white.
Ruellia longifolia, blue.
Hibiscus Manihot, yellow.
Rondeletia speciosa, deep orange.
Dipladenia crassinoda, rose.

August.

Pentas carnea, bluish.
Chirita zeylanica, violet.
Manettia cordifolia, scarlet.
Ixora crocata, orange.
Murraya exotica, white.
Columnea scandens, scarlet.

September.

Æschynanthus grandiflorus,
scarlet.
Justicia carnea, bluish.
Gesnera elongata, scarlet.
Guzmania tricolor, gr. and scarlet.
Echites stellaris, bluish.
Clerodendron fallax, scarlet.

October.

Passiflora racemosa, scarlet.
Gesnera zebrina, red and yellow.
Aphelandra cristata, scarlet.
Ismene flava, yellow.
Franciscea Hopeana, blue.
Manettia bicolor, red.

November.

Pitcairnia flammea, scarlet.
Begonia semperflorens, white.
Epiphyllum truncatum, crimson.
Physianthus auricomus, yellow.
Pleroma Benthamianum, blue.
Aphelandra aurantiaca, orange.

December.

Goldfussia anisophylla, blue.
Euphorbia fulgens, scarlet.
Aristolochia gigas, brown & buff.
Eranthemum strictum, blue.
Dysophylla stellata, violet.
Ipomœa cymosa, white.

QUICKLIME, QUITE DRY AND FRESH FROM THE KILN, A PREVENTIVE OF DAMP IN PLANT FRAMES.

HAVING had some plants in a hot-bed frame more than a month since that were damping off, I placed lumps of quicklime on pans and in garden-pots among them, and found in a day or two after its use a check of the disease. I may be too sanguine, but from the apparent beneficial result of my trials, an anticipation is entertained by me that the application of quicklime to absorb the damp from plants in pits under cover, will prove a great benefit to horticulturists in many cases where no other means can be applied so readily. The lime will not be deteriorated for other purposes, and supplies of it fresh can be introduced as required. I have not a hygrometer or other instrument to ascertain the absorbing power of lime, but the absence of drip and the revival of the plants were facts to be seen.—*Gardeners' Chronicle*.

RANUNCULUSES.

AT a recent meeting of the Kingsland branch of the Society for Encouraging Floriculture in Great Britain, the subject of Ranunculus culture was discussed in the presence of forty members, many of them highly successful cultivators. All of them agreed the following were essentials to success. Growing in the cleanest and best-seasoned loam, having a layer of well-decomposed dung below it; shading from the heat of the sun when in bloom; keeping the roots liberally supplied with water, and preventing its evaporation during the period of bloom, if possible, by laying tiles between the rows; keeping the earth well stirred at the surface in all the early stages of their growth, and close about the stems; also to take up the tubers as soon as they turn yellow.

PINK BEDS.

LATELY we called, for the first time, upon one of the first-rate Pink-growers, and found that he had suffered the misfortune of the loss of nearly all his stock, which consisted of, he said, thirty thousand plants.

This occurred from an attack of mildew. The garden is about half an acre; the greater part surrounded by buildings and a brick wall of about three yards high, by reason of which the place was kept damp; and having a well whose supply of water was nearly up to the surface of the ground, it tended to increase the dampness of the garden. The Pink beds were formed so as not to be more than two or three inches higher than the general level of the ground. These combined circumstances promoted the mildew, and the loss resulted in consequence.

We mention this occurrence in order to suggest to our readers the necessity in all cases of having a Pink bed upon a dry substratum, either naturally, or one must be formed, and the bed must be raised six inches higher than the general surface around. If there be a pos-

sibility to drain around the bed in wet situations, so as to convey the water away by a drain, it should be done. Good flowers cannot be grown in wet situations; the flowers will be rough and uneven, and the colours will not be pure.

Where Pink beds already exist in damp situations, and not drained at the sides, or raised above the general level around, a deep pathway around should be made, or a drain cut, filled to some height with branches, twigs, &c., and then covered over with soil, stones, gravel, &c., to form the walk. Such provision will benefit the plants in growth and improve the flowers.

PANSIES.

BY JUVENIS.

I AM a beginner in floriculture, and desirous of growing nothing but what is of first-rate character. I therefore respectfully solicit some of the readers of the FLORICULTURAL CABINET to give me a list of twenty-four of the best Pansies.

I am told they should be perfectly even, not serrated at the edges, and the flowers be nearly round, as well as flat on the face. I hope the Pansy growers who read this will spare about five minutes in inspecting their plants in bloom, and marking down the flowers which answer the above description.

[In our report of the Royal South London Show, in our last number, we gave the names of the best exhibited, and beyond that number we could not select what we approve. We hope some of our readers will favour our correspondent with a list of such as he requests. The following have been generally considered of first-rate character, and suitable for every grower:—Hall's Rainbow, Hooper's Berryer, Youell's Supreme, Thomson's Duchess of Rutland, Thomson's Constellation, Cook's White Serjeant, Bell's Duke of Norfolk, Bell's Climax, Major's Milton, Turner's Optimus, Brown's Arethusa, Thomson's Zabdi, Hare's Superb, Thomson's Candidate, Mrs. Beck, Hooper's Blooming Girl, Chater's Model of Perfection, and Gosset's Lord Hardinge.]

ON THE ACHIMENES.

BY A NOBLEMAN'S FLOWER GARDENER.

THIS is one of the most interesting and loveliest tribe of plants which ornament our stoves, greenhouses, conservatories, and sitting-rooms, and is universally admired. At the present time there are twenty-five species and varieties existing of nearly every colour. By proper management, some of the kinds may be had in bloom at every season of the year. *Achimenes picta* proves to be one of the finest winter ornaments. The entire tribe being especial favourites of mine, I have paid particular attention to their cultivation, and produced specimens in bloom more than double the size I have seen at any of the floral

exhibitions in or around London, or the country either. The following is the course of treatment I have pursued:—

In the beginning of February I 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. I then fill the pots up with a compost of peat soil, light loam, and leaf soil, and give the whole a gentle watering. I then place the pots in a fruiting pine-stove or hotbed frame, the temperature of which is kept from 70° to 85° of heat. I 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, I turn the bulbs out of their pots, and carefully break them till I can divide the young shoots. I 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. I grow the plants in a moist heat and in a slight shade, occasionally sprinkling them with a syringe or the fine rose of a watering-pan. As they advance in growth and fill their pots with roots, I frequently repot them into pots a size larger till I 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 I give them pots two sizes larger, and I add one-fourth of well-decomposed hotbed manure, using the other part of the compost more turfy and open. I am 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. I 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, I place them, some in a cooler stove and others in the greenhouse, being careful that they enjoy as much light as possible, which I find materially enhances the brilliancy of their scarlet flowers, and adds much to their general lustre.

After they have done flowering I gradually withhold water, but do not cut their stems away till they have entirely died down. I keep the dormant roots in the pots, on a shelf in the greenhouse, without any water, till they are again wanted to vegetate.

COMBRETUMS.

THESE splendid flowering climbers have generally been neglected, in consequence of a supposition that they could not be properly grown and bloomed but when planted in the border of a warm conservatory or hot-house. Recent facts, however, prove that they may be grown in pots to a high degree of perfection, and an instance in confirmation is inserted in *Paxton's Magazine of Botany, &c.*, for last February.

The following instance shows a practical application of the theory propounded in the foregoing remarks. Amongst a miscellaneous collection of hothouse plants, the potting and superintendence of which was under the writer's charge in July, 1847, was a strong plant, tolerably well branched, of *Combretum purpureum*, in a half dormant state, within a pot of eleven inches in width. It was freely divested of its exhausted soil, preserving with care the straggling main roots, and small amount of young fibres, and thus re-potted with the sole intention of re-accumulating an amount of vigour equal, if possible, to the mean strength of its stems, by placing it within a pot of fourteen inches diameter, having about two inches of progressively coarse bottom drainage, over which was placed a distinct and heavy strata or layer of knobby portions of dried peat, well pressed, and using nearly equal parts of friable, sandy, turfy loam, and well-decayed turfy heath-mould.

The plant was then placed upon the surface of a newly made vinery tan-pit for a few weeks, until symptoms of vigorous growth appeared, when it was half-plunged in the same position, and, as it progressed, it was three-quarters plunged, with an inverted dish placed beneath the pot. The temperature of the house was, in a great degree, maintained to suit the plants within it, varying from 65° to 80° by day, and 50° to 60° by night. The most material points of management were, with regard to ventilation, as early an admission of air as the external atmosphere would permit, thereby admitting of an early removal, and closing with a high, moist, genial temperature. With this treatment, the growth became remarkably vigorous, respectively from twelve to eighteen inches in length, while, as it attained maturity, the pot was gradually re-lifted to the surface, and the plant remained in the same house throughout the autumn and following winter, under a temperature of 50° to 60° , which appeared just sufficient to enable it to retain its foliage until the summer of 1848; when the matured growth of the previous summer and autumn, on being exposed to a genial stove-heat, expanded from its elongated axillary leaf-buds, fine large splendid racemes of bloom, one of which was nearly two feet long and eighteen inches wide; and, after remaining an object of extreme beauty for some time, it formed in July one of the large premium-collection of plants at the great Horticultural Exhibition in York.

The interest and merits of this species is too generally well known to need any further eulogium upon its attractive features, and as it so seldom appears amongst the competition groups at the great metropolitan fêtes, for the reasons previously given, the evidence now offered proves that where size and vigour of growth is present, aided by a temperature equal to what its natural habit demands, it may, by suitable management, appear as one of the most beautiful and gorgeous objects yet introduced. One motive alone remains to test its capabilities. Were special premiums offered for the finest productions, it would ere long be placed in the very highest rank of splendid flowering exotic shrubs. The plant above referred to was trained upon a flat fan-shaped wooden trellis, about two and a half feet in height.

CLEMATIS AZUREA GRANDIFLORA.

BY G. B. N.

I AM desirous to increase this plant, what method am I to pursue?

[When the young shoots are about six inches long, cut them at their origin, insert them in equal parts of silver sand and yellowish loam, cover with a bell-glass, and place them in a hot-bed frame, where the heat is of a gentle temperature. The inside of the glass must be wiped in the morning, at the early stage of putting in the cuttings, so as to prevent them damping off. They root readily. Or when the new shoots are about half ripened, layer them as is done to carnations, cutting up to a joint; in this way they increase freely. Also graft them into the stock of a common white Sweet-scented Clematis flammula, or any other free-growing kind, either by cleft or tongue grafting, and they succeed well by that method. They also increase readily by inarching upon other kinds.]

ON ROSE-PLANTING ON LAWNS.

BY RHODOPHILOS.

I OBSERVE that the method of planting and grouping Roses on lawns varies in almost every pleasure garden that one sees; one person delighting in placing tall naked standards on the turf without order or arrangement, merely as if they had tumbled from the skies, and were planted where they fell; others rejoicing in formal lines of standards of exactly one height, and directed to every point of the compass; these grouping tall standards, of every shade and colour, in large beds; and again those preferring to see alternate rows of standards, tall and dwarf, meandering about their parterres. To none of these methods does my taste incline. Every one knows that "doctors differ;" and several persons of undoubted taste in gardening have expressed opinions adverse to mine, but I still think it worth while to record my aversion to the general methods of planting Roses on lawns; indeed, I may say that I never yet saw a garden in which standards were grouped on lawns tastefully, to my fancy. I regret that I cannot offer a plan which will embrace it according to taste; the whole system is bad. Devote a portion (let it be as large or small as you please) of your garden to Roses, and let nothing interfere with them; and avoid by all means the placing of standards on your turf: the naked stems with bushy heads have an effect the reverse of picturesque. Standard Roses, work them and train them as you will, must of necessity be formal objects; it is needless, therefore, to add to the formality by placing them in regular rows. It may suit the old Dutch and French gardens to place them in lines, with their mop heads distinct and outlines unvaried; everything in these gardens is in character with them; but very different is the aim of the English gardener. His object is truly to "hold as 'twere the mirror up to nature," and to copy her faultless forms and varied hues. Our object is to hide, and destroy, if it be possible, all attempts at rigid formality; and I cannot say that I ever saw the planting of standards on a lawn, where any quantity was

placed, without either degenerating into absolute formality, or, what is still worse, descending to unmeaning confusion. In my last letter, a fortnight ago, I endeavoured to describe my method of hiding the stems in my rosarium, whether successfully or not I leave to the reader; and this is my great objection, among others, to the practice now so universal. I do not mean by this to exclude Roses from the parterre—far from it; few things look more handsome than a well-cultivated pillar rose on turf (but formality in this must be avoided as much as possible), and especially if a vigorous-growing Rose of a distinct colour, either very dark or very light, when backed by dark foliage of trees; and a very handsome thing is a well-planted bed of very dwarf-worked Roses in full flower, of rich scarlet colour. But even this had better be in the rosarium, for the Roses themselves are shown much more to advantage, and they never seem to accord with other things. Another point in which I think I differ from most Rose-growers is in the time of pruning, my practice being to prune most Roses late in the autumn, and but very few in the spring. I cannot, for want of space, particularize those which are best pruned in the spring; but the person who wishes to commence growing the queen of flowers as she ought to be grown may take for a sure guide this, that all forward, early, and vigorous growers should be pruned as soon as convenient after the leaf has fallen; and the least vigorous and dwarfest should be left until the early spring: this, however, should not be delayed too long. Another objection to the planting of standards on lawns is this—that they seldom admit of the compost being put round their roots in the winter time, when it is so much required. Gentlemen who love a neat garden do not like to see their grass cut about and besmeared with dirt, which it is impossible to prevent in attending to the roots of the roses through the winter. One instance does occur to me, in which I saw short standards introduced to great advantage. A semicircular gravel-walk was backed by a fine bank of evergreens. On the inner side of the walk was a broad border of various kinds of flowers; the inner edge was cut into angles of grass, and at the centre of the grass angle a Rose was planted.—*Gardeners' Journal*.

AMMONIA SUPPLIED TO PLANTS.

MR. GORDON, who superintends the management of the collection of orchideous plants in the garden of the Horticultural Society at Chiswick, having supplied ammonia to them very advantageously, the following remarks are inserted in the *Gardeners' Chronicle* upon the subject:—

“The whole collection exhibited the best possible health, the foliage being of the deepest green. The latter, indeed, was remarkable, a circumstance which Mr. Gordon ascribes to his supplying ammonia occasionally to the atmosphere of the house. Having first wetted a bit of pure carbonate of ammonia, about the size of a bean, he rubs it on the hot-water pipes, waves his hand backwards and forwards once or twice, to disperse the fumes, and the work is done. Besides adding to

their green colour, he is of opinion that this important manuring principle otherwise acts beneficially on the plants. It must, however, be used with caution, or it may do more harm than good. Mr. Gordon applies it in the evening, just before the house is steamed."

HOOKER'S JOURNAL OF BOTANY.

IN the Number for May there is a continuation of "Extracts from the Private Letters of Dr. J. Hooker," and from which we transcribe the following:—

"*March* 4.—Started for Mr. Felle's Bungalow, at Shahgungh. The *Acacia Arabica* is common here, and I believe rare to the eastward of this meridian, for I saw little of it in Behar. It is a plant very partial to a dry climate, and indifferent in a great measure to the soil. Its distribution seems governed by the same laws as affect the camel, its constant companion over some thousands of leagues of longitude. Neither of them flourishes east of the Soane river (to the south of the Himalaya, at least), below the mouth of which, on descending the Ganges, a marked change in the humidity of the atmosphere is experienced. Mango, which is certainly *the* fruit of India, as the pineapple is of the Eastern Islands and the orange of the west, is now blossoming, and a superb sight it is. The young leaves are purplish green, and form a curious contrast to the deep lurid hue of the older foliage, especially when the tree is (which often occurs) dimidiate, one-half the blue and the other the red series of colours; when in full blossom all forms a mass of yellow, diffusing a fragrance rather too strong and peculiar to be pleasant.

"Mr. Felle's house occupies a hill on the plain, and is in fact built upon the site of an old fort, still surrounded on three sides by a moat. A neat garden, adorned with Mignonette, Sweet Peas, and Roses, was a pleasant sight in the wilderness, though not so attractive to me as the water plants which filled the moat. In this, which is half supplied by spring water, grew the *Nymphæa Lotus Damasonium indicum*, three species of *Potamogeton* (one is *P. natans?*), *Aponogeton*, *Vilarsia cristata* (the flowers small, and not crested), *Chara Zannichellia*, and two species of *Naias*. These three tufted aquatic genera are used indifferently or together in the refinement of sugar by the natives."

Under the head "Botanical Information" is an interesting paper, being the notes by Mr. B. Seamann of the voyage made in H.M.S. "Herald," which proceeded last year to Kamtschatka, in order to effect the discovery and rescue of Sir John Franklin:—

"Great was my surprise, when first I beheld the vegetation of Awatscha Bay, to find, instead of naked hills and sterile plains, as I had anticipated, a luxuriant herbage, reaching as high as to the line of perpetual snow of the numerous volcanoes, a brilliant green presented itself, for it was August, the height of summer. Nearly everything was in flower, and beautiful it was to see the roadside covered with blue *Geraniums*, Kamtschatka *Roses*, and *Lilies*, intermixed with *Pedicularis* and the white blossoms of *Spiræas* and *Actæas*. Only two

kinds of trees are found, viz., *Pinus cembra* and *Alnus incana*; for the *Pyrus rosæfolia*, called by Chamisso a tree, cannot rank as such, as it never grows higher than eight or ten feet. The *Alnus* is the most common. The whole town of Petropaulowski is built of its wood; it also furnishes the principal fuel of that place. Of its bark the Kamtschadales manufacture vessels for holding fluids, called here, as over all Siberia, *Tujes* (one of which I transmit for the Museum). Bread made of the bark of the same tree is not used at Petropaulowski, but is still eaten by the natives of the interior."

A paper of a similar character is given by Dr. T. Thompson, being notes of a scientific mission to Thibet. The following melancholy detail of Dr. Gardner's untimely end, communicated in a letter to Sir William Hooker by Lord Torrington, governor of Ceylon, will be read with deep regret:—

"My dear Sir William,—It is with very great pain and distress that I take up my pen to address you; but knowing the interest and friendship you had for Dr. Gardner, and being unacquainted at this moment with his family in Scotland, I relate to you my melancholy tale, trusting to your kindness to make it known to those it must so deeply interest. Poor Gardner arrived here yesterday at three o'clock in high health and spirits, and was going on an excursion with me to the Horton Plains. Never did he seem so well, and never more cheerful or agreeable; so much so, that when some of us went out to ride at four o'clock we remarked it. He took some luncheon, and he said he should go to his room and rest after his journey.

"We had not ridden two miles, when an express was sent to us to say he was taken severely ill. Dr. Fleming (the ablest physician in the island) was with me at the time, when we immediately returned, and found him lying in a fit of apoplexy. Every possible means that science and skill could invent were employed; but nothing proved of any avail. He breathed his last at eleven o'clock last night (March 10) in my presence, and, I can truly say, surrounded by as many sorrowing hearts as if his own relations had been here. It appears from the account of the Rest-housekeeper that, hearing him scream in his room, and exclaim, 'I am going to die!' he rushed in, when poor Gardner fell into his arms, and said, 'Fleming—bleed!' He must have been in the act of taking off his boots. He is to be buried this evening at six o'clock, and everybody will attend to pay the last mark of respect to our lost friend."

ON THE CULTIVATION OF THE GLADIOLUS CARDINALIS.

BY MR. ANDREW MACKENZIE, GARDENER AT BLAIR-ADAM.

PERHAPS this plant has been brought to greater perfection at Blair-Adam than in any part of Britain, for in a bed of a few square yards I have had no fewer than five hundred trusses of these superb scarlet flowers all in bloom at one time. When the late Mr. London, with his lady and daughter, paid me a visit in the beginning of August, 1841, the bed was then in full show; and he was amazed to see the

Cardinal Lily growing in such luxuriance, and said he had never seen anything like it in all his travels, either in this or in any other country ; and in a work lately published by Mrs. Loudon she says, " 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." As I have, therefore, been fortunate in the cultivation of this flower, and am desirous that it should be more extensively cultivated in this country, I beg to lay before the Caledonian Horticultural Society the result of some experiments and observations made during the last nine years.

It is generally recommended, in our horticultural and floricultural periodicals, " that when the leaves have died away, the roots be taken up for the winter, and also divided." But the mode which I adopt is as follows:—About the beginning of October, when it is wished to propagate them, I take from well-established plants a ball or cluster of corms, perhaps about a foot in circumference ; I plant these balls in beds two feet wide, preferring a somewhat shaded situation, placing the clusters one foot apart and three or four inches deep, with a little sand round each mass of bulbs. In the course of two or three years the beds are found to be wholly filled with the plants. I have frequently planted them in the above manner, and they have stood, year after year, without any protection whatever, even in our most severe winters. It is advisable, however, during the first winter after planting, or when the earth is loosened about the plants, to cover the beds two or three inches deep with leaf-mould or half-decomposed leaves.

When the cluster of bulbs attains to the size of a foot in diameter, it is proper to lift and divide it into three or four portions ; for when the balls or masses are too large, the bulbs degenerate in size, and consequently the flowers become smaller.

By way of experiment, I divided a large ball of corms, and planted them out singly into a bed in the open air, when only two flowers made their appearance the first season, and in the course of the following year they had all died away. I believe many cultivators have experienced a similar disappointment. In order to the formation of a permanent bed, I would, therefore, recommend that roots of different sizes be at first grown in pots, five or six in each pot, and protected during winter in a cold pit or frame, or under the stage of a greenhouse, for a year or two, until they swell into a cluster. When the clusters have attained a sufficient size they may be planted out with safety, and will be able to withstand the winter, as already mentioned.

This *Gladiolus* may be forced for supplying the greenhouse or conservatory, in the beginning of summer, with its lovely flowers. In the month of October I take eight or twelve sized pots, and fill them with as large a cluster of the strongest plants as the pots will admit, and protect them till they are required for forcing. I thus will have from six to twelve trusses of flowers in each pot. Last season, in a box one foot square, there were no fewer than twenty-three trusses growing.

The *Gladiolus* is easily propagated from seed. It may be sown about the middle or end of September, as soon as ripe, or early in the

following spring, either on a slight hot-bed, or in the open air in pans or boxes, in a light sandy soil. The seed should be covered about a quarter of an inch deep; and the seedlings protected during winter as above recommended. The second year after sowing they may be pricked out into pots, one inch apart; or they may be separated into small balls, and these balls may be allowed to remain in pots until they are large enough for planting out. In about three or four years from the time of sowing, the plants may be expected to flower, when they will amply repay all the care and attention which have been bestowed upon them.

P.S. Since sending the preceding communication to the Society, I have found, in Mrs. Loudon's "Gardening for Ladies," an extract from a work by the late Hon. and Rev. William Herbert on the Amaryllidaceæ, in which that eminent person recommends the growing of the *Gladiolus*, and similar bulbs, in tufts. He observes, "They succeed best when grown into a thick tuft, in which state the profusion of blossom is admirable; the cluster of bulbs, and the old skins of the decayed bulbs, permitting the wet to drain away, and preventing the earth from lying too close and heavy on the bulbs in autumn and winter."

FLORAL EXHIBITIONS.

HORTICULTURAL SOCIETY ROOMS.

FROM the garden of Mrs. Lawrence, of Ealing Park, came a nice collection of stove and greenhouse plants, consisting of *Chorozema Lawrenceanum*, *Henfreyia scandens*, *Erica triumphans*, a somewhat scarce Rosemary-leaved sort, with flowers resembling those of *physodes*, but larger; fine plants of *Begonia nitida* and *coccinea*; well-cultivated bushes of *Boronia pinnata* and *B. serrulata*, *Æschyanthus pulcher*, *Cyrtoceras reflexum*, *Pimelia spectabilis*, &c. A Knightian medal was awarded for these.

A collection of greenhouse plants was exhibited by Mr. Rivers, gardener to R. W. Eyles, Esq. Besides seven finely-flowered Azaleas, this group contained *Weigela rosea*, which is found to force well; two *Corræas*, *Indigofera australis*, *Tropæolum tricolorum*, and the pretty *Zichya inophylly*. A Banksian medal was awarded for these.

A similar award was also made to Mr. Bunney, of Stratford, for a handsome brown and yellow-flowered *Oncidium*, apparently new to gardens.

Mr. Iveson, gardener to the Duchess Dowager of Northumberland, at Syon, sent a *Gaultheria* from Santa Martha, distinct from but resembling *Gaultheria Shallon*; a hardy hybrid *Rhododendron*, with large compact heads of handsome white flowers; *Salvia gesneriflora*, a brilliant scarlet-flowered Sage, very different to the old *S. cardinalis*; a flower of the Sierra Leone *Gardenia malleifera*; and ripe pods of the *Vanilla* (*V. planifolia*), which is found to produce excellent fruit, provided the flowers are set. It was mentioned that this latter operation was necessary; for, owing to the peculiar structure of the flower,

fertilization cannot take place without artificial assistance. A Banksian medal was awarded for the Vanilla fruit and the Rhododendron.

Messrs. Henderson, of Pine-apple-place, received a Banksian medal for an interesting collection of Hyacinths. Of *blues*, it comprised Emicus, Prince Van Saxe Weimar, L'Ami Cœur, Vulcan, Richard Cœur de Lion, Le plus Noir, Graaf Van Nassau, Tubal Cain, Charles Dickens, William the First. *Pale blue, with light tubes*, Laurens Koster, Grande Vidette (one of the best), A-la-mode, Orondates, Passe tout, Prince Frederic. *White*, La Candeur, Madame Talleyrand, Virgo, States General, Helene, Victoria Regina. *Red*, Van Speyke, L'Eclair, Appellius, Panorama, La Dame du Lac, Talma, Lord Wellington, Waterloo, Norma. *Black, or nearly so*, Prince Albert. *Plum-coloured*, L'Unique, a desirable variety, on account of its colour, which is new to Hyacinths.

Messrs. Veitch, of Exeter, sent *Camellia Storyi*, a red variety in the way of *imbricata*; the hardy yellow-flowered Violet, from Patagonia; and a blush-coloured *Dendrobium*, with a yellow blotch in the lip, from Moulmein, for which a certificate of merit was awarded.

A similar award was also made to Messrs. Fairbairn, of Clapham, for a beautifully-grown plant of the late Mr. M'Nab's variety of *Erica aristata major*.

Mr. Fortune's *Azalea obtusa*, which certainly proves to be a distinct species, was exhibited by Mr. Henderson, of St. John's Wood, who also contributed collections of named and seedling *Cinerarias*.

A *Cineraria* named *Mazeppa* was shown by Mr. Gaines, of Battersea; and Mr. Kendall, of Stoke Newington, also sent a seedling named *Sanspareil*, white, broadly margined with sky-blue.

From the garden of the Society, amongst other plants, we noticed *Orchis spectabilis*, a pretty dwarf-growing lilac and white flowered species, which is hardy, or nearly so; and a very dwarf compact white-flowered *Azalea* from the north of China, differing from the common white Chinese *Azalea* not only in having but five stamens instead of ten, but also in other particulars. It is apparently a profuse flowerer, and will prove an acquisition.

HORTICULTURAL SOCIETY.

Exhibition held at the Garden on May 5th.—The plants appeared to be more superb than we recollect to have seen on any former occasion, both in health, form, and bloom.* The rain falling in such torrents, prevented us taking down the particulars of many of the plants. We however had the opportunity afforded at the Regent's Park Garden, and as we give them our readers may form an idea of the exquisite specimens shown, for nearly all the plants which were at the Royal Botanic show, had been exhibited at Chiswick.

POT ROSES.—Never, perhaps, has there been a more unpropitious season for bringing forward the "Queen of Flowers" in perfection than the present, and never, even in the best of years, have we seen the task better accomplished. The exhibition of Messrs. Paul and Lane were perfect of their kind. The leaves were of the healthiest

green, and there was a freshness about the flowers which was quite delightful. Messrs. Paul obtained the gold medal, with admirably-grown specimens, trained according to the plan laid down in "The Rose Garden." The tallest shoot was brought to the centre of the plant, and around this the others were disposed, gradually decreasing in height as they receded from the centre, till the lowest branches were fixed horizontally, the plants being alike on all sides. We give the heights and widths, the latter measured at the base, of the varieties forming this collection:—*Hybrid Perpetual*.—Madame Laffay, a splendid bush, 3 feet high and 4 feet wide; Auberon, $2\frac{1}{2}$ feet high and 4 feet wide; Mrs. Elliott, $1\frac{1}{2}$ feet high and 4 feet wide; William Jesse, $1\frac{1}{2}$ feet high and 3 feet wide. *Bourbon*.—Amosa, 3 feet high and $3\frac{1}{2}$ feet wide; Ceres, $1\frac{1}{2}$ feet high and 2 feet wide; Mrs. Bosanquet, $2\frac{1}{2}$ feet high and 4 feet wide. *China*.—Madame Lacharme, 2 feet high and 2 feet wide. *Tea-scented*.—Madame de St. Joseph, very fine, 2 feet high and 3 feet wide; Niphetos, $2\frac{1}{2}$ feet high and 3 feet wide; Safrano, 3 feet high and 2 feet wide; Comte de Paris, $1\frac{1}{2}$ feet high and 2 feet wide. Mr. Lane's plants were—*Hybrid Perpetual*.—Baronne Prevost, blush; Comtesse Duchatel, rosy pink; Duchess of Sutherland, blush; Edward Jesse, lilac crimson; Lady Alice Peel, rosy crimson; Louis Bonaparte, rose; Robin Hood, pinkish lilac; William Jesse, crimson; Duc de Chartres, shaded crimson. *Bourbon*.—Amosa, rosy blush. *Rubifolia*.—Baltimore Belle, white, and the Yellow Banksian. The latter was finely grown and beautifully flowered. Mr. Francis, of Hertford, showed a third and good collection, consisting of—*Hybrid Perpetual*.—Auberon, La Reine, Baronne Prevost, Duchess of Sutherland. *Bourbon*.—Souvenir de la Malmaison, Amosa, Reine des Vierges. *Hybrid Bourbon*.—Charles Duval, Paul Perras. *Tea*.—Elise Sauvage, Comte de Paris. *China*.—Eugene Hardy. Among private growers the competition lay between Mr. Slowe and A. Rowland, Esq., of Lewisham. In Mr. Slowe's group, to which the first prize was awarded, we remarked Bouquet de Flore, Bougère, Hymene, Elise Sauvage, Triumphant, Belle Emile, Safrano, Caroline, Mrs. Bosanquet, Archduke Charles, and Pactolus. From Mr. Rowland came Dauphin, Amosa, Safrano, Augustine, Mouchelet, Devoniensis, Madame Laffay, William Jesse, Mrs. Bosanquet, and Baronne Prevost. Mr. Noble, of Bagshot, sent a specimen of Mr. Fortune's Yellow China Rose. It resembles Jaune Desprez, but is more coppery in colour.

A SEEDLING PELARGONIUM EXHIBITION

Took place on June 15, at Upton Park, near Slough, open to all, when the following prizes were awarded:—

1st prize, five pounds, Mr. Black, gardener to E. Foster, Esq., Clewer Manor, Windsor, for *Gipsy's Bride*; a very perfect formed flower, upper petals rich crimson maroon, surrounded with a narrow belt of carmine; lower petals bright deep pink, lighter to the centre of the flower; stout in substance and remarkably even, of medium size; footstalks firm, elevating the truss just sufficiently high to clear

the surrounding foliage. This is the best flower of the season that we have seen, deficient only in the size of its blooms. We have had a drawing of it prepared, which we purpose to have copied for one of our embellishments.

2nd prize, three pounds ten shillings, Major Foquett, of the Isle of Wight, for *Magnificent*; rich rosy vermillion, fading to the centre of the flower; the upper petals blotched with dark velvety maroon. Smooth and firm in texture, preserving its evenness to the last. Good size and apparently of excellent habit.

3rd prize, two pounds ten shillings, Messrs. Veitch and Son, Exeter, for *Field Marshal (Symonds)*; bright red, with a dark feathery blotch in the upper petals. A showy flower, but a little rough.

4th prize, one pound ten shillings, Mr. E. Beck, Isleworth, for *Aurora's Beam*; lower petals bright lake, with white in the centre of the flower; upper petals dark crimson maroon, belted with crimson-lake. Of general good form, but inconstant in its colouring, and seemingly not a good grower.

The manner in which the merits of the above flowers was determined may be mentioned on account of its peculiarity. The schedule specified the following regulations:—

“A person unacquainted with Pelargoniums will receive them from the exhibitors at the door of the exhibition-tent, and will place in each pot a numbered label, and arrange them on the stage.

“When all the plants are arranged, the exhibitors alone will be allowed to enter, and each will be supplied with a plain card. Free examination of their merits will then take place; and after a sufficient time has elapsed, and the exhibitors have declared their readiness to go to the ballot, they will each write upon the blank card the numbers of the plants which they consider should have the first, second, third, and fourth prizes, adding their signatures at the bottom. On leaving the tent these cards will be received in a box prepared for the purpose, and two persons shall then be selected to examine the cards and declare the numbers of the winning flowers.”

Without disputing the correctness of the decisions as to the merits of the flowers in the present case, and there could be none as to the first and second awards, it is obvious that such a system of deciding the true merits of a flower, can never be satisfactory.

ON CINERARIAS.

BY FLORA.

RIPE seed may now be obtained from the early blooming plants. If this be sown immediately in pots, placed in moist peat (in a hot bed frame) the plants will soon be up. As soon as fit to be potted off, put them singly into pots. As soon as the flower-stem appears (not previously) an inch or so high, then re-pot them into the usual sized blooming pots, in a rich compost. Properly treated, such plants will begin to bloom in autumn, and a fine succession of bloom may be had through the winter season.

ROYAL BOTANIC SOCIETY, LONDON.*

(Continued from our last.)

IN the class of thirty STOVE AND GREENHOUSE PLANTS there were four competitors, viz., Mr. May (1st), gardener to Mrs. Lawrence, Ealing Park; Mr. Cole (2nd), gardener to H. Collyer, Esq., Dartford; Mr. Pamplin (3rd), Walthamstow. Mr. May's plants, as will be seen by the following table, were of larger growth than those of Mr. Cole; but the latter were objects of very superior culture. The following table* will be found to be a more easy mode of conveying a correct idea of the comparative merits of the several collections than any other mode of description. The figures indicating the comparative height and width of the plants, and the asterisk is prefixed to such as were superlatively well grown and flowered:

	May.	Cole.	Pamplin.
	Feet.	Feet.	Feet.
<i>Aphelaxis humilis</i>	—	3 by 2	—
<i>purpurea macranthe.</i>	*3 by 2½	3 2½	—
<i>purpurea macranthe.</i>	—	2 1	—
<i>Azalea indica rubra pleno</i> . . .	4 3	—	—
<i>conqueror</i>	—	2 2	—
<i>refulgens</i>	—	4 2½	—
<i>variegata</i>	—	2½ 2	*2½ by 2½
<i>alba</i>	—	—	4 4
<i>Broughtoni</i>	—	—	3 3
<i>Woodsii</i>	—	—	*3½ 3½
<i>Boronia serrulata</i>	*2½ 2	3 2½	3 3
<i>pinnata</i>	*4 3½	3 1½	2 1½
<i>Bossiaea disticha</i>	*3 3	—	—
<i>Chorozema Henchmannii</i> . . .	3½ 2½	3 2	2½ 2½
<i>Lawrenceana</i>	*3 3	—	—
<i>varium nana</i>	—	3 2	—
<i>Clerodendron Kæmpferii</i> . . .	—	4½ 3	—
<i>Dipladenia crasinoda</i> (trellis) .	4½	—	—
<i>Erica persoluta alba</i>	*3½ 3	—	—
<i>intermedia</i>	4 3	—	4 3
<i>perspicua nana</i>	2 1½	—	—
<i>elegans</i>	—	1 1½	—
<i>Cavendishiana</i>	—	3 2	—
<i>depressa</i>	—	*2½ 2½	—
<i>ventricosa coccinea minor</i>	—	*3 3½	—
<i>stricta</i>	—	—	*3 2½
<i>vestita carnea</i>	—	—	*4 3½
<i>Epacris grandiflora</i>	*5 4	—	*3 2½

* Taken from the *Gardeners' Journal*.

	May.		Cole.		Pamplin.	
	Feet.		Feet.		Feet.	
Eriostemon buxifolium . . .	—		—		*4	2½
cuspidatum . . .	5	2½	—		—	
myoporoides . . .	2½	2	—		—	
neriifolium . . .	2½	2	—		—	
Euphorbia splendens . . .	—		—		5	2
Franciscea augusta . . .	*4½	2½	—		—	
Gompholobium polymorphum .	*2	1	*2½	2½	—	
barbigerum . . .	2½	2	—		—	
Genista racemosa . . .	—		—		5	3
Hovea Celsii . . .	*3	1½	—		—	
Ixora coccinea . . .	—		*4½	2½	—	
crocata . . .	—		*3	2½	—	
Leschenaultia formosa . . .	2½	2	—		—	
Baxteri major . . .	2	2	—		—	
Pimelea spectabilis . . .	*3½	3½	*3	4	—	
lanata . . .	—		—		*3½	2½
decussata . . .	—		3	2	2½	2½
Hendersonii . . .	—		—		1	1
diosmæfolia . . .	3½	3½	—		—	
linifolia . . .	—		2	2	—	
Polygala oppositifolia . . .	—		3	2	3½	2½
dalmaisiana . . .	3	2½	—		—	
acuminata . . .	*4½	4½	—		—	
Stephanotis floribunda (trellis) .	—		—		4	1½
Tetratea verticillata . . .	—		*3½	2½	—	
Tremandra verticillata . . .	—		—		2½	2
Vinca rosea . . .	—		—		2½	2½
Zichya villosa (trellis) . . .	—		—		4½	2

TROPÆOLUM TRICOLORUM.

BY A PRACTITIONER AND LONDON EXHIBITOR.

It is very pleasing to notice that this most lovely-flowering plant is now grown in a far more luxuriant condition than it was four or five years back. The fine vigorous specimens shown at the London Exhibitions confirm this fact. This has been brought about principally by the following means: the plant has been considered very remarkable for its *very slender, weakly stems*, and in proportion to the vigour was the size and quantity of flowers. This being ascertained, attempts were made to induce the stems to grow stronger and larger, by increasing the size and strength of the bulb. This has been effected as follows: instead of placing the bulbs, as usual, an inch or more within the soil, they are now placed so that the surface of each is bare, fully exposed to the light. By this means the bulbs swell and increase in an astonishing manner. During this rapid extension of the bulb, the plant does

not bloom so freely, probably arising from the bulb being so much exposed, yet it prepares it for future years' abundant vigorous bloom. The bulb being thus improved in size contains more nutriment, has more roots, and the consequence is luxuriant stems and larger flowers. When the bulb is the size desired, then at each following planting, it is placed about an inch beneath the surface of the soil, and the plant blooms in vast profusion, if it has the usual proper treatment. This kind of attention to obtain larger bulbs is equally beneficial with *T. azureum*, and *T. brachyceras*.

These plants, it is well known, do not require to be planted in large pots, as their roots are delicate, not numerous either, nor do they push far from the bulb. If they are not grown in larger sized pots than they absolutely appear to require, the heat of the sun penetrates the pots to such a degree, as to cause the foliage to turn yellow, and sickly. The following method, however, is adopted, which provides for the desired medium.—It is effected by placing the pots containing the plants in others of a larger size, and filling up the space between the two with river-sand, which is kept constantly watered, and it imparts a coolness and moisture to the soil in which the plant is growing that renders the application of water at the surface much less necessary. Moss between the two pots kept moist, has also been found to answer equally well.

MR. GROOM'S TULIP SHOW.

THE private view of the annual show of Tulips at the grounds of the celebrated floriculturist, Mr. Groom, at Clapham, was attended by a more than usual number of the nobility and gentry, florists, amateurs, &c. Amongst them were the Duchess of Marlborough, Lady Langdale and party, Madame Bunsen and party, Earl Minto and party, Viscount Hawarden and party, Viscount Falkland and party, Viscountess Gage and party, Lord Lilford and party, Lord Manners and party, Lord Monteagle and party, Miss Coutts Burdett, Lord Northwick and party, Lord Crewe, Viscount Templetown, Bishop of Oxford and family, Lady Grenville and party, Dowager Lady Wharncliffe, &c. The appearance of the flowers, about 2,000 in the best bed, under cover, showed what art could do to counteract the ungenial spring and the cutting influence of an easterly wind. They were of extraordinary splendour, and amongst them were some specimens of the most exquisite beauty. The following are the finest we saw, and are what Mr. Groom deems his most superior flowers:—

CHERRY AND ROSE, having white grounds, broken with various shades of these colours. Where the letter B. is affixed, that flower is sometimes flamed, and at other times feathered; FI. denotes flamed flowers, and F. feathered.

Aglaia, B.; Bacchus No. 1, FI.; Catalani, FI.; Countess of Wilton (Groom's), FI.; Duchess of Sutherland (Groom's), B.; Duchess of St. Albans, F.; Julia, F.; King of Saxony, FI.; Lady Crewe, F.; Lady Douro, F.; Lady Peel (Groom's), FI.; Princess Sophia of Gloucester, F.; Rose cerise blanche, F.

BYBLEMENS, having white grounds broken with various shades of purple:—

Addison, F.; Ambassadeur d'Hollande, F.; Captain Cook, F.; Claude, Fl.; David, Fl.; Duke of Buccleuch (Groom's), F.; Imperatrix florum, F.; Lewald, F.; Louis the Sixteenth, B.; Lady John Russell, F.; Michael Angelo, Fl.; Mentor, or Reine de Sheba, F.; Pandora, Fl.; Roi de Siam, Fl.; Victoria Regina (Groom's), B.; Violet Alexander, F.

BIZARDS, yellow grounds with different shades of maroon, &c. Catafalque (Dutch), F.; Commodore Napier, Fl.; Duke of Cambridge, B.; Duke of Devonshire, F.; Duke of Norfolk (Groom's), B.; Duke of Sutherland, Fl.; Earl of Lincoln, Fl.; Emperor of Austria, B.; Everard, Fl.; Fabius, F.; Garrick, Fl.; Marshal Sault, B.; Nourri Effendi, Fl.; Optimus, F.; Platoff, F.; Polyphemus, B.; Prince of Wales, Fl.; Pompe Fenebre, Fl.; Prince of the Netherlands, Fl.; William the Fourth, Fl.

Mr. Groom has forced the *Lilium lancifolium punctatum*, the first flower opening on May 20th. The plants were not drawn, but of stiff robust growth. Thus by due attention this charming tribe may be had in perfection from May to September, and will amply repay for it. Mr. Groom has a great number of this class of Lilies growing in the open ground, and of the charming Hybrid Lilies of the Orange and Red class; when in bloom they are well worth seeing.

ON KEEPING UP A SUCCESSION OF FLOWERS.

BY JOHN M'ARDELL.

To keep up a succession of flowers as long as possible is one of the chief objects of a flower-gardener. A parterre without blossoms is like an orchard without fruit; every expedient is therefore had recourse to for the purpose of retarding the flowering of some kinds, and expediting that of others. Our early spring flowers, which are chiefly bulbs and tubers, would be inclined to flower again in the autumn if they were not checked by the great heat of the summer in those countries of which they are natives; or if in imitation thereof, the careful florist did not remove them out of the bed in which they have already flowered. Thus by stopping their growth and keeping them in a colder and moister climate than their own, we keep them from blooming till the season when their blossoms are most welcome to us. In this way many of these bulbous and tuberous-rooted plants can be flowered almost at any season; but there are rules of propriety in the execution of these proceedings: a Snowdrop would scarcely be regarded at midsummer, while surrounded by so many gaudier beauties; neither would the Tulip—the bright queen of the garden—look well amid the sober tints of autumn. Nature intends that her beauties shall be dispersed over the whole circle of the year, and the florist assists in this arrangement, and for this assistance claims for himself the privilege that she shall be, to a limited extent, subservient to him in some instances while he encroaches upon her seasonal laws. The

British florist has a peculiar claim to this privilege, because he has taken under his care the floral beauties of every clime in both hemispheres—affording to each, as near as can be, its natural temperature, its natural soil, and its natural rank and station among others. If, then, he should occasionally interfere with nature's laws in bringing forth flowers out of season, he is not only excusable as their cultivator, but it is creditable to him as their guardian. To have them always in beauty would diminish rather than advance them in our estimation; but the recurrence of a flower when not expected—and especially if obtained without any derangement or mutilation of the plant operated upon—would be a delectable rarity, and really a desirable incident in the flower garden. Every one knows that transplanting Rose trees late, or pruning them late in the spring, procures a late bloom—three weeks or a month later than the usual time of flowering. I am speaking of the common Provence Rose, though this treatment of Rose trees is less necessary now than it was before the introduction of so many French and Chinese varieties, some of which are always in flower during the summer and autumn months. The Laburnum is a highly ornamental plant from the latter end of May to the middle of June; if the flowering shoots be cut back, and the tree divested of its racemes of pods, it will again bloom nicely later in the summer; indeed the whole of the Cytisuses may be made to flower twice in the summer, by careful cutting back after the first flowers fade. The Rose, Acacia, and several others of its congeners, will flower a second time; and so will the Althea frutex, presenting its second flowers as late as October, when flowers of any kind are much wanted. Checking the growth of herbaceous border flowers, by transplanting, or by divesting them of a few of their stems, to delay the flowering, or only allow it to be developed gradually, is an old expedient; and with attention paid to this management of perennials and biennials, and to the different times at which annual flowers may be sown, a continued display of flowers may be kept through the growing season.—*Gardeners' Journal*.

HORTICULTURAL SOCIETY'S FLORAL EXHIBITION.

A SUNNY day, cloudless and cool, enabled 8,839 visitors, from among the higher classes of the London world, to witness and enjoy the second great exhibition of the year in the garden of the Horticultural Society. A more delightful day, and a more glorious collection of flowers, have never been combined: the softness of the turf, the freshness of the foliage—here matured, there coloured with the peculiar tints of spring, or elsewhere gushing forth with all the transparency and delicate texture characteristic of early vegetation—banks of Rhododendrons in blossom, tents filled with an endless profusion of the most admirably varied flowers, together with a crowd of gay costumes, graceful forms, and happy faces, constituted a scene which has often been witnessed in these gardens, and rarely elsewhere.

Of the exhibition we cannot speak too highly. We had ample

opportunity afforded us to examine minutely the plants shown, and we could not find a poor-grown one; but eminent skill had been displayed by the cultivators. The collections, too, contained a much greater number of the best species or varieties of their respective classes than we ever saw before; indeed, so many admirably, even-grown, beautiful specimens, we believe, were never previously brought together.

NEW PLANTS.

Escallonia macrantha (Messrs. Veitch).—Stated to be a hardy shrub. The leaves are large, of a glossy green. The flowers are of a rosy-red, tube-shaped, one inch long, wide. They are produced numerously, in long racemes, and in clusters of from four to six. It will be a valuable acquisition to our shrubs, whether as a standard or trained to a wall or trellis. It is a native of Patagonia.

Mirbelia dilatata (Messrs. Veitch).—The flowers are borne in long terminal spikes, of a pretty lilac colour, with a white centre. It is a handsome plant.

Lisianthus pulcher (Messrs. Veitch).—The flowers are tube-shaped, about an inch and a half long, having a five-parted limb (mouth), an inch across. They are of a bright scarlet colour. It will thrive with a similar treatment to the older species, and merits a place in every greenhouse. The plant shown had been drawn by forcing it rapidly for the exhibition.

Posoqueria longiflora (Mr. Jack).—The tube of the flower is six inches long, narrow, a greenish-white; the terminating limb is a pure white, an inch across.

Gardenia amæna (Mr. Jack).—The plant is a dwarf grower; the flower is single, white.

Gompholobium venustum (Messrs. Henderson).—The flowers are borne in clusters, a lilac-purple colour, with a yellow eye. The foliage, too, is pretty.

Hoya bella (Messrs. Veitch).—This charming new species had eleven pendulous heads of its most lovely blossoms, recommending itself to all.

Hoya imperialis (Mr. Glendinning).—The flowers were not expanded enough to show the singular body colour.

Portlandia grandiflora (Mrs. Lawrence).—This is a fine old, but rare plant. The flowers very much resemble those of small blossoms of the well-known *Datura* (or *Brugmansia*) arborea. It merits a place in every stove collection.

Mitraria coccinea (Messrs. Veitch).—We cannot forbear again to mention this beautiful shrubby plant, with its lovely bright scarlet pendulous flowers. It is worthy of growing in every collection.

Lilium lancifolium punctatum, and *album*.—Mr. Groom has attempted to force this fine class of Lilies into bloom at so early a period of the season. This he has succeeded in very satisfactorily, without drawing up the plants. The twelve he exhibited were in fine bloom, thus proving we may enjoy their beauty and fragrance from May to November.

PELARGONIUMS (Seedlings, 1849).

Ajax (Hoyle).—Upper petals very dark, with a fiery crimson margin; lower petals a light purple. A first-rate formed flower.

Cecil (Hoyle).—Upper petals scarlet, with a large dark spot; lower petals a light scarlet. The centre of the flower is nearly white. Of first-rate excellence.

Rosa (Hoyle).—Upper petals a large dark blotch, edged with crimson, shading off lighter to the margin; the lower petals crimson; centre of the flower a pure white. It is a very showy variety, but the margin of the petals is slightly notched.

Duesma (Beck).—Upper petals very dark, with a fiery crimson margin; lower, pink, slightly veined. Very good form.

Macready (Beck).—Upper petals dark velvet, with crimson edge; lower, rosy-crimson; flower, a white centre. Very good form.

Lord Gough (Hoyle).—Upper petals a large dark blotch, with a scarlet-crimson margin; lower, purple; flower, a light centre. Of first-rate excellence.

Crusader (Hoyle).—Upper petals a large dark blotch, shading off with scarlet-crimson, slightly veined; lower, a fine rosy-scarlet; flower, a light centre. Of first-rate excellence.

Nandee (Hoyle).—Upper petals black, with a purple margin; lower, pink; flower, a white centre. A beautiful variety.

May Queen (Hoyle).—Upper petals a dark blotch, shading off with crimson, and the margin very light; lower, flesh-colour, with white margin; flower, white centre, but the edges are notched. Very showy.

Apollo (Whomes).—Upper petals a large dark blotch, with a crimson margin; lower, rosy-pink; flower, white centre.

(To be continued.)

BUDDING THE RHODODENDRON.

BY JUNIUS.

I HAVE lately visited the fine collections of Rhododendrons, &c., exhibited at King's-road, Chelsea, by Mr. Waterer, and those at the Regent's-park Garden; also Mr. Smith's, of Norbiton near Kingston, and have been delighted with the splendid and highly interesting hybrids that have been raised. There are flowers of almost every colour, as yellow, crimson, scarlet, primrose, purple, white, red, buff, rose, orange, maroon, &c., and these beautifully spotted, marbled, blotched, &c., with very distinct markings. I felt anxious to obtain some of the most superb kinds, but found the price very high, in consequence, it was said, of the small portion of stock, arising from the difficulty of increasing them rapidly. Now I think this may readily be remedied by having recourse to budding the fine species and varieties upon stocks of the commoner kinds. Several years since I obtained a plant of the pure white, and wishing to increase it I inserted buds into several young stocks of the R. Catawbiense. They all succeeded, and now are fine bushes. If the method was pursued with the fine yellows, white, crimson, primrose, and others, we might soon have them at a cheap rate. I practised the following process:—

The common method of extracting buds is to cut away a piece of the shoot, and afterwards extract the wood; but this destroys the very sharp edge of the knife, and the cut will invariably be found more or less rough. The bark should be cut all round the bud to the shape and size wanted, and the thumb pressed against the cut portion, at the side of the bud. If the shoot is growing and healthy, the bud will separate freely, and there will be no laceration of the edge; the bark will be cut as smooth as a piece of cheese, and the edge of the knife will be kept sharp, as no wood needs to be cut through. As far as mechanical operation is concerned, this cutting smooth is of far more importance than any method of inserting the bud; if the bud does not squeeze freely off the branch with the side of the thumb, it is very doubtful of succeeding.

The success, however, of budding depends greatly on the state of the stock; if this is growing vigorously, and the bark flies up quite freely on the introduction of the budding knife, the budding will hardly fail of success; if the young shoots of the stock are nearly ripened to the top, the bark is in the way of beginning to fasten to the wood; or if the shoots are small and weak, and the plant unhealthy, the bark most likely has not risen at all; in either case, the bark will not rise freely from the incision with the handle of the knife, the sap is not circulating freely, and it is in vain to attempt introducing a bud by forcing up the bark. The bud should be chosen from a vigorous young plant; the shoots from old trees have not so much sap or vitality; and the bud should be chosen when the bark is beginning to assume a ripe colour; if too ripe, it does not rise so freely from the bark, and vitality is beginning to get dormant; if too green it is apt to perish before uniting to the stock. The buds should be tied as soon as possible after the operation, to exclude air from the wounds; but if the stocks are vigorous, drawing very tight is not of so much consequence here as in grafting. When buds are nearly ripe, in which state they succeed best, the piece of wood which unites the bud to the branch is apt to break off far in, and leave the appearance of a hollow eye. Some operators attach great importance to this, and say that, though the bark live and unite, the bud will not push in the spring; but I have frequently inserted buds with very hollow eyes, and marked them for the purpose of experiment, and they always pushed as well as the others; the sap of the tree should soon fill this hollow. Much of the success also depends on having the edges of all the cuts smooth, and the operation done as speedily as possible; if the edges of the wound are rough, the vessels of the liber, where the living principle is most active, are bruised and lacerated; and, if long exposed to the air, they begin to spoil.

RAISING CARNATIONS FROM SEED.

BY AN OLD FLORIST.

OBSERVING in your CABINET that several of your correspondents solicit some information on raising Carnations from seed, I am induced,

as a tolerably successful cultivator of that delightful flower, to offer a few remarks.

Experience has proved to me the error of sowing seed from self colours, or those possessing bad properties, as, by repeated trials, I am satisfied that the only chance of obtaining superior flowers is to sow *your own* seed, produced from those acknowledged to be first-rate. The course I have adopted, and which I recommend, is, when the petals are dead, to pluck them out of the calyx, or cup containing the seed-vessel, leaving the two styles, or what are generally called the horns; by removing the former, the pods are kept dry, and more exposed to the sun and air; they should at all times be protected from rain, by placing over them the shades used at the time of blooming; and care should be taken that the vessels wherein the legs of your platform stand, are constantly supplied with water, to prevent the approach of those nocturnal enemies—earwigs. When the seed-vessels become hard, and present a brown appearance at the tip, they should be gathered, and in that state preserved, in a perfectly dry situation, until the following April or May, which is the period for sowing in pots or boxes filled with rich loam, taking care not to cover the seed more than a quarter of an inch; give them a slight watering before they are plunged into a hot-bed of about 65 degrees; occasionally moisten the surface with soft water, of the same temperature as the air in the frame; and as soon as the plants appear, admit the air freely during the day-time, to prevent their being drawn up. When about three inches high, transplant into larger pots or boxes of rich turf mould, five inches apart; place them in a southern aspect, at first protecting during the nights with matting, and applying moderate light watering in dry weather; but invariably avoid wetting the plants, as too much moisture frequently decays the hearts of the shoots, and prevents their blooming the second year. In about six weeks again transplant them, a foot asunder, into beds prepared of good sandy loam, mixed with rich garden mould; keep the beds clear from weeds, and water copiously in the evenings during the summer. By adopting the above course, the plants will be found exceedingly strong towards October, and require little or no protection in the winter; but should any appear particularly weak and unhealthy, take them up, and after examining the roots, which is generally the seat of disease in plants, replant them in a different compost, and during the severe weather protect with pots raised about two inches upon pieces of tile. I have always found a long bed in the centre of a grass plot, about three or four feet wide, so as to admit of two or three rows, by far the best situation for seedlings, being more easily protected when necessary by mats or hoops, and decidedly less liable to be injured by snails, &c. In the following April let the beds be well cleaned, and the surface carefully loosened, to receive a thin top-dressing of rotten manure, the application of which will be found materially to renovate the mould, as after so many months it necessarily becomes much impoverished. I am not, however, an advocate for planting seedlings in very rich compost, as it is much more practicable by cultivation to put colour into a flower, than to extract it. When the shoots are grown about a foot high, they

should be supported by sticks; at this time they will also require to be frequently watered; and as they bloom, pull up all that come decidedly bad; the best, of course, should be piped or layered at the proper season.

Some persons sow the latter end of May, allow the pots to remain in the open air, and prick the plants out at once into beds. The disadvantage of this system is obvious; for, in the first place, they do not come up so soon; and secondly, when planted in beds at so tender an age, they are rendered more liable to be destroyed by worms and slugs.

REMARKS.

AURICULAS.—Now is a favourable time to commence shifting and re-potting these plants for summer growth. Should this business be deferred (as is the practice with some) till August, the plants grow sickly, and are more difficult to preserve during the hot months.

POLYANTHUSES.—We recommend nearly similar treatment for this class, with the exception of planting out, which may be done with advantage as soon as the plants are done blooming. A bed having been prepared for them in a nice cool situation, they should be parted from the roots and placed at equal distances, carefully watered and protected when needful, vigilantly watching for the appearance of red spider, which you may consider yourselves fortunate if they do not wait upon you by thousands—and, what is worse, are seldom induced to quit their quarters, unless extreme measures are resorted to.

ON BUDDING ROSES.—Being a novice in the art of budding Roses, I shall feel much obliged if either yourself, or any one of your numerous correspondents, will kindly inform me what is the best way of pruning the stocks. I have now procured two hundred, having last year's shoots left five or six inches long. Should these be left, so that when they put out in summer I shall bud on two years' old wood, or is it better to prune the stock to a single straight stem, and then bud on the wood of one summer's growth?—X. X.

[An article on the subject is inserted in the number for April, 1842, vol. x., to which we refer our correspondent for the entire process, extracting only the following:—"Transplant strong, clean, straight stocks, as just mentioned; cut them over at a height to suit your taste, say from three to six feet; and cover the wounds with a cement, directions for making which will ensue. In the spring, when they begin to shoot out, rub off all buds but three or four at the top, so situated as to promise an uniform head. Carefully pinch off fresh buds, which arise afterwards, and remove suckers as soon as they appear. In the progress of summer the stocks will require to be staked, and demand continued attention to the disbudding of them (of other shoots which push) and the regulation of those retained for budding upon." "Early in July displace the thorns where it is designed to make incisions for the buds."]

“ Summer budding should not be commenced before the middle of July, although tolerable success may attend the execution of it in August. But worked too early a portion of the buds will commence growing the same season, at a period when it is too late to ripen their wood sufficiently before the commencement of frost, and thus be likely to sustain injury, or be wholly destroyed.”

Our correspondent will see that if the stocks be high enough for the purposes desired when planted, that the head of the stock should be cut off below the shoots already existing, so that new ones (which are necessary for budding upon) may be produced the following season. If, however, any stock be too low to serve designed purposes, and the present head was cut off, then prune back the existing shoots to one bud each, which, on pushing, will furnish new shoots for budding upon afterwards.]

PAULOWNIA IMPERIALIS.—This noble tree has bloomed in the open air in France for several years, a drawing of a floral specimen was taken by a French artist, and we inserted it in one of our plates for the year 1844. Since that time plants have been numerously procured and planted in the open air in our own country, but though it grows freely we have not heard of its blooming before the one now in flower at Claremont. The flowers are borne in paniced heads, of a pretty lilac colour, each about the size of a small Gloxinia flower. The tree has a noble appearance, the leaves being large, of a roundish heart-shaped form.

It requires to be grown in a sheltered, warm situation, and to be upon a dry bottom. The soil should not be rich, but a good loam of half a yard or more, deep, for if rich the shoots are very gross, and do not ripen well in this country; but when of medium growth, they ripen better, and in proportion endure the severities of winter, and give hopes of freely blooming with us.

ACHIMENES.—Few plants are more attractive than the different varieties of Achimenes now in cultivation, but they are seldom seen in that state of excellence which they are capable of attaining. It is customary to grow them in boxes, shallow pans, baskets, and pots, but I prefer the latter; for their bloom is soon over in shallow pans, baskets require too much looking after, and stiff unsightly boxes which always meet the eye when looking at the flower, detract greatly from that imposing effect they create when properly arranged in pots, and trained in the way in which Pelargoniums are shown at Chiswick, only a little higher in the centre than the Pelargoniums, and allowed to drop a little over the edge of the pot. Nothing can exceed the beauty and elegance of *A. longiflora* and *patens* grown in this way. Instead of planting the tubers at first in small pots and shifting them into larger ones as they advance in growth, as is commonly done, I use pots ten inches wide and twelve inches deep. After covering the bottom with a few crocks I spread a layer of moss over them, on which I place six or seven roots, and cover them slightly with a little leaf-mould or well rotted cow-dung and sand. As the young shoots lengthen more

soil is added until the pot is filled to within two inches of the top, which space is afterwards filled up with moss pressed down firmly with the hand; the stems thus buried in the soil soon emit a profusion of roots that are never brought into action when the tubers are planted near the surface. I have had pots of *A. longiflora*, measuring two feet and a-half high, and as much through, covered with bloom from the beginning of May to the end of September, and many of the flowers measured three inches in diameter. *W. S.*—(*Gardeners' Chronicle.*)

CYTISUS CANARIENSIS.—This beautiful and free flowering shrub is exceedingly well adapted for conservatory display during the spring months, inasmuch as it presents an admirable contrast to the delicate colours of the Chinese Azaleas, and the more gorgeous masses of Indian and hybrid Rhododendrons, which ought to abound in all such structures in the earlier part of the season. It is also an excellent subject for bouquets, the bright yellow colour of its spikes yielding sprightliness and variety when used in conjunction with Camellias, Roses, Primulas, Cinerarias, and such like; whilst Violets, Sweet Briar, Balm of Gilead, and sprigs of Myrtle, furnish the requisite sweetness. It is grown here in bottomless pots, plunged to the rim in the conservatory bed. By this means it is kept within moderate bounds, and flowers more freely when grown in the open soil. This system also insures a positive degree of health which large pot-bound specimens seldom present for any lengthened period; the plants are moreover readily removed when re-arrangement is required, and this, when occasionally repeated, gives an air of freshness to the whole house, for one tires of seeing the same plant continually under the same circumstances and associations. There is a large plant growing here in an inverted Seakale pot, and plunged to the rim in the conservatory border, which measures twelve feet in height and seven feet through, and is at this moment, and has been for these last two months, profusely covered with its spikes of brilliant yellow blossoms; and there are many other plants of not more than from two to three feet in height, which blend their flowers with those of Cinerarias, Hyacinths, and such like, down to the floor of the house. It is rather subject to the attacks of red spider, and requires in consequence a somewhat free use of the syringe when out of flower, and an occasional drenching with soap-suds, which here are a never failing remedy against the attacks of those troublesome insects; care is, however, taken to ascertain that this material is not too dirty or overcharged with potash or other deleterious ingredient, or the plants would have a dirty appearance for some considerable time. *James Duncan, Basing Park.*—(*Gardeners' Chronicle.*)

[We have seen several fine plants growing in Surrey in the open air, trained against a south-east aspected part of a house, and it is one of the finest ornaments we ever saw for such a purpose. It continues to bloom for a long period, commencing early in May.]

COTONEASTER MICROPHYLLA.—This is a fine shrubby plant for forming an edging round a bed of large-growing flowers, as Hollyhocks, Dahlias, Michaelmas Asters, Roses, &c. It grows very freely,

and is easily trained to any size or form desired. The foliage is neat at all seasons. It is pretty when in bloom, and extremely handsome when almost covered with its rich red berries, throughout winter and spring. Last spring we saw an old wall, eight feet high, covered on both sides with the Cotoneaster, and the berries in their richest hue; it was most strikingly handsome. The shrubs had only been planted on one side of the wall (west), but the branches had extended over the top, and, becoming pendant, had reached the ground, and the leads had taken root in the border. For a purpose of this kind it is admirably adapted, and, growing rapidly, it soon realizes expectation. It is a valuable plant for trailing over a bank, soon covering a large space; and near to walks, in shrubberies, woods, &c., has a very interesting appearance; being evergreen, too, renders it increasingly valuable. Its cheapness, too, is an additional recommendation.

FIFTY BEST ANNUALS.—In the last number a correspondent requests the names of fifty of the gayest and best annuals, I forward the following as suited to the purpose named:—

Alonsoa incisifolia.	Jacobæ, double purple.
Anagallis cœrulea.	Lobelia gracilis.
Aster, German.	romosa.
Turkey.	Larkspur, dwarf.
Bartonia aurea.	branching.
Brachycome Iberidifolia.	Leptosiphon androsacea.
Cacalia coccinea.	densiflora.
Calendula pluvialis.	Lupinus lutea.
Campanula Loreii.	nanus.
pentagonia.	Crookshankii.
Candytuft, purple.	Malcomia maritima.
scarlet.	Marygold, French double.
white.	Nolana atriplicifolia.
Clarkia pulchella.	Nemophila discoidalis.
pulchella alba.	insignis.
elegans.	atomaria.
Collinsia bicolor.	Schizanthus pinnatus.
Convolvulus minor.	Viscaria oculata.
major.	Venus's looking glass.
Calliopsis Drummondii.	Tetunia nyctaginiflora.
tinctoria.	Salpiglossis, mixed.
Clintonia pulchella.	Sultan, yellow.
elegans.	sweet purple and white.
Didiscus cœrulea.	Stock, ten week.
Erysimum Peroffskianum.	Zinnia elegans.
Elichrisum bracteatum.	coccinea.
Heliophila trifida.	

*H. Coles, Seedsman, Cranbourne-street,
Leicester-square, London.*

TORENIA ASIATICA.—In full bloom forms one of our prettiest stove plants when trained to a globular trellis. I have grown several plants in this way to admirable perfection. The compost I use is sharp sandy peat, with a little mellow loam, and a portion of leaf mould. Having

an abundance of plants I had not wire trellises for all, and had to use small split laths; I placed a number of them in the pots a short distance apart, and the branches were allowed to push among them to the sides and extremities of the laths. The leads were then pinched off so as only to leave two joints to each; by this attention, and the usual care in watering, &c., I had plants which even far surpassed those on the wire trellises. The stopping of the leads induced the production of numerous side shoots, all of which were prolific in flowers, and by allowing the shoots to spread among the laths, &c., the plants had not so formal an appearance as those trained to the trellis, but exhibited a natural beautiful display, which amply repaid for attention. Complaints are often made of plants dying in winter, this must be expected when they are kept in a greenhouse; they must be in a stove throughout that season, and thus situated there is no difficulty to keep it alive and flourishing.

FORCING ROSES.—It has become a custom with some persons to throw away the plants when done forcing them the first season, and then to have a supply of fresh ones for every season. This is unwise, as by proper attention to the plants they may not only be forced every year, but are for a few years better than fresh ones. The fact is, the habits of plants may be completely reversed, so as to change their season of blooming. When they have been forced they have a longer ripening season for the wood than plants that have not been forced, and I have found that such plants bloom much more vigorous and profuse. The plan I adopted was as follows:—The first season after potting I did not allow them to bloom, but pinched off the flower-buds. The second and following three seasons I have forced the plants, and bloomed them admirably. As soon as the bloom was over I repotted the plants, and kept them in the greenhouse or warm frame-pit till they completed their growth; when the wood was ripened I placed them out of doors, giving every required attention to watering, pruning, &c. Thus treating them regularly every season it becomes natural to them to begin to push earlier than others by several weeks. I have most successfully forced the same plants for five successive seasons.—*Rosea*.

ROSE TREES INFECTED* WITH GREEN FLY.—My standard as well as some of my dwarf Roses are again pestered to an amazing extent with the Green-fly. What is the best and easiest mode of destroying them without doing so to the rose-buds and foliage. An immediate answer will oblige—*Amicus*.

[A strong infusion of camomile has proved effectual, having some in a vessel, into which the shoots are bent and held for a moment. So with tobacco-water. Snuff, in a finely powdered state dusted over, has, too, proved successful, or smothered with smoke. We have seen a puddle of earth and water to the consistence of cream taken in a pail, and the ends of the shoots affected dipped in; this formed a coating over them and smothered them; it soon became dry and enveloped them. In a day or two it was washed off by means of a garden engine or syringe, soon dispelling it, and the plants were healthy all the season after.]



FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

THE present month is proverbially both a hot and dry one, it will therefore be highly necessary, during the continuance of dry weather, to administer copious supplies of water. This should be done towards the evening of each day, because the plants have then time to absorb the water gradually, and appropriate such portion as contributes to their well being. It is only in extreme cases that water should be given in the morning, because it is then so quickly exhaled from the soil as well as the leaves that its refreshing and nutrimental properties are almost wholly wasted. Rain water is best, or that from an exposed pond or tank. Where beds of plants have been repeatedly watered through a rose, the surface of the soil will probably have become crusted and almost impervious to moisture, consequently they ought to be stirred over occasionally with a small fork. Continue to make up any deficiencies in the beds, stop the growth of such plants as require it, that over luxuriance may be checked, tie and train those that require support, and be careful to remove all dead flowers or seed vessels which are not required; the former destroys beauty of appearance, and the latter when left on greatly retards the vigorous fertility of the plants. A few annuals, as mignonette, &c., may now be sown to bloom in the autumn, also biennials to bloom next year.

FLORIST'S FLOWERS—*Auriculas* should be kept in the shade and occasionally watered as necessary. At this season of the year the plants are often attacked with green fly, which should be removed with a camel-hair brush. *Tulips* will have perfected their growth, and should now be taken up, as if allowed to remain too long it invariably acts prejudicially on the bulb. When taken up they should be wrapped, separately, in thin paper, and dried gradually in the shade. *Ranunculuses* will require to be taken up as soon as their foliage has become withered and dry, and the roots preserved in bags. *Pinks* may still be piped, if not already done, as recommended last month. *Carnations* and *Picotees*, as the pods are fully formed and ready to open, tie them round with a small strip of bass, to prevent their bursting on one side. When blown they should be shaded. Never suffer the plants to flag for want of water. Proceed with layering. It requires some little practice to ascertain when the shoots are in a fit state. As a safe criterion, the amateur may begin with the longest and strongest. Pippings are struck in the same manner as Pinks, on a gentle hotbed: they generally make nice stiff plants, and stand the winter best. *Dahlias* will require thinning out as they advance in growth, and the branches should be secured firmly to stakes; a slight wind is sufficient

to do them great damage if they be not constantly attended to in this respect. In dry weather give water very freely, and if the plants are sprinkled over-head late in the evening with a fine rose or syringe, their luxuriance will be greatly promoted. Trap earwigs by all possible means, on the principle that prevention is better than cure, they will not be wanted when the blooming season comes on. *Pelargoniums* that have shed their flowers should be cut down, dis-rooted, and potted in smaller pots, keeping the plants for a week in a close frame, to assist them in developing their new shoots. *Roses* may now be budded, moist weather being best for the operation. It is of importance that there should be a resemblance between the bud and the stock as to the vigour of vegetative growth, in order to ensure a successful result. If a Rose of slow development is budded on a rampant briar, and all the strength of the latter is turned into the parasitical stranger, health cannot be maintained, nor will a freely vegetating Rose submit to be impeded in its progress by a sluggish stock. Roses budded on the stocks of Boursaults succeed well. Thin away surplus branches from all stocks not budded as early as possible, not to wait a day even, but get the branches left strong and healthy.

IN THE FORCING FRAME, STOVE, &c.

Where stove and greenhouse plants afford suitable cuttings, propagation may still be pursued; as, generally speaking, it can be practised with greater success in the early than in the latter part of the year. It should be remembered that the propagation of most plants is facilitated by the employment of bottom-heat and bell-glasses. Stove plants will derive great advantage from a partial shading during the glare of the day, and will be less liable to injury from drought. Many plants that have made vigorous growth will require shifting, especially such as *Justicias*, *Clerodendrons*, &c., give plenty of water at the roots, syringe often in the evening, and keep the floors of the house and every part damp, to assist in maintaining a humid atmosphere; it is surprising the amount of evaporation going on at this season. Bulbs of *Amaryllis* and other stove and greenhouse plants can be put together in a pit or frame, where they will be near the glass, and where the influence of the sun with a gradual diminution of water will mature them. Never permitting the foliage to flag is a good criterion as to the quantity of moisture required, and they may be kept as near that state as possible. In the *orchid* house copious and frequent waterings are indispensable, for all species from the more humid part of the tropics, as *Stanhopeas*, *Dendrobiums*, *Gongoras*, &c.

Such plants as *Cattleyas* require less heat and moisture, and should be placed in a cooler part of the house. All those species generally flowering during the winter season should have their growth perfected as speedily as possible, and then be gradually excluded from exciting influences, and placed in cooler and more favourable situations.

IN THE GREENHOUSE, COLD FRAME, &c.

As a free ingress of air must necessarily be permitted during fine weather, its rapid circulation, conjoined with active solar heat, must

cause a rapid evaporation both from the plants and soil; hence there exists a necessity, under the above circumstances, of watering and syringing frequently. However beneficial a screen may be during bright hot weather, its presence is not required while the sun is obscured. Encourage the growth of Azaleas and Camellias by keeping them comparatively close (with shade during sunshine), and supplying them liberally with moisture administered by the syringe. As probably increased room will be obtained by the removal of many plants to the flower-beds, the space might be appropriated to the cultivation of plants of the commoner sort for an autumn display. The pits will be found useful for many hard-wooded greenhouse plants, impatient of too much heat. Propagate Roses by cuttings from those plants which have been forced; and place the plants in a rather shady situation, in order that they may have a period of rest for a few weeks. Calceolarias that have ceased blooming should be re-potted; cut off dead tops, place the plants in a situation where they can be shaded from hot sun, admitting it morning and evening. Cinerarias also that have done blooming should have the tops cut off, be fumigated in a close frame, as they are often affected with green fly; after which the plants should be turned out of the pots, and planted in a somewhat raised bed, of good soil, in the garden. The tubers of *Tropæolums* which have ceased blooming, and the tops withered, must be taken out of the soil, or be kept in a bag, &c., or the pot must be put aside, where it may have the soil kept dry till potting time. Greenhouse plants placed in the open air in pots should have frequent waterings at the under side of the foliage, to destroy or keep down green fly.

SEEDS FROM INDIA.

IN transmitting seeds from India to this country, it has been usual to have the packets enveloped in oil-cloth, but the seeds have generally been injured, having misgave. It is now found that, to wrap the various packets in common brown paper answers admirably.

THE AMERICAN, OR MEALY BUG.

BY CLERICUS.

HAVING a Chinese Apple-tree in my shrubbery, it had for two years become infested with the Mealy or American bug. In order to destroy it I took a quantity of the finest brickmakers' clay from a brickyard, mixed it with water so that it was a stiff liquid, and carefully coated the tree over with it, as far as the insect infested it. This, by excluding the air from the insects, soon destroyed them. The coating came off by natural causes. I kept the diseased portions plastered over the entire year, and it so answered the purpose that not a vestige of the insect has been seen since February, 1842.

ROYAL SOUTH LONDON HORTICULTURAL SOCIETY'S
EXHIBITION.

THE first Prize for twelve Tulips to nurserymen was awarded to Mr. Lawrence, of Hampton, for Fabius, Madame Vestris, Bacchus, Duke of Devonshire, Lavinia, Musidora, Strong's King, Aglaia, Reed's Prince Albert, Newbrooke's Bizarre, Lady Exeter, Violet Blondeau. They were well grown flowers and in fine condition.

The following flowers were the best shown in the other collections : David, Cerise à belle forme, Imperatrice florum, Triumph Royal, Rose Blanca, Aglaia, Fabius, Captain White, Brulante, Bijou des Amateurs. Holme's King.

SONGS OF THE FLOWERS.

NO. 5.—THE ROSE.

“ And all is ecstasy, for now
The valley holds its feast of roses ;
That joyous time, when pleasures pour
Profusely round, and in their shower
Hearts open, like the season's Rose,—
The flowret of a hundred leaves,
Expanding while the dew-fall flows,
And every leaf its balm receives.”—*Lalla Rookh*.

The angel of the flowers one day
Beneath the Rose-tree sleeping lay ;
That spirit—to whose charge is given
To bathe young buds in dews from heaven.
Awaking from his light repose
The angel whisper'd to the Rose,—
“ O, fondest object of my care,
Still fairest found where all are fair,
For the sweet shade thou'st given to me,
Ask what thou wilt, 'tis granted thee.”
“ Then,” said the Rose, “ with deepen'd glow,
On me another grace bestow.”
The spirit paused in silent thought,
What grace was there that flower had not ?
’Twas but a moment—o’er the Rose
A vail of moss the angel throws.
And robed in nature's simplest weed
Can there a flower the rose exceed ?





Pelargonium Fosteri Gipsy Bride



FLORICULTURAL CABINET

AUGUST, 1849.

ILLUSTRATIONS.

FOSTER'S GIPSY BRIDE PELARGONIUM.

IN our last month's Number we inserted the particulars of the Seedling Pelargonium Exhibition held at Upton Park, near Slough. To the Pelargonium we now figure the first prize was awarded. It was shown by Mr. Black, gardener to Edward Foster, Esq., of Clewer Manor House, near Windsor. It had previously been exhibited at the Royal Botanic Gardens show, when a first class certificate was awarded for it.

The flower is of first-rate form, a good trusser, free bloomer, and the flowers are properly elevated above the foliage. It would have added to its excellence had the flower been larger.

Pelargoniums always succeed best when grown in a house apart from other plants, and placed upon a stage as near to the glass as circumstances will admit, which is a most essential point in their culture. Where a greenhouse is of necessity appropriated to other classes of plants, then it is best to have pit-frames to grow the Pelargoniums in till blooming season; and when the flower-stems have pushed about half their length, to introduce the plants into the greenhouse for blooming. When they are in the greenhouse, and the petals are bursting the calyx, the temperature must be kept high, and be kept so till the blooming is over. If it is desired to have large and bold flowers this attention is very necessary, and, though at a hot season of the year, the house should be kept closed, in a great degree, using a canvass shade when mid-day sun is intense. This mode of treatment with blooming plants is the principal reason of the flowers exhibited by the London growers being generally so superior in size to any we ever saw in the country.

Having recently given some observations on the culture of this charming tribe of plants, as well as lengthened articles being in pre-

vious Volumes, we deem it unnecessary to devote much space here on the subject.

About the first week in July is the best time to cut in the stock plants for next year's blooming, and, at the same time, to put in cuttings for the young stock of next season.

For a week previous to cutting in let the plants be kept so dry as only to be preserved from withering injuriously, this gives a check to the sap and prevents the wounds from bleeding, the cut parts will also heal the sooner. As soon as they are healed water them over head, and give a little water at the roots, place them in a close situation, and they will soon push vigorously. When the new shoots are about an inch long, and the ball is in a dry condition, shake off all the soil and cut in rather closely all the roots, leaving as many of the fibrous as can consistently be retained with a proper pruning away. Re-pot the plants in an open soil of loam and leaf mould, having a free drainage. If they are placed up to the rim in a frame where there is a little bottom heat, say a frame on an exhausted hot-bed, it promotes an early pushing of the roots, and as soon as these are thus excited a free admission of air should be given.

The cuttings may either be inserted in pots, in equal parts of loam and leaf mould, and then be plunged in a frame, be kept close, and shaded from the sun, or they may be inserted in an open border, in a warm sunny situation, being shaded for a time at the middle of the day. In a month or five weeks the cuttings will be rooted; they must then be carefully removed so as to retain all the roots, and potted separately, into a compost consisting of equal parts of good rich loam and sandy peat, not sifted. Place them in a warm situation on boards, or in a cool frame; and with due attention, by the last week in September, they will be nice plants, when those that are in the open air must be taken into a cold frame or pit. As soon as the plants are well established the leading shoots must be stopped, to induce the production of side shoots, and cause the plants to become bushy.

When the pots are well filled with roots let the plants be shifted into forty-eights, keeping the ball entire, in a compost of equal parts of good turfy loam, which has been laid in an heap for six months or more, well chopped, and add a good portion of well-rotted manure mixed with it from the time of its being laid in an heap, and the other half to consist of leaf mould and sandy peat, to which is added a small portion of bone dust.

The plants require shifting again into the pots they are intended to bloom in; some celebrated growers do this about the middle of February, and others defer it to the middle of March; the state of the plants as to the roots, &c., will best point out the time it should be done. Plants which have the shoots stopped about the beginning of March will bloom in July and August.

Those plants cut-in in July, from which cuttings were taken, ought to be re-potted as soon as the pots are well filled with roots. The young shoots must be thinned away at an early stage, only leaving just enough to fill up the plant so as to form a compact bush. The surplus shoots, if cut off carefully, will strike roots in a sandy loam. The plants

require to be often syringed over head, as well as the under side of the leaves, during spring up to the period when the blossoms begin to burst the calyx. The plants should always be kept well apart, so that the air may circulate round them freely. Liquid manure should occasionally be given in the growing season. During November, December, and January, the plants should be watered sparingly, and be kept cool, at from 40° to 45°, this being their period of rest.

Raising Seedlings.—When ripe seed is obtained, up to the early part of August, it should be sown as soon as gathered, and the plants potted singly when well rooted. By this early sowing, potting, &c., they become strong enough to bear the winter season, and thus a year is gained upon the method usually adopted of sowing the following spring. When seed ripens after August it is best not to sow it till February. In order to induce seedlings to bloom early and fine, stop the lead, in autumn or very early in spring, to induce the production of side shoots, which will produce flowers much earlier than the leading stem.

NOTES ON NEW OR RARE PLANTS.

AMHERSTIA NOBILIS—THE NOBLE AMHERSTIA.

Leguminosæ. Diadelphia Decandria.

MR. GIBSON sent this singularly handsome species from the Burman Empire, East Indies, to the Chatsworth Gardens. It first flowered in this country in the collection of Mrs. Lawrence's stove-plants at Ealing Park. Dr. Wallich, speaking of it, styles it the prince of flowering trees; that he had gathered it in a garden belonging to a monastery. Handfuls of the flowers were found as offerings in the caves before the images of Buddha. Of the two trees he saw in the garden, the largest was forty feet high, and the girth at the base six feet. They were profusely ornamented with pendulous racemes of large vermilion-scarlet-coloured flowers. Each flower is about five inches across, and the petals being rather narrow in comparison with the size of the flower, gives it a straggling appearance. (Figured in *Bot. Mag.* 4453.)

ALLOPLECTIS CAPITATUS—THE HEADED.

Gesneriaceæ. Didynamia Angiospermia.

It is probably a native of the tropics of South America. It was presented to the Royal Gardens of Kew by Messrs. Knight and Perry, where it has bloomed in the stove. The leaves are about a foot long, of a velvety-green above, and purplish beneath. The stem, petioles, peduncules, and calyx, are of a deep blood colour. The flowers are tubular ventricose, about an inch long, yellow, contrasting beautifully with the rich red calyx, &c. (Figured in *Bot. Mag.* 4452.)

CYRTOCHILUM CITRINUM—CITRON-COLOURED.

A pretty stove orchideæ, sent from America to Mrs. Lawrence, and bloomed last April. The flower scape is erect, about a foot high,

bearing eight to ten deep citron-coloured flowers. Each blossom is about two inches across. (Figured in *Bot. Mag.* 4454.)

EPIMEDIUM PINNATUM—PINNATE-LEAVED:

Berberideæ. Tetrandria Monogynia.

A native of Persia, and is a most lovely hardy herbaceous perennial plant, the flower-stems rising about eight inches high. The blossoms are of a bright yellow, with a small dark spot at the base of each division. A single flower is about three-quarters of an inch across. (Figured in *Bot. Mag.* 4456.)

MILTONIA KARWINSKII—COUNT KAROWINSK'S MILTONIA.

A very beautiful orchideæ, brought from Mexico, and has bloomed in the collection at the Horticultural Gardens. The scape is three feet high, erect, many-flowered, each blossom two inches across. Sepals and petals bright yellow, barred and spotted with rich brown; labellum pure white end, middle rose-coloured, and base deep velvet. (Figured in *Pax. Mag. of Gardening.*)

ON THE IMPROPRIETY OF SHOWING CARNATIONS
AND PICOTEEES ON CARDS.

BY MR. SLATER, OF CHEETHAM HILL, NEAR MANCHESTER.

I HAVE read with much surprise and regret, the announcement made by the Committee of the Derby Carnation Meeting, that all Carnations and Picotees must be shown on cards.

This appears to me rather too much, and reminds me of an anecdote of a traveller, of bygone days, who, on his return from his London journey, assumed so many of the peculiarities of the Londoners to his master, that he at last exclaimed, "None of your London tricks, John."

Why depart from the good old custom of disqualifying every bloom that has either tie or card upon it? This way of showing is not calculated to discover the imperfections of the flowers, as there are many varieties whose petals stand loose in the pod, and others which will not remain in form, whilst a card will keep them in proper position.

As well might a number of men be placed behind a screen, reaching up to the knees, and then judges appointed to report which were the most perfectly made. Some might be lame, others deformed, &c., and all these defects would be hidden by the screen, so that the scrutiny of the judges could not descend below the knee, and those only with handsome features would be preferred, whilst probably below they would be either lame or deformed.

Another leading feature is, that nearly all are to be staged in pans. Pan showing is not a proper criterion as to the merits of a flower, as many a pan may have four good blooms and two very bad ones, and yet obtain a prize, in consequence of having a majority. Class showing is the proper and only true way of ascertaining the merits of a flower.

Seedlings ought also to be judged separately, and prizes awarded to them; and afterwards be placed in classes, and allowed to take another prize. If this plan were carried out, few flowers would be sent out but what were worthy of a place in the most select collection.

Another argument is, that few small growers are capable of making up a pan of six or twelve flowers, whilst they might have one or more extraordinary good blooms, which would give them a chance of a prize or two.

Classes ought also to run ten in length for Carnations and Picotees, and four in length for rose and yellow Picotees.

If these views were carried out in a proper spirit, we should then see a great revival in exhibitions, and more competition.

These remarks are offered in a friendly spirit, and I hope they will be received as such.

THE CLOVE AND CARNATION.

“ Let yon admir’d Carnation own,
 Not all was meant for raiment, or for food,
 Not all for needful use alone ;
 There while the seeds of future blossoms dwell,
 ’Tis colour’d for the sight, perfum’d to please the smell.”

Shenstone.

THE Carnation seems a flower—

“ Not to delight thine eye alone design’d,
 But touch, and calm, and elevate the mind.”

These delightful flowers, which are now become favourites with all florists of Europe, are children of art, having been raised from a small kind of Red Clove Pink, which is thought to be a native of our climate, since it has frequently been found growing in the wild state on rocks and old walls, and in other situations where the soil is dry. We have already noticed how little the ancients knew of the Pink, and that the Clove and Carnation were altogether unknown to them is perfectly clear, since they are neither of them mentioned by their natural historians, or celebrated by any of their bards, who would not have failed to have sung the praises of such aromatic flowers, since the Clove-spice was known to them and much admired.

We learn from Chaucer, the father of the English poets, that the Clove Gilliflower was cultivated in this country as early as the reign of Edward III., and that it was used to give a spicy flavour to ale and wine, and from from hence it was called *Sop in Wine*:—

“ Ther springen herbes grete and smale,
 The licoris and the setewale,
 And many a cloue gilofre,
 ——— to put in ale.
 Whether it be moist or stale.”—*Chaucer.*

It seems to have been a flower of high estimation in Queen Elizabeth’s time, since we find it so often celebrated by the poets of

her day. Spenser, who was remarked for his care in retaining the old manner of spelling, calls them Coronations, probably because they were used on these festive occasions, and from hence the name of Carnation seems a corruption. Some writers are of opinion that they were called Carnation after a flesh colour so distinguished, whilst others suppose that the colour was so named from the tint of the Carnation flower—

“Carnation’d like a sleeping infant’s cheek.”

Lord Byron.

Spenser says in his *Shepherd’s Calendar*,—

“Bring hether the Pincke and Purple Cullambine,
With Gelliflowres;
Bring Coronations, and Sops in Wine,
Worn of paramours.”

Drayton also speaks of them under the name of Sops in Wine,—

“Sweet-Williams, Campions, Sops in Wine,
One by another neatly.”

Shakspeare says, by the mouth of Perdita.—

——“The fairest flowers o’ the season
Are our Carnations, and streak’d Gilliflowers.
Which some call, nature’s bastards: of that kind
Our rustic garden’s barren; and I care not
To get slips of them.”

The name of Clove, as well as that of Caryophyllus, was given to this species of *Dianthus* from the perfume being similar to that of the spice so called, and the flower was, on that account, frequently used to flavour dainty dishes as well as liquors, and it was also thought to possess medicinal properties. Gerard says, “The conserve made of the flowers of the Cloue Gilloflower and sugar, is exceedingly cordiall, and woonderfully aboue measure doth comfort the hart, being eaten now and then.” It was also thought good against pestilential fevers. Gerard tells us also that he had a Carnation with yellow flowers, “The which, (he says), a worshipfull marchant of London, Master Nicholas Lete, procured from Poland, and gaue me therof for my garden, which before that time was neuer scene nor heard of in these countries.” From this account we not only learn that it was a flower then cultivated in different parts of Europe, but we find with what care they were procured from distant countries. The yellow Carnation is still scarce in this country, and although it is more frequently seen in the vicinity of Paris than in the neighbourhood of London, yet is it not so common in France as other varieties, though Parkinson speaks of the yellow or orange-tawny Carnation as producing seed in this country much freer than any other kind of Carnation, and from which he says numerous varieties were raised.

This author enumerates by name forty-nine kinds of Carnations that were cultivated in the time of Charles I., whose queen was excessively fond of flowers; but although it appears that varieties were then procured from France and other parts of the continent, yet the largest

and principal kind of Carnation was then distinguished by the name of The Old English Carnation.

During the civil commotions of the latter part of the reign of Charles I. and of the Commonwealth, this flower seems to have been nearly lost in England, as Mr. John Rea remarks, in the "*Flora*" which he published in 1665, that we had formerly many good kinds, but that few of them were then to be found in any of our gardens. The Dutch had then taken up the cultivation of the Carnation, and we renewed our gardens with these flowers from Holland during the reign of Charles II., as Rea observes, "Of these Dutch flowers I have known more than a hundred distinct varieties, by several names, all of them fair, large, and double flowers." He also remarks, that these plants were not so hardy as those that had been formerly cultivated in England. In a latter edition of Mr. Rea's *Flora*, three hundred and sixty good sorts of Carnations are enumerated; and to show how high this flower was in the estimation of that author, we give his own words:—

“ For various colours Tulips most excel,
 And some Anemonies do please as well,
 Ranunculus in richest scarlets shine,
 And Bear's Ears may with these in beautie joyn :
 But yet if ask and have were in my power,
 Next to the Rose give me the Gilliflower.”

As the Carnation possesses some advantages even over the queen of flowers, we rejoice to see its cultivation increasing in this country, and it is generally admired as the pride of summer flowers. In the vicinity of Paris it is cultivated to such an extent that the flowers are frequently brought to market in quantities, and we have known a whole side of the large Marché de Halles perfumed with the fragrance of the Carnation bouquets, which les dames de Halle were offering to each passenger for a few sous, whilst the agreeable Marché aux Fleurs was at the same time covered with these plants in pots, for the purpose of decorating the courts of the hotels.

The advantage of the Carnation over the Rose, when cut as an ornament for apartments, is its long continuance of beauty, when placed in vases of water or wet sand. When placed in water, a small piece of nitre should be added, and the water should be changed every day, and a small piece of the flower stalks cut off each time of giving fresh water, which will prolong their freshness for a considerable length of time. It is as common to see large vases filled with these flowers in the retail shops of Paris during the summer season, as it is to find fires in the London warehouses during the winter months.

WEeping ROSES.

THE Alpine or Boursault Roses are very distinct from all others. The shoots are long, flexible, very smooth, in some instances entirely free from thorns; the one side often of a pale green, the other of a reddish tinge; the eyes are formed further apart than common. The

flowers are produced in large clusters. By these features the varieties of this group are readily distinguished. The Boursault Roses, though of vigorous growth, are not of a sufficiently pendulous habit to make perfect "Weeping Roses" without assistance from the cultivator. When desired to be formed into such, the branches should be drawn to the ground with tar-twine, or twisted bast, when the immense trusses of flowers they bring forth give to the tree an appearance truly gorgeous. One inducement to grow them in this manner is, that most roses of a pendulous growth produce pale-coloured flowers, and these introduce a charming variety among Weeping Roses; for the Boursault are mostly purple or crimson. Besides forming good Weeping Roses, they are fine grown either on pillars or on fences, with a northerly aspect; a situation where few other kinds succeed well. They are very hardy, and will bloom well in situations where they scarcely obtain a gleam of sunshine. Boursault Roses should be well thinned out in pruning; but the shoots that are left for flowering should be shortened-in very little.

HORTICULTURAL SOCIETY'S FLORAL EXHIBITION.

(Continued from page 181.)

PELARGONIUMS (Seedlings, 1849).

Beza (Hoyle).—Upper petals very dark, with a fiery crimson margin; lower, rosy-red; a second-rate flower.

Flying Dutchman (Gaines).—Upper petals a dark blotch, shading off with light-crimson; lower, rosy-pink.

Pindurus (Beck).—Upper petals a dark blotch, shading off with crimson-red; lower, rosy-purple; flower, white centre. The upper petals are wavy at the margin. Pretty, but only a second-rate flower.

Rosa (Beck).—Upper petals a dark blotch, shading off with scarlet; lower, a light rosy-scarlet.

Major Domo.—The flower is very large. The upper petals having a large dark spot, shading off to a light margin; lower, rosy-crimson; centre, white. Its size renders it very striking, but, in form, it is only of second-rate.

Diana (Beck).—Upper petals a large blotch, shading off with crimson to a light margin; lower, flesh-colour; centre, white. The surface of the flower is crumpled. It is a third-rate only.

Electra (Gaines).—Upper petals a large dark blotch; lower, a flesh-pink; centre, white. It is very pretty, but the petals are thin at the margin.

Blaza (Beck).—Upper petals nearly black, with a crimson margin; lower, rosy-scarlet. The upper petals are very uneven and wavy.

Magnificent (Foquett).—Seedling of 1848. Upper petals a large dark blotch, shading off with a scarlet margin; lower, rosy-scarlet, with a slight tinge of violet; centre, white. It is very handsome, and of good form.

Firefly (Beck).—Upper petals scarlet, with a dark blotch; lower,

rosy-scarlet. The upper petals are very irregular. A third-rate flower.

Gloriana (Beck).—Upper petals a large dark blotch, with fiery crimson margin; lower, scarlet, with a tinge of purple at the centre. The upper petals are wavy. A second-rate.

Pontiff.—Upper petals a large very dark blotch, edged with deep scarlet; lower, a rich scarlet. The petals are thin, what are termed flimsy, but it is a very showy variety, the flower is nearly three inches across.

Flavis (Hoyle).—A rich scarlet, slightly tinged with violet at the centre, and the upper petals a large dark blotch. A first-rate flower, and very showy.

Christabel (Hoyle).—Upper petals a large dark blotch, shading off with crimson, and the margin lighter; lower, flesh-colour; centre, white. A first-rate flower.

Nonsuch (Hoyle).—A seedling of 1848. Upper petals a large dark blotch, the next crimson belted, with a light margin; lower petals pink, and each has a very distinct crimson spot at the middle of the petal. Good form, and very pretty.

Barker's Seedling Scarlet Geranium (or Fire Queen).—This splendid variety was not brought to the exhibition, but we lately saw it in bloom. A single truss of flowers was shown us by Mr. Baker, which contained the enormous number of two hundred and sixty one flowers, not all expanded. The flowers are large, forming very near an entire ball, petals of thick substance, and of a brilliant rich scarlet. It will be offered for sale towards the end of summer, and deserves to be in every collection of this valuable tribe of flowers. We have not seen another variety to equal this.

SEEDLING FANCY PELARGONIUMS of 1849.

La Coquette (Ambrose).—Upper petals a dark blotch, with a white margin; lower, white, with a slight spot. Of good form.

Belle Marie (Ambrose).—Upper petals a dark blotch, belted with a white margin; lower, white, with a crimson spot at the middle of each petal. Second-rate form.

Venustum (Ambrose).—Upper petals dark, with a clear white margin; lower, white, with a purple veined band across the middle of each petal. Very good form.

Nimrod (Gaines).—A pretty rosy crimson, with a white margin.

Madame Rosate (Gaines).—Upper petals white, with a large rosy-violet spot, and a white margin; lower, white, with a violet spot at the middle of each petal. Very showy and pretty.

Murio.—Upper petals dark maroon, with a slight white margin; lower petals similar colour. Third-rate.

Madame Alboni.—Upper petals white, with rosy-crimson blotch, and white margin; lower, white. Third-rate.

Pauline.—Upper petals white, with dark spot, and a white margin; lower, white, with a dappled band of rose across the middle of each petal. Third-rate.

Delight.—Upper petals a bright rosy-purple, lighter towards centre; lower, white, with a violet band across each petal. Second-rate.

Carlotti Grisa (E. Henderson).—Upper petals a large dark blotch, with a violet tinge at the centre, and a white margin; lower, white, with a band of slight rose across each petal. Second-rate.

Beauty of St. John's Wood (E. Henderson).—Upper petals rosy-crimson, with a white margin; lower, white tinged with lilac, and a deeper coloured spot at the centre of each petal.

Alice Lawton (E. Henderson).—Upper petals all dark, with a white margin; lower, white, with a band of dark crimson across the middle of each. First-rate form.

Beauty of Chiswick.—The flower a dark maroon, with a white margin, and the middle nearly white. Second-rate.

COLLECTIONS OF PELARGONIUMS.

In eight-inch pots, six dissimilar varieties.—*Amateurs*: 1. Mr. Cock, Chiswick, for Centurion, Salamander, Pearl, Sikh, Rosamund, and Pictum; 2. Mr. Robinson, gardener to J. Simpson, Esq., Pimlico, for Pearl, Sarah, Forget-me-not, Negress, Beauty of Clapham, and Rosette Superb; 3. Mr. Staines, Middlesex-place, New-road, for Pericles, Norah, Miss Holford, Forget-me-not, Pearl, and Chimborazo. Six varieties, in eleven-inch pots: 1. Mr. Parker, Roehampton, for Isabella, Zenobia, Sir Robert Peel, Orion, Matilda, and Margaretta; 2. Mr. Cock, for Negress, Bertha, Orion, Hebe's Lip, Forget-me-not, and Sylvia; 3. Mr. Wiggins, gardener to J. Saunders, Esq., Staines, for Augusta, Duke of Cornwall, Rosy Circle, Champion, Mustee, and Lady Essex.—*Nurserymen*. Six varieties in eight-inch pots: 1. Mr. Dobson, gardener to Mr. Beck, of Isleworth, for Star, Delicatissima, Princess, Rosamund, Cassandra, and Centurion; 2. Mr. Gaines, of Battersea, for Aspasia, Duke of Northumberland, Forget-me-not, Talisman, Salamander, and Marian. Six varieties in eleven-inch pots: 1. Mr. Beck, for Cruenta, Star, Aurora, Gustavus, Cinderella, and Cassandra; 2. Mr. Gaines, for Milo, Negress, Miss Holford, Orion, Xarifa, and Duke of Cornwall.

FANCY VARIETIES.

1. Mr. Ambrose, of Battersea, for Empress, Anaias, Jenny Lind, La Belle d'Afrique, Queen Victoria, and Defiance; 2. Mr. Gaines, for Hero of Surrey, Statuiski, Lady Flora, Ibrahim Pacha, Reine de Français, and Mulatta; 3. Mr. Robinson, for Nosegay, Empress, La Belle d'Afrique, Queen Victoria, Yeatmanianum grandiflorum, and Anaias; 4. Mr. Staines, for Queen, Lady Flora, Madame Miellez, Ibrahim Pacha, Statuiski, Yeatmanianum, and grandiflorum.

CAPE PELARGONIUMS.

1. Mr. Stanly, gardener to H. Berens, Esq., for echinatum (spotted purple), tricolor, ardens, reniforme, flexuosum, and bicolor; 2. Mr. Barker, for tricolor, flexuosum, erectum, bipinnatifidum, bicolor, and ardens; 3. Mr. Staines, for laciniatum, ardens, flexuosum, bipinnatifidum, quinquevulnera, and Blandfordianum.

CALCEOLARIAS.

1. Mr. Gaines, for Cavalier, Gustavus, Prima Donna, Bianca, Don Juan, and Eclipse; 2. Messrs. Henderson and Co., Pine-apple-place, Miss Rattray, Duke of Rothsay, Black Agnes, Dr. Neill, Lucy Ashton, and Catherine Seaton.

RANUNCULUSES.

Beautiful exhibitions of these interesting flowers, though in some instances hardly sufficiently blown, were sent by Mr. Tyso, of Wallingford, and Mr. Costar, of Benson; Mr. Tyso showed two stands of fifty fine blooms each, among which were specimens of his superb seedling varieties named Flaminius, Enchantress, Emerald, Arbitrator, Pleaser, Delectus, Alexis, Exhibitor, Dædalion, Minios, Amasis, Victor, Festus, Brunel, and Edwin; Lightbody's Herald and Dr. Channing; Kilgour's Queen and Princess Royal; also Apollo, Eliza, Horatio, and Dido, raisers not stated. Mr. Costar showed forty-eight blooms, including some good flowers of Napier, Porsenna, Extasy, Moulton, Lancet, and Coronation.

THE ANTIRRHINUM, OR SNAP DRAGON.

THIS singular and handsome flower is made the emblem of presumption, from its monopetalous (being formed of one petal) corolla forming a mask, which resembles the face of an animal, and it has from that circumstance received various names, as Dog's Mouth, Lion's Snap, Toad's Mouth, Cat's Eye, and Snap Dragon, from the resemblance of the flowers when expanded to an open mouth, which is seen by pressing the sides it opens like a mouth, the stigma appearing to represent the tongue; on removing the pressure the lips of the corolla snap together, and hence its name. It is also called Calf's Snout, from the form of its seed vessel, hence *Antirrhinum* from *anti*, similar, and *rhin*, snout.

It is a flower which we cannot examine without admiring how wonderfully it is formed and adapted for the bleak situations in which it grows naturally, as on the highest rocks, or out of the crevices of the most exposed cliffs, or the chinks of the loftiest towers. In all of these situations its parts of fructification are guarded against the tempest by the singularly shaped corolla, which defies either wind or rain to enter until impregnation has taken place, when the mask falls off to allow a free access of air to the seed vessel.

It is now generally considered to be a native of this country, growing wild on the coasts of Sussex and Kent, particularly on the cliffs and hills of Dover. In every situation it is an elegant flower, but by cultivation is so much improved that plants have been grown seven feet high, and four feet in diameter.

The attention of florists has been recently given to raising improved hybrids, and now we have a number of strikingly handsome varieties highly deserving a place in every flower garden.

They are very easy of cultivation, flourishing in a good rich loam, and supplying them liberally with water in dry weather.

In order to have a display of these pretty flowers from the beginning of May to November two plantings must be made.

Plants put out about the middle of March begin to bloom by the first week in May, and will do so in vigour till the end of July. Those planted out towards the end of June begin to bloom early in August, and will continue to the end of the season.

In order to have a proper supply of plants they should be provided in pots. *Young* plants should be planted out, they strike very freely from cuttings of the *side* shoots, three or four inches long, cutting them close under a joint, and inserting them in a compost of equal parts of sand and loam, in a shady border, covering them with a hand glass, or, if in pots, with bell-glasses. When potted off singly and begin to grow, the leading shoots should be stopped to make them bushy. Such plants, well rooted and bushy, should be provided for during the winter, and they should be kept in a dry cool frame or pit. The old blooming plants should never be depended upon for enduring winter and blooming a second year. Seed sown in pots, and the plants transplanted out, or sown thinly in the open ground, soon come into bloom, and scarcely will there be two alike; it is interesting to examine the variety and make selections.

The following are the best varieties we have seen:—

GARLAND: tube white, mouth yellow, lips white ground, striped and spotted with deep purple.

IBRAHIM PASHA: ground white, mouth yellow, lips and tube striped crimson-purple.

VICTORY: white ground, yellow mouth, and lips striped with purple.

MADONNA: white ground, yellow mouth, flower striped and spotted with purple.

CALYPSO: tube white, yellow mouth, and pretty lilac-blush lips.

STRIPED PERFECTION: white ground, striped and spotted with purple.

ENTERPRIZE: white spotted, and striped with carmine.

PAWSEYANA: light ground, yellow mouth, with broad stripes of crimson-red.

PRIMA DONNA: white tube striped with purple, yellow mouth, and the lips dull sulphur, with stripes of purple and crimson.

FAIR MAID: tube and mouth pure white, lips a beautiful lilac-pink.

LUTEA IMPROVED: pretty sulphur and yellow.

CRIMSON KING: splendid crimson, large.

HARLEQUIN: blush ground, striped with carmine.

CHLOE: pure white.

CONSTELLATION: light ground, heavily striped and spotted with rosy-pink.

MAIDEN'S BLUSH: rosy lilac, with a white mouth.

QUEEN OF THE WHITES: pure white, large.

SURPLUS: bright yellow, with white mouth, pencilled and veined with dark claret.

PRAIRIE BIRD: white tube, with sulphur mouth, lips blush-lilac, veined with rosy-red.

UNIQUE: purple ground colour, with broad stripes of white.

GRANDIS: light ground, striped with pink.

HOTSPUR: white, with yellow mouth, striped and spotted with purple-crimson.

VILLAGE MAID: white tube and mouth, with purple lips.

VIRGIN QUEEN: white tube, with a yellow mouth, lips white, marbled with lilac.

DELIGHT: tube white, with yellow mouth, lips white ground, veined with purple.

MODEL OF PERFECTION: tube white, streaked with rose, mouth yellow, lips finely veined with red.

SPECKLE MUNDA: tube and mouth white, lips prettily spotted with rose.

COMMANDER-IN-CHIEF: tube lilac-purple, mouth yellow, lips bronze, streaked with brown.

QUEEN VICTORIA: light ground, yellow mouth, blotched with carmine.

COSSACK: yellow ground, beautifully pencilled with red.

THE GREAT NORTHERN OPEN TULIP SHOW.

THIS rich display of superb Tulips was exhibited in the Guildhall, at York, on May 29th. The Committee made every desirable arrangement for the show, and about seventy professional florists attended and 75*l.* was distributed as prizes. The following is the list of the successful exhibitors and flowers:—

List of Exhibitors.—Mr. Slater, Manchester; Mr. Summers, York; Mr. J. Battersby, Mansfield; Mr. Merryweather, York; Mr. Bell, York; Mr. William Turner, Haslingden; Mr. Burnett, York; Mr. Chippendale, Enfield; Mr. James Hardman, Worsley; Rev. S. Cresswell, Nottingham; Mr. R. Houseman, Oakenshaw; Mr. E. Hodgson, Great Harwood; Dr. Horner, Hull; Mr. Hinchcliffe, Halifax; Mr. Thornley, Heaton Norris; Mr. Parkinson, Derby; Mr. J. Hepworth, Huddersfield; Mr. Gibbons, Derby; Mr. J. Smith, Derby; Mr. S. Bromley, Macclesfield; Mr. Thomas Beighton, Sheffield; Mr. Spencer, Thurleston, near Derby; Mr. Thomas Amson, Congleton; Mr. John Cato, Wakefield; Messrs. William Chadwick, J. Brama, J. Hopwood, J. Mallinson, Scholefield, and J. Smith, of Leeds; Mr. J. Gill, Wakefield; Mr. William Astle, Melbourne, Derbyshire; Mr. James Morris, Bolton-le-Moors; Mr. J. Peacock and Mr. J. Naylor, Denton; Messrs. Hart, Stockport; Messrs. Archer and Green, Sheffield; Mr. Dixon, Manchester; Messrs. Prescott and Wilcock, Lowton; Mr. W. Backhouse and Mr. W. Smith, Darlington; Mr. J. Weatherall, Darlington; Mr. J. Walker, Mansfield; Mr. Stephens, Leeds; Mr. Coundon, Sunderland.

Pans of six Rectified Tulips.—1. Mr. Thornley, for Heroine, Charles X., Gibbons' Seedling, Rose Elegans, Polyphemus, and Princess Royal; 2. Mr. Spencer, for Magnum Bonum, Baguet, Heroine, Catafalque, Queen Charlotte, and Triumph Royal; 3. Mr. Thomas Wilcock, for Charles X., Polyphemus, Bienfait, Alexander Magnus, Heroine, and Triumph Royal; 4. Mr. Hepworth, for Charles X.,

Donzelli, David No. 1, Baguet, Count de Vergennes, and Aglaia; 5. Mr. Prescott, for Polyphemus, Walworth, Waller's Violet, Lord Lilford, Mungo, Heroine; 6. Mr. Gibbons, for Magnum Bonum, Midland Beauty, Heroine, Triumph Royal, Purple Perfection, and Captain White.

Pans of three Breeder Tulips.—1. Mr. R. Dixon, for Lightbody's 20, Marmion, Mozambique; 2. Mr. J. Smith, for Duke of Devonshire, Amelia, Unknown; 3. Mr. Slater, for Demosthenes, Marcus Manlius, Agnes Beaumont; 4. Mr. Thornley, three Gibbons' Seedlings; 5. Mr. Gibbons, for Prince Albert, Seedling, Catherine; 6. Mr. Parkinson, Seedling, Britannia, Catherine.

Pans of three Chellaston Breeders.—1. Mr. Naylor (no name); 2. Mr. Hopwood, for Competitor, Maid of Orleans, and Anastasia.

SINGLE SPECIMENS.

Feathered Bizarres.

1. Royal Sovereign, Mr. Summers.
2. Magnum Bonum, Mr. Spencer.
3. Duc de Savoy, Mr. Spencer.
4. Surpass Catafalque, Mr. Brama.
- *5. Lord Lilford, Mr. Naylor.
6. Prince Albert, Mr. Summers.
7. Sanzio, Mr. Backhouse.
- *8. Nourri Effendi, Mr. Thornley.
9. Optimus, Mr. Spencer.
10. Crown Prince, Mr. Smith.

Flamed Bizarres.

1. Polyphemus, Mr. Spencer.
2. Captain White, Mr. Spencer.
- *3. Caliph, Mr. Mallinson.
4. Duke of Lancaster, Mr. Chippendale.
- *5. Pilot, Mr. Gibbons.
6. Shakspeare, Mr. Hepworth.
7. Morning Star, Mr. Naylor.
8. Lord Stanley, Mr. Prescott.
9. Paganini, Mr. Houseman.
10. Rufus, Mr. Hopwood.

Feathered Byblæmens.

1. Gibbons' Seedling, Mr. Battersby.
- *2. Edgar, Mr. Naylor.
3. Bienfait, Mr. Bromley.
4. Lewold, Mr. Slater.

5. Baguet, Mr. Thornley.
6. Incomparable, Dr. Horner.
7. Gibbons' Seedling, Mr. Thornley.
8. Lord Durham, Mr. Bromley.
9. Amb. de Holland, Mr. Prescott.
10. Maitre Partout, Mr. Summers.

Flamed Byblæmens.

1. Bacchus, Mr. Bromley.
2. Violet Alexander, Mr. Astle.
3. Sable Queen, Mr. Bromley.
4. Grisdelin Noir, Mr. Hardman.
5. Princess Royal, Rev. S. Cresswell.
6. Waller's Violet, Mr. Hardman.
7. Incomparable, Mr. J. Smith.
8. Alexander Magnus, Mr. Hepworth.
9. Baguet, Mr. Merryweather.
10. Princess Charlotte, Mr. Astle.

Feathered Roses.

1. Heroine, Mr. Parkinson.
2. Joan of Arc, Mr. Naylor.
3. C mte, Mr. Turner.
4. Hero of Nile, Mr. Prescott.
5. Lady Crewe, Mr. Chippendale.
6. Newcastle, Mr. Hepworth.

* These were superb specimens.

7. Walworth, Mr. Astle.
8. Bion, Mr. R. Dickson.
9. Dolittle, Mr. E. Scholefield.
10. Mrs. Mundy, Mr. Archer.

Flamed Roses.

1. Aglaia, Mr. Hopwood.
- *2. Triumph Royal, Dr. Horner.
3. La Van Dikken, Mr. Chippendale.
4. Lady Wilmot, Mr. Gibbons.
5. Rose Camillus, Mr. Battersby.
6. Rose Unique, Mr. Peacock.
7. Walworth, Mr. Prescott.
8. Vesta, Mr. Hardman.
9. Rose Amelia, Mr. Scholefield.
10. Grand Rose Desire, Rev. S. Cresswell.

Bizarre Breeders.

1. Seedling, Mr. Hepworth. •
2. Pilot, Mr. Dixon.
3. Unknown, Mr. Gill.

Premier Rectified Tulip.—Mr. Thornley, for Gibbons' No. 45.

Premier Breeder Tulip.—Mr. Naylor, for Gibbons' Bizarre Breeder.

4. Gibbons' Seedling, Mr. Parkinson.
5. Arden, Mr. Peacock.

Byblæmen Breeders.

1. Britannia, Mr. Peacock.
2. Gibbons' Seedling, Mr. Peacock.
3. Unknown, Mr. Gill.
4. Sancta Sophia, Mr. Chadwick.
5. No. 13, Mr. Walker.

Rose Breeders.

1. No Name, Mr. Astle.
2. Gibbons' Rose, Mr. Dixon.
3. Ruttley's Rose, Mr. Peacock.
4. Gibbons' Rose, Mr. Bramma.
5. Gibbons' Rose, Mr. Peacock.

Selfs.

1. Min d'Or, Mr. Merryweather.
2. Cotherstone, Mr. J. Smith.
3. Seedling white, Mr. Hinchcliffe.

TULIP SHOW HELD ON MAY 19TH, AT BEDFORD, NEAR LEIGH,
LANCASHIRE.

Factory Prize (kettle).—T. Belshaw, for Rose Unique, Walworth.

Maiden Grower's Prize (kettle).—1. T. Belgrave, Crown Prince, Bienfait, Toot, Walworth, Unique, Ridey; 2. G. Mort, for George IV., Lustre, Surpass Lacantique, Bienfait, Count, Unique.

Steward's Prize.—1. A. Blackbury, for George IV., Lustre, Bienfait, Bienfait, Count, Rose Unique; 2. R. Ratcliffe, for George IV., Lustre, Winner, Bienfait, Count, Unique; 3. J. Eaton, for Gold Buers, Lustre, Bienfait, Bienfait, Rose Vesta, Rose Regina; 4. J. Postlethwate, for Pass Catafalque, Lustre, Lancashire Hero, Toot, Count, Newcastle; 5. R. Glegg, for George IV., Lustre, Bienfait, Wallers, Count, Unique; 6. W. Leather, for Crown Prince, San Joe, Winner, Bienfait, Count, Unique; 7. A. Belshaw, for Crown Prince, Lustre, Bienfait, Bienfait, Count, Regina; 8. R. Prescott, for Crown Prince, Lustre, Bienfait, Bienfait, Unknown, Unique; 9. W. Leather, for George IV., Surpass Lacantique, Grand Turk, Bienfait, Count, Unique; 10. J. Monks, for Trafalgar, Lustre, Mango, Roi de Siam, Dolittle, Unique; 11. P. Rosbotham, for Surpass Catafalque, Lacantique, Winner, LaBelle Narene, Count, Regina; 12. W. Battersby, for Lord Melbourn, Duke of Devonshire, Bienfait, Adelaide, Count, Vesta.

* This was a superb specimen.

Feathered Bizarres.

1. Magnum Bonum, A. Blackburn.
2. Surpass Catafalque, ditto.
3. Crown Prince, R. Clegg.
4. Trafalgar, G. Mort.
5. Wellington, ditto.
6. General Blucher, J. Postlethweate.
7. Firebrand, A. Blackburn.
8. Waterloo, J. Postlethweate.
9. Gold Buers, S. Moss.
10. Old Lacantique, G. Mort.

Flamed Bizarres.

1. Turner's Bizarre, J. Postlethweate.
2. Lustre, R. Ratcliffe.
3. Surpass Lacantique, J. Bromelow.
4. Crown Prince, W. Lythgoe.
5. Carlos, R. Ratcliffe.
6. Albion, J. Eaton.
7. Liberty, P. Rosbotham.
8. Dutch Catafalque, J. Eaton.
9. Pilot, R. Ratcliffe.
10. Sutheran's Britannia, J. Eaton.

Feathered Byblæmens.

1. Winner, R. Prescott.
2. Washington, ditto.
3. Bienfait, R. Clegg.
4. Mungo, A. Blackburn.
5. Ambassador, ditto.
6. Prince, W. Leather.
7. Burdoe, J. Postlethweate.
8. Incomparable, J. Eaton.
9. Toot, A. Blackburn.
10. La Belle Narene, G. Mort.

Flamed Byblæmens.

1. Bienfait, G. Mort.
2. Wallers, A. Belshaw.
3. Sable Rex, R. Prescott.
4. Toot, T. Belshaw.
5. Incomparable, W. Leather.
6. Baguet, J. Eaton.
7. Eagle Noir, J. Thompson.

8. Fuddler, J. Postlethweate.
9. Winner, ditto.
10. Unknown, R. Prescott.

Feathered Roses.

1. Seedling Rose, A. Blackburn.
2. Andromeda, R. Clegg.
3. Dolittle, A. Blackburn.
5. Walworth, ditto.
5. Count de Vergennes, R. Ratcliffe.
6. Triumph Royale, R. Clegg.
7. Lady Crewe, W. Leather.
8. Lady Lilford, W. Battersby.
9. Unknown, R. Clegg.
10. Ditto, W. Lythgoe.

Flamed Roses.

1. Unique, G. Mort.
2. Regina, P. Rosbotham.
3. Andromeda, R. Prescott.
4. Roi de Cerise, W. Leather.
5. Rose Ann, W. Lythgoe.
6. Vesta, P. Rosbotham.
7. Lady Lilford, R. Prescott.
8. Matilda, W. Lythgoe.
9. Lord Hill, ditto.
10. Lady Crewe, P. Rosbotham.

Rose Breeders.

1. Lady Lilford, J. Postlethweate.
2. Andromeda, A. Blackburn.
3. Lady Crewe, R. Prescott.
4. Unknown, J. Monks.

Bizarre Breeders.

1. Charbonnier, J. Postlethweate.
2. Polly, R. Clegg.
3. Dutch Catafalque, J. Postlethweate.
4. Truth, James Monks.

Byblæmen Breeders.

1. Lancashire Hero, E. Blackburn.
2. 71, G. Mort.
3. Beauty, R. Prescott.
4. Unknown, J. Postlethweate.

ROYAL SOUTH LONDON FLORICULTURAL SOCIETY'S EXHIBITION

Was held at the Surrey Zoological Gardens, on the 25th of July. It was what is usually denominated the Carnation and Picotee Show. The collections of these beautiful flowers were numerous, and the specimens exhibited were of first-rate excellence, several of the stands being much superior in size and excellence to any we ever previously saw. It was a rich treat to have so many fine specimens brought together for inspection, and would amply repay for a long journey to see them. We feel great pleasure in remarking that the collections of plants, specimens, &c., have this season generally been of a superb character, well grown, and finely bloomed, very considerably in advance of former years. The liberality of the Society, and the proprietor of the gardens, in permitting the Floral Exhibition, the objects in the collection of the gardens, and the other entertainments, at the very reasonable charge of one shilling, deserves the gratitude and increased encouragement of the public; we hope we shall have the pleasure to see it successively realized.

We have not space for an entire account of the plants and flowers in our present number, but give the pets of the day.

FLORISTS' (Dealers) CARNATIONS.—*1st Stand of 24.* Flora's Garland, Puxley's Queen, Holliday's No. 6, Ely's Lord Milton, Hepworth's Hamlet, Wakefield's Paul Pry, May's Lorenzo, May's Antonia, Hale's Prince Albert, Ariel, Earl Spencer, Count Pauline, Mercutio, May's Seedling Purple, Holyoake's Dido, Beauty of Woodhouse, Martin's Splendid, May's Seedling, Puxley's Prince Albert, Admiral Curzon, Puxley's Princess Royal, Holliday's Lord Rancliffe, Young's Twyford Perfection.—Mr. TURNER of Slough.

2nd Stand of 24. Flora's Garland, Count Pauline, President, Paul Pry, Duke of Wellington, La Destine, Twitchett's Don John, Ely's Lady Ely, Puxley's Prince Albert, Puxley's Queen of Roses, Puxley's No. 84, Ward's Sarah Payne, Bishop of Gloucester, Puxley's Jolly Tar, Roi de Feu, Oriflamme, Mulck Adhet, Earl of Litchfield, Jacques's Glorianne, Squire's Defiance, Martin's Splendid, Squire Meynell.—Mr. BRAGG of Slough.

3rd Stand of 24. Wilson's Duke of York, Ariel, Addenbrook's Lydia, Squire Meynell, Hugo Meynell, Hale's Prince Albert, Wilson's Harriett, Lord Middleton, Kerr's Majestic, Puxley's Prince Albert, Bright Phœbus, Puxley's Queen Victoria, Ely's John Wright, Strong's Duke of York, Beauty of Brighthouse, Flora's Garland, Beauty of Woodhouse, Puxley's Queen of Roses, Cartwright's Rainbow, Colcut's Brutus, Taylor's Lord Byron, Colcut's Juba, Jacques's Georgiana, Turner's William Penn.—Mr. WARD of Woolwich.

4th Stand of 24. Flora's Garland, Colcut's Brutus, Puxley's Prince Albert, Strong's Duke of York, Wilmer's Defiance, Grey's Mary, Huntsman, Jackson's Squire Trow, Sealy's Princess Royal, Pond's Lady of the Lake, Prince de Nassau, Ariel, Count Pauline, Admiral Curzon, Taylor's Marquis of Westminster, True Briton, Ward's Sarah Payne, Young's Double X., Marquis of Chandos, Beauty

of Woodhouse, Wilmer's Venus, Ely's Duke of Bedford, Hardwick's Fire Ball.—Mr. WILMER of Sunbury.

5th Stand of 24. Hepworth's Antagonist, Puxley's Princess Royal, Hale's Prince Albert, Squire Meynell, Jacques's Georgiana, Hardwick's Firebrand, Lord Byron, Hepworth's Vivid, Flora's Garland, May's Caliban, Ariel, Well's Queen Adelaide, Wilmer's Telamachus, Simpson's Queen Victoria, Beauty of Woodhouse, Tam O'Shanter, Ely's Lovely Ann, Giddins' Sir Robert Peel, Martin's Splendid, Ward's Sarah Payne, Headley's Royal Chancellor.—Mr. NORMAN of Woolwich.

FLORISTS' (Dealers) PICOTEES.—*1st Stand of 24.* Edmond's Ernest, Wildman's Isabella, May's Juliet, Burroughs' Duke of Wellington, Marris's Prince Albert, Burroughs' Lorena, May's Olivia, Barnard's Mrs. Barnard, Marris's Prince of Wales, Cox's Regina, Green's Queen Victoria, Holliday's Marquis of Exeter, Headley's Venus, Matthew's Enchantress, Burroughs' Lady Alice Peel, Wilmer's Princess Royal, Kirtland's Pride of the Village, Holliday's Queen of Roses, Lady Harriett Moore, Jessica, Burroughs' Amy, Headley's King James, Edmond's Jenny Lind, Youell's Gem.—Mr. TURNER of Slough.

2nd Stand of 24. Garret's Lady Dacre, Mrs. B. Norman, Amy, Headley's Ariel, Marris's Princess Royal, May's Juliet, Headley's King James, Cox's Regina, Holliday's Delicata, Hudson's Unique, Duke of Newcastle, Gem, Norman's 1849, Mr. Barnard, May's Portia, Headley's Captivation, Barraud's Bride, Sharp's Elegance, Nicklin's Fair Ellen, Norman's James II., Wildman's Isabella, Norman's Rufus, Burroughs' President, Edmond's Jenny Lind.—Mr. NORMAN of Woolwich.

3rd Stand of 24. Burroughs' Mrs. Bevan, Edmond's Clara, Amy, Isabella, Burroughs' No. 22, Miss Fanny Irby, May's Olivia, Juliet, May's Sebastian, Vespasian, Portia, Burroughs' Binlet, Edmond's Jenny Lind, Crask's Queen Victoria, L'Elegance, Venus, Gem, Ivanhoe, Sharp's Duke of Wellington, Wilmer's Princess Royal, Edmond's Prince of Wales, President, Nimrod, King James.—Mr. BRAGG of Slough.

4th Stand of 24. Headley's Venus, Mrs. Bevan, Princess Royal, Lady Dacre, Marris's Princess Royal, Sir W. Middleton, Miss Jane, Mr. Trahee, Gem, Juliet, Miss Fanny Irby, Ward's 49, Isabella, Giddins' Diana, Lady Alice Peel, King James, President No. 2, Alterdan, Mrs. Barnard, Jenny Lind, Regina, Duke of Wellington, Brinlow's Purple Perfection.—Mr. WARD of Woolwich.

YELLOW PICOTEES.—*1st Stand of 6.* Hoyle's Mount Etna, Barraud's Euphemia, Martin's Queen, Countess of Ashburnham, Tinsley's George III., Hoyle's Topaz.—Mr. NORMAN of Woolwich.

2nd Stand. Queen of Yellows, Napoleon, Malay Chief, Martin's Queen Victoria, Bragg's Novelty, Euphemia.—Mr. BRAGG of Slough.

3rd Stand. Euphemia, Coronation, Martin's Queen Victoria, Malay Chief, Prince of Orange, John Edwards.—JOHN EDWARDS, Esq.

4th Stand. Martin's Queen Victoria, Merope, Coronation, Half-acres Queen, George III., Romulus.—J. W. NEWALL, Esq.

HOLLYHOCKS.—A collection of very superb varieties. A long stem of the flowers of each was shown:—

Comet, dark crimson; Purpurea elegans; Mulberry superb; Sul-

phurea perfecta ; Queen, a beautiful light, with dark centre ; Napoleon, orange and red ; Pallida, peach and lilac ; Black Prince, a deep black, fine form too ; Magnum Bonum, a rich maroon of immense size ; Formosa, a light crimson-red.—By Mr. CHATER.

(To be continued.)

YELLOW ROSES.

SOME disputes have lately occurred at the London floral shows relative to the kinds of Roses which properly may be ranked of that class. Mr. William Paul, in an article inserted in the Magazine of Gardening, has arranged them into two sections—the pure yellows, and the shaded yellows. To the first belong the Persian Yellow, Harrisonia, Yellow Briar, and Single Yellow Austrian, also the old Double Yellow. To the second section belong the following, which are the yellowest in it, viz. :—Of the Tea-scented, Abricote, Aurora, Cleopatra, Devoniensis, Eliza Sauvage, Jaune, Moiret, La Renomme, Mirabile, Pellonia, Princess Adelaide, Safran, Smith's Yellow, and Viscomtesse de Cazes ; of the Noisettes there are, Clara Wendel, *Cloth of Gold, *Desprez. Euphrosyne, *Lamarque, La Pactole, *Solfaterre, all partaking somewhat of the nature of the Tea-scented. All the kinds enumerated do best grown in pots, except those marked with an asterisk, being liable to injury by exposure to frost. Loam and leaf mould, or old pulverized rotten manure, forms a suitable compost, and close pruning is essential to vigour. The plants to be kept in a pit, frame, or greenhouse, during winter and spring, and during summer and autumn the pots are sunk in the open ground. Those marked are vigorous growers, are very suitable to be trained to a wall or the pillars of a greenhouse, conservatory, &c. The yellow Banksian Rose, and Jaune Serin of the same class of Roses, both do well against a wall. The latter of the two is more double and a deeper colour. As we have several times remarked in our Magazine, these roses must be pruned in summer, cutting out all surplus shoots, and only securing to the wall as many as will properly cover it, in a similar manner as is done in summer pruning and arranging a Peach tree. This operation should be performed about midsummer, or as early after as possible. The Persian Yellow requires particular attention in pruning. The main shoots should only have the mere tips cut off, as the flowers are produced from the buds near their tops, and all the buds lower down only wood shoots. The blooming buds towards the summit are somewhat closely set, and it is advisable to rub some of them off, and this contributes to the vigour of the bloom.

Whatever manure is added to the soil it must be in a perfect decomposed state. It flourishes in a compost of turfy loam mixed with one-eighth each of lime, river sand, and leaf mould.

It is a fine sort for pot culture, too, six plants having borne five hundred healthy flower buds. The head of each plant was trained to an umbrella shape, a wire being put round the rim of the pot, and the shoots drawn downwards and so secured.

The Harrisonia Rose should be treated as the above, except when pruned it must be thinned more. It blooms most profusely, and deserves, with the Persian Yellow, to be in every collection.



FLORAL
OPERATIONS FOR THE MONTH
IN THE FLOWER GARDEN.

ALL the operations in this department, as far as present effect is concerned, will have become chiefly of a routine character. The highest order ought to prevail in all its departments. The heavy rains at the close of last month will have caused renewed vigour in many plants, therefore attend particularly to the regulating of overgrowths, especially in Petunias, strong-growing Verbenas, &c. Herbaceous plants in the borders should be supported with sticks, and neatly tied; not all the stems bundled together in a slovenly manner, but spread out, so as to display the flowers to the greatest advantage. Before the propagation of plants for turning out is proceeded with to any material extent, it is as well that a proper arrangement should be made as to what number of plants are required in another season. Examine the effects of colours; investigate their combinations and contrasts, so as to improve and vary the arrangement another season. To keep up the interest of a garden, especially if planted on the grouping system, requires some considerable skill and forethought, to vary the scene in each succeeding year, so as to prevent the arrangement becoming monotonous. Thus if warm colours prevail to any material extent this season, it would be as well to introduce a majority of cold colours next season, and to edge each bed of the latter with its complimentary warm colour. Indeed, the system of edging beds with contrasting colours imparts a highly interesting feature, especially to such as may be distributed over the lawn without any methodical arrangement. For these purposes, no plants are so well adapted as those which have variegated foliage, and for that reason a large stock of variegated Pelargoniums should be provided. The best of these is Lee's new variegated, Mangles's variegated, the common and golden variegated, and the different varieties of variegated Ivy-leaved Pelargoniums. One of the most interesting is a very small-leaved variety called Dandy, which makes the neatest edging for a small bed of perhaps any plant. Of the Oak-leaved kinds, Moor's Victory is very neat.

FLORIST'S FLOWERS.—*Auriculas*, seedlings that have hitherto been kept in pans or boxes may now be potted singly in small pots; while such as were potted earlier will perhaps require shifting into a larger size. Plants which were potted in May should have the surface soil stirred occasionally, and any left for potting at this season should at once be done. *Carnations* and *Picotees*, the principal operation this month will be the layering, which should be proceeded with, and completed as soon as possible. Water over head with a fine rosed pot as often as necessary. *Pinks*, some florists layer the strongest shoots and

pipe the second crop of weaker ones, contending that these last root much more freely. Be that as it may, whether pipings or layers, those intended for next year's blooming are better planted out now, or at least as soon as they are fairly rooted. The beds should be made of well-decomposed dung, sound loam, and leaf-soil, equal parts; in fact, they ought to be rich, as there is little danger of the Pink discolouring. The reason why we prefer planting at this time is that the plants get well established, stand the winter better, and lace much more correctly than when the planting season is deferred. The surplus stock may be put out on store beds. A second crop of pipings may be put in, where it is desirous to increase the stock. *Cinerarias*, as the plants which have been turned out into the open border throw up suckers, they should be carefully removed, potted into small pots, and placed in a cool shady frame until sufficiently established. We have a list of some of the best new varieties, which we will give next month. Sow seed in a light rich soil, and pot off the plants as soon as they have attained sufficient size. *Dahlias*, the prevalence of dry weather and, in many localities, of blight during the first half of the past month was unfavourable for the growth of these; the succeeding copious showers has re-established the vigour of the plants, and washed away the insects infesting them, so that we now look forward to a fine season of bloom. Continued care will be necessary in thinning out laterals as they appear, and securing such as are left against being broken by wind. Lighten up the soil around the plants with a fork, carefully avoiding injury to the young fibres. Towards the middle of the month, add a layer, one or two inches deep, of cow-dung around the plants, avoiding such application, however, to all those with large or coarse flowers. Look actively after earwigs, and bear in mind that much of after-success depends on the care and attention bestowed at this time. The fancy kinds generally require a less exciting growth. *Tulips*, off-sets should be planted towards the end of the month. The bed should therefore be prepared, and consist of river-sand and fresh loam in equal portions; plant the young bulbs from two to three inches deep, and let the surface of the bed gently slope from the middle. *Hollyhocks*, see that the blooming stems are properly secured to a strong stake; where increase is desired, as soon as the flowers fade, the stems should be cut down, and the surrounding surface of the soil stirred up, adding thereon a little well-decayed manure; this will induce them to shoot up vigorously, and afford a numerous division. The cultivation of this plant has been much neglected, and we are very glad to find it is again becoming increasedly popular. Some of Mr. Chater's specimens, shown at the Surrey Gardens last month, were magnificent beyond anything we had seen; notice of them will be found in another page. *Pelargoniums*, if the plants cut down last month are not already potted, they should be done at once; some of the cuttings, too, which were potted early, may require another shift. Seed should be sown in pots of light rich soil. *Rose* budding should be completed as early as possible. *Pansies*, continue to propagate, and save seed from the best varieties. *Chrysanthemums* should be re-potted into larger

pots for blooming, using a rich soil, and giving an abundant supply of water.

IN THE FORCING FRAME, STOVE, &c.

The stock required to fill the beds and borders of the flower-garden for another season should now be thought of. Where there is ample room in frames, &c., propagating cannot after this be begun too soon. Many of the things will strike freely by mere pricking them in the open border, and shading them for a few hours in the middle of the day from the heat of the sun; others, amongst greenhouse and stove species, require a little heat, soon rooting at this season, and if potted immediately will be firmly established before winter. In the management of the stove and orchid-house, ventilation may be freely given during the day, and, except on very clear days, the shades drawn away. Water must be administered more sparingly, so that both shade and moisture be gradually withdrawn.

IN THE GREENHOUSE, COLD FRAME, &c.

Light is now more than usually important to elaborate and consolidate the juices before the winter arrives, for unless every means is taken to accomplish this, we may expect sad failures during the next winter among our tender and more valuable exotics. To protect them from rain and to expose them to light should now more than ever be our earnest study, in regard to choice specimens, especially those which have been recently shifted, and which are in vigorous growth. Almost all the soft-wooded stove-plants that can be grown into large specimens by one or two seasons' growth, like Pelargoniums, may be conveniently treated like that popular tribe; cut them back after they are done flowering; keep them dry for a week or ten days, and then shake them out of the mould; shorten their large roots, and pot them in light rich compost in as small pots as their roots can be got into. This is a good time to look over a collection for this purpose. Where a large conservatory is to be kept gay all the year round, this class of stove-plants is by far the most useful to cultivate, as you can always winter them in little room, whereas fine woody plants will soon get too large and take some years before they are fit to appear in a good conservatory. Another great advantage is, that as soon as you get these plants established in the new pots, they will only require to be kept in that condition through the winter, and therefore will not require more than 50° of heat for three or four months.

Greenhouses and frames, while they remain empty, should be thoroughly cleaned, repaired, white-washed, and painted. Cleanliness is not only essential to their appearance and preservation but to keep the plants in a healthy condition. It is bad management when these matters are deferred until late in the season, when the plants are again replaced, and almost sure to be injured during the process.

REMARKS.

STANDARD CLIMBING ROSES.—The prettiest form in which many of the climbing roses may be introduced to the garden is that of a standard. Those varieties which make shoots of a moderate length, produce, when worked on a straight stem of five or six feet high, and allowed first of all to form a broad expansive head, and then to assume a naturally drooping habit, a surpassingly beautiful effect, the long pendant branches forming so many festoons of roses. On lawns, the effect of tree-roses thus flounced and wreathed is excellent. Such plants must have but little pruning; and that little confined to the shortening of any casual over-luxuriant shoots and the cutting clean away any such as become old and worn out. In other respects, the plants must be left to nature. Many of the Boursault roses are well suited for this purpose; as also are some of the Sempervirens, or ever-green group.

COMPOST FOR POT PLANTS.—A mixture of soils which will be suitable for growing the generality of plants, may be prepared thus:—To three parts of the turf of a loamy pasture partially rotted, add one part of turfy peat soil, such as heaths are found growing in upon our commons, and one part of cow-dung or hot-bed manure, in a completely rotted and friable condition; mix these ingredients well together, but do not sift them, except for very small pots. If the loam is adhesive, add about an eighth part of sharp sand—silver sand is generally preferred.—*A Practitioner.*

SONGS OF THE FLOWERS.

NO. 6.—THE FORGET-ME-NOT.

THIS beautiful little flower, which, at this season, enamels the banks of our rivers with its corollas of celestial blue, has become celebrated by a German tale, so full of melancholy romance as to affect all the Damons and Phillises of Europe that haunt the purling streams.

It is related that a young couple, who were on the eve of being united, whilst walking along the delightful banks of the Danube, saw one of these lovely flowers floating on the waves, which seemed ready to carry it away. The affianced bride admired the beauty of the flower, and regretted its fatal destiny, which induced the lover to precipitate himself into the water, where he had no sooner seized the flower than he sank into the flood, but making a last effort, he threw the flower upon the shore, and at the moment of disappearing for ever, he exclaimed, “*vergils mich nicht,*” since which time this flower has been made emblematical of, and taken the name of “Forget-me-not.”

It has become a favourite flower with the German poets, as some lines of Lord F. L. Gower’s translation of Göethe’s “Lay of the Imprisoned Knight,” will evince:—

" Ah! well I know the loveliest flower,
 The fairest of the fair,
 Of all that deck my lady's bower,
 Or bind her floating hair.
 Not on the mountain's shelving side,
 Nor in the cultivated ground,
 Nor in the garden's painted pride,
 The flower I seek is found.
 Where time on sorrow's page of gloom
 Has fixed its envious lot,
 Or swept the record from the tomb,
 It says Forget-me-not.
 And this is still the loveliest flower,
 The fairest of the fair ;
 Of all that deck my lady's bower,
 Or bind her floating hair."

This flower has been figured as a device on the seals of lovers, and had its praises sung in their verses :—

" To flourish in my favourite bower,
 To blossom round my cot,
 I cultivate the little flower
 They call Forget-me-not.
 It springs where Avon gently flows,
 In wild simplicity,
 And 'neath my cottage-window grows,
 Sacred to love and thee.
 This pretty little flow'ret's dye,
 Of soft cerulean blue,
 Appears as if from Ellen's eye
 It had received its hue.
 Though oceans now betwixt us roar,
 Though distant be our lot,
 Ellen! though we should meet no more,
 Sweet maid, Forget-me-not!"

The Forget-me-not is seen no where in greater perfection and abundance than on the banks of a stream in the environs of Luxembourg, which is known by the name of the Fairies' Bath, or the Cascade of the Enchanted Oak. The romantic banks of this stream are covered with these pretty blue flowers from the beginning of July until the end of August, and which being reflected in the pure waters appear more numerous than they really are.

To this favourite spot the young girls often descend from the ramparts of the town to spend the leisure hours of their saints' days, in dancing on the borders of this stream, where they are seen crowned with the flowers which the waters afford them.





Calice.

1. General Duvernois 2. Madame Frobé



1. *Dahlia pinnatifida*
2. *Dahlia pinnatifida*



FLORICULTURAL CABINET

SEPTEMBER, 1849.

ILLUSTRATIONS.

- PHLOX VARIETIES—1. GENERAL DUVIVIER.
2. MADAME FROBEL.
RANUNCULUS VARIETIES—1. DR. CHANNING.
2. ENCHANTER.

THE entire tribe of Ploxes have an especial claim to cultivation ; they are, almost without exception, perfectly hardy, easy of culture, readily propagated, profuse in bloom, many are very fragrant, of great variety and beauty in colours, and of long endurance as an ornament to the flower garden. A selection may be grown that will flower from the beginning of April to November. The diversity of height to which the kinds grow render them equally adapted for growing in masses, or singly in the flower border. When in masses, the tallest being in the centre, a gradual declination can be arranged from the height of three or four feet down to the prostrate kinds whose flowers are but two inches from the ground. All are worth growing, but as considerable attention has been directed by ourselves and others for the last five years to raising seedlings, possessing a superior round form, thick petals, and very distinct eye, or stripe, and many such superb varieties have been obtained, a collection of most handsome ones may be selected, and at a very reasonable price. No flower garden ought to be without such charming plants. In a good strong loam, well enriched, upon a dry subsoil, they grow vigorously, and bloom profusely. They do not thrive under trees, but like an open situation. As the roots generally admit of division each season, an increase of young plants should be made early in spring ; this being annually done, the sorts are kept up, and a healthy bloom obtained. They strike freely by cuttings, inserted in white sand, either in pots, or under a hand-glass, in a shady border.

The varieties we have here figured are of first-rate excellence, and
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the flowers generally larger than what our artist, for convenience of arrangement, has drawn them.

RANUNCULUSES.—We proposed giving the present plate of these charming varieties, along with those we gave in our July Number, but we found it impracticable at the time, so as to have them well executed. They form part of the superb collection, shown by Mr. Carey Tyso, of Wallingford, at one of the recent exhibitions in the Horticultural Gardens at Chiswick. The names of the collection we inserted in our July and August Magazine, they highly deserve cultivation.

NOTES ON NEW OR RARE PLANTS.

DIELYTRA SPECTABILIS—MOUTAN DIELYTRA.

Fumariaceæ. Diadelphina Hexandria. (Syn. Fumaria spectabilis.)

THIS is a fine and hardy herbaceous plant, which Mr. Fortune sent from China to this country. It is an especial favourite with the Chinese mandarins, and is much cultivated in their gardens. It is a native of the north of China, and with a layer of tan, leaves, &c., over the roots in winter, no doubt it will prove quite hardy in our own country, if the subsoil be tolerably dry. It flourishes in loam and peat. It makes a very showy greenhouse plant. Most of our readers know the *Fumaria* tribe of flowers, this is of the order, but the blossoms are very much larger. They are of deep rose-red, with the inner petals nearly white. A single flower is an inch and a-half long. They are drooping, and in large racemes. It merits a place in every greenhouse, frame, or flower garden. After the decay of the flower stems, it should only have just enough water to keep it barely moist, till the growing period arrives. (Figured in *Bot. Mag.* 4458.)

GARDENIA SHERBOURNII—MRS. SHERBOURNE'S.

This very beautiful species is a native of Sierra Leone, from whence it was received by Mrs. Sherbourne, of Hurst House, near Prescott, in Lancashire. It is an evergreen climbing plant. The flowers are bell-shaped, one inch and a-half long, and about the same across the mouth. White without, and a deep red inside. It flourishes, like all the *Gardenia*'s, in a compost of rough peat, leaf mould, and silver sand, with the pots well drained. It deserves a place in every stove or warm greenhouse. (Figured in *Pax. Mag. Bot.*)

GESNERA CORUSCANS—SHINING FLOWERED.

A native of South America, in the collection of Messrs. Knight and Perry, nurserymen, Chelsea. The flowers are produced on long slender peduncles, drooping. Each flower is nearly three inches long, of a shining scarlet colour. It is a handsome species. (Figured in *Pax. Mag. Bot.*)

NEMATANTHUS IONEMA—DARK BLOOD-COLOURED.

Gesneriaceæ. Didynamia Gymnospermia.

A very striking species, the flower stalks are five inches long. Calyx a rich purple tube, and each segment green. Corolla a rich

deep-blood colour. Each blossom is nearly two inches long. It blooms very freely. It is a native of the forests of Brazil, and grows very freely, treated as a stove orchideous plant, either suspended in a basket or otherwise. It is in the collection of Messrs. Henderson, of Pine Apple Place Nursery. (Figured in *Bot. Mag.* 4460.)

RHODODENDRON FORMOSUM—THE BEAUTIFUL.

In 1815, the late Mr. Smith discovered this handsome species on the mountains bordering on Silhet, in eastern Himalaya. It is stated to be the same as the *R. Gibsoni* of Mr. Paxton, which Mr. Gibson, collector for his Grace the Duke of Devonshire, brought from India seven years back. It does best in the greenhouse in this country. The plant forms a slender shrub, with foliage, about the size and form of a well-grown Indian Azalea. The flowers are of a delicate white, tinged with yellow and rose, and having five stripes of red outside. Each blossom is nearly four inches across. (Figured in *Bot. Mag.* 4457.)

RHODODENDRON CAMPANULATUM SUPERBUM.

A beautiful hybrid raised by Mr. Jackson, nurseryman, Kingston, in Surrey. It is perfectly hardy. The flowers are white, the upper segment being strikingly spotted with a dark colour. Each flower is about two inches and a-half across. (Figured in *Pax. Mag. Bot.*)

THE PINK.

“ Each Pink sends forth its choicest sweet

Aurora’s warm embrace to meet.”—*Mrs. M. Robinson.*

THE Pink, which is now made the emblem of lively and pure affection, may be considered as a child of art; and on no plant has the florist been more happily successful, than in the instance of having transformed an insignificant weed into one of the most delightful charms which the lap of Flora contains. This flower was entirely unknown to the Greeks, and it was also a stranger to the Romans until the time of Augustus Cæsar, when it was discovered in that part of Spain then inhabited by a ferocious and warlike people called Cantabri, and which country is now named Biscay. These people having rebelled against the then masters of the world, were conquered by Augustus, and during these struggles the plant was discovered and conveyed to Rome, where it was called Cantabrica, after the country from whence it was procured. (*Pliny*, lib. 25, c. 8.) Our readers will not be surprised that a people whose principal profession was the art of war, should have attended to so simple a flower as the Pink then was in its natural state, when they reflect that flowers were esteemed one of the luxuries of those people, who seldom sat at their meals without wearing chaplets of fragrant blossoms, and as novelty has ever had its charms, a new flower possessing a spicy fragrance would naturally excite considerable attention.

Dr. Turner, one of our earliest writers on plants, calls it Cantabrica Gelouer, and from him we learn that it was then cultivated in our

gardens, since he says, "The garden Gelouers are made so pleasant and swete with the labours and witt of man, and not by nature."

Monsieur Pirolle seems of opinion that it was originally brought from Africa, since he says it anciently bore the name of Tunica, and Herbe tunique, which seems to indicate that it was a plant from Tunis.

Shaw considered it a native of Italy when he wrote—

" In fair Italia's bosom born,
 Dianthus spreads his fringed ray ;
 And glowing 'mid the purpled morn,
 Adds fragrance to the new-born day.
 Oft by some mould'ring time-worn tower.
 Or classic stream, he loves to rove,
 Where dancing nymphs, and satyrs blithe,
 Once listen'd to the notes of love.
 Sweet flower, beneath thy natal sky
 No fav'ring smiles thy scents invite ;
 To Britain's worthier regions fly,
 And paint her meadows with delight." *

The modern generic name of Dianthus, which has been bestowed upon this fragrant flower, is derived from the two Greek words, *Διος* and *αρθος*, which signifies Jove's flower.

" Like that sweet flower that yields great Jove delight ;
 Had he majestic bulk, he'd now be styled
 Jove's flower ; and, if my skill is not beguiled,
 He was Jove's flower when Jove was but a child.
 Take him with many flowers in one conferr'd,
 He's worthy Jove, e'en now he has a beard."—*Cowley*.

The French name of *Œillet* signifies a little eye, and our name of Pink seems to have been derived from the Dutch name of Pink for an eye, and bestowed upon it on the same account.

To proceed in the history of this Pink of flowers, we go back to the days of Queen Elizabeth, from whose vegetable historian, Gerard, we learn that it was then cultivated in its improved double state, and this is the first writer who calls them "Pinks, or Wild Gilloflowers," from their being smaller than the "Clove Gilloflower, or the Carnation," which were also then known in English gardens.

England, as well as Spain, France, Germany, and most other temperate and warm climates, possess a native Pink, but to state how many of them have been changed by cultivation, and from which each peculiar variety first sprang, would be as arduous a task as to attempt to define the parentage of each peculiar apple, which, like the Pink, owes its excellence and variety to the labours of the cultivator. And the Pink, like the apple, continues to demand the attention of man to preserve it from degenerating into its original insignificance ; for although the hand of the gardener can double and triple the petals of the Pink, he cannot render their beauties permanent, for nature

* The modern Italians hold perfumes in aversion.

seems to have allowed her works to bear a temporary improvement only, in order to create industrious habits in man, her most noble and finished work.

The primitive Pink is simple red or white, and scented; by floriculture its petals have been enlarged and multiplied, and its colours infinitely varied, until it has obtained all the colours from the darkest purple to the purest white, with all the hues of red from the rich crimson to the pale rose, and with which the yellow is frequently blended. In some of these flowers we see the eye of the pheasant painted, others are beautifully marbled, striped, or figured. In some varieties we see two opposite colours abruptly diversified, whilst, in others, they seem not only to meet in happy contrast, but to mingle and soften off in shades. Thomson speaks of it as the "gay spotted Pink;" but under all its diversities it preserves its delicious spicy fragrance, which never leaves it, however incessantly it inclines to quit its artificial adornment to take its own simple attire.

Although our forefathers might not have carried refinement so far as to have laid down rules for the government of our admiration towards flowers, yet we find Professor Martyn wrong when he states that the Pink had not attracted any notice amongst our ancestors; and that it is only within the last half of the eighteenth century, that Pinks were much improved and varied, so as to be greatly valued amongst florists. We have already shown that they were cultivated in the reign of Elizabeth; and Parkinson enumerates many fine varieties that were favourites in the time of his unhappy master Charles I.

The White Pink is one of the flowers which Milton calls for in his monody on Lycidus, and London and Wise, so celebrated for having laid out the gardens of Blenheim, and improving those of Kensington, gives more pages on the cultivation of the Pink than on that of any other plant contained in their *Retired Gardener* of 1706.

Madame de Genlis tells us, that it was the good king Rene, of Anjou, the Henry IV., of Provence, who first enriched the gardens of France with the Pink, and to this day it remains a favourite flower in the neighbourhood of Toulouse, although it is much less frequent in the vicinity of Paris than formerly.

It is a flower that has attracted the particular notice of princes. The great Condé, whilst prisoner in the Bastille, amused himself in the cultivation of Pinks.

We have connected with the Pink an anecdote, which shows how far the mind may be led away and debased by the arts of flattery.

The young Duke of Burgundy, grandson of Louis XV., being fond of cultivating these flowers, a flatterer persuaded him, by substituting other pots of Pinks for those of the Prince, that the Pinks which he planted, came and flourished in one night. Thus persuaded, the youthful Prince believed that nature obeyed his will. One night, not being able to sleep, he expressed a wish to get up, but was told that it was then the middle of the night: "Well," replied he, "I will have it be day."

It has been observed that the Pink has lost its powerful attractions for the nobility of this country, and is degenerated into a mechanic's

flower, because its cultivation is so carefully and successfully attended to in manufacturing districts, and more particularly at Paisley. But this is erroneous as far as it relates to good taste, as we have frequently noticed with what delight these flowers have been regarded by the most refined classes of society, when they have met with them in village gardens; for their own florists having of late years been so much engaged in the culture of rare plants, known ones have too frequently been neglected.

How forcibly does the sight of the Pink carry our imagination back to the well-known cottages of our infant days, and how often does the picture present itself showing where—

“ A path with Pinks and Daisies trimm'd,
 Led from the homely entrance gate;
 The door, worm-eaten and decay'd,
 Bespoke the tenant's low estate.”

It is in such situations that flowers have the power of delighting the English traveller, because, in most other parts of the world, he finds his fellow-creatures too often debarred from these innocent luxuries, that endear his home to the English cottager, and render his limited bounds a sufficient substitute for a proud domain; with what pride and satisfaction do we see him regard his plants on the morning of a fine sabbath-day, surrounded by his neatly-clad family. These are scenes that are the particular boast of England, but like the Pink they require a careful attention to prevent their degeneration.

ORNAMENTAL GARDEN POTS.

IF we may judge by the prevailing taste of the present day, we are midway in what may be termed the transition state from the plain matter-of-fact principles which have hitherto principally guided us, both in business and decoration, to that period when the highest efforts of artistic skill shall be brought to bear, not only on purely decorative objects, but also on more common articles. That such a period has arrived in the history of all nations who have been celebrated for refinement and civilization, there is abundant testimony to prove. No one can for a moment behold the restored treasures of the ancient Egyptians, the relics of Etrurian pottery-ware, or the matchless sculpture of the Greeks and early Romans, without being forcibly convinced how highly the decorative art was prized by them, and of the high degree of refinement requisite to design, execute, and appreciate objects, which generally speaking we, as a nation, are only beginning to understand and value. I need scarcely refer to the mediæval ages for corroborative proof. The decoration of tapestry, the embellishment of missals, and the carving with which the most trifling articles were enriched, all bespeak an appreciation of the ornamental and decorative styles, in an age not otherwise remarkable for the refinements of civilized life. At the present time, in our own country, and more or less in others, the attempt at restoring the true decorative style, both on objects justly considered within the pale of the fine arts,

and on those more common utensils pertaining to our daily wants, which have hitherto been considered unworthy of such distinction, is daily pushing itself into notice. We may hail this as unmistakeable evidence that an appreciation of the beautiful and decorative in art is fast pervading society at large. I have been led into making the above remarks, on reflecting what might be done by way of improving the appearance of that most useful, common, and certainly, at present, most unornamental piece of pottery, "the garden-pot." Gardeners have hitherto been content with it in its plain unpretending form; and it may fairly be questioned whether any utensil employed either in gardening or agriculture has passed through the hands of many generations with its primitive form so little altered as this has. It is true, Mr. Forsyth some years ago recommended to have them glazed, or varnished; for which piece of advice he was unanimously voted an innovator, and I believe the plan was never put into practice. Some modification in its form, too, has been brought into notice, in the shape of the "West Kent Garden Pot;" but these, in so far as ornament is concerned, are not a whit before the original patterns. Again, lately, a substitute has been invented for our old friends in the shape of "slate tubs." Now I had always an inkling that these latter would be a great improvement, as regards appearance at least, to the common garden-pot; but after seeing a stage of plants growing in the "miniature orange-tubs," I was so struck with their prim, formal appearance, producing impressions so unfavourable to my pre conceived ideas of beauty, that I determined in my own mind they would never succeed, where taste was called in question. Perhaps some readers may not be aware how far the decorative art may be carried into effect on the common flower-pot, and the wide field it opens for design in their embellishment; several attempts have been made, one of which has come under my notice, and as they have stood with comparative safety for twelve years to my knowledge, I am enabled to speak as to their durability. The pots I am now describing were, I believe, made at Sherborne, and are of a large size. They are (to all appearance) made of the common pottery clay, in moulds. The rims of the pots at top and bottom are embossed with foliage and flowers, and festoons of the same, in high relief, are carried round the sides. There is likewise an elaborate border towards the bottom, in the same style. The foliage, &c., has all the sharpness of outline so valued in sculptured relieve. Altogether, they are the most decorative article I ever saw made for plants. Now, it has often struck me while admiring the magnificent plants which annually crowd the tables of the metropolitan exhibitions, how much pots of this description would enhance the beauty of the plants exhibited. It must be admitted, that the value of all objects is increased by comparison, as they approach a certain point, or degree of excellence. The plants themselves are many of them matchless specimens of the gardener's skill. Nature and art cannot go much farther in cultivation. The pots, on the contrary, are neither better, nor perhaps worse, than they were fifty years back; try to embellish them, and make them worthy, as works of art, to be viewed with satisfaction, in connexion with the choice treasures

they contain. The reader must not suppose that pots thus decorated are recommended to be universally used; such would be a misapplication of taste; but for plants to bloom in, for the conservatory, and for plants intended during the summer to ornament the flower-garden, or parterre, such pots would harmonize with the surrounding objects and scenery, and by their warmth and colour, form pleasing objects of themselves, independent of their proper uses.—*Spencer, in Paxton's Magazine.*

THE POTENTILLA

Is one of those plants which do not attract much attention in their original state, but which have been rendered desirable by the improvements that have been made by seeding. The best of the family was *Potentilla Hopwoodiana*, which was originally found in a bed of stools, and was supposed to be a self-sown seedling, a natural cross between a light and a scarlet.

This flower, to be perfect, should be circular and slightly cupped, blooming abundantly, completely above the foliage, on stiff wiry branches. The colour, as in all other flowers, is purely a matter of taste, but the most in repute are the most brilliant.

The culture of the *Potentilla* has been quite neglected, except that it is found among the collections of herbaceous plants. A collection of them in a bed, with the flowers well contrasted, makes a very showy object, and the following selection has been recommended:—

Atrosanguinea, deep crimson.

Thomasii, rich yellow, large.

Insignis, bright yellow.

Russelliana, crimson scarlet.

Formosa, rose.

Menziesii, rich crimson.

M^cNabiana, bright crimson.

O'Brienii, orange red.

Rubra-Aurantia, red and orange.

Hopwoodiana, lemon ground with pink edges.

Brilliant, rich bright scarlet.

Plantii, yellow centre, scarlet border.

These are calculated to make a pretty little collection to begin with, and contrast one with the other well for colour. This plant, like many others, would grow best in good rich loam, without any other dung than had fallen to its share when it was in pasture land; and as a general rule, nothing beats this soil for flowers. Beds should be formed four feet wide, and any length the number may require. They should be planted in three rows down the bed; the rows should be nine inches from the side, and the same from row to row. There are few subjects that look more pleasing or more showy. They will do three years without replanting, but when done, the roots should be parted, so that there be a good heart and a bit of root to each. After watering them in, to settle the earth about the roots, they may

be left, all but cleaning; they must be weeded from time to time, but that is all they require. It is a plant well worth growing from seed for the chance of a new variety, and if the before-mentioned varieties were placed in one bed, all the seed saved from the bed must afford the very best chance of novelty, because all the colours, being placed to grow in one bed, will be crossed by the bees, &c., and no two can be crossed without making very pretty combinations. When these flowers are shown for prizes, they ought to be shown on a single flower stem, and all the blooms and branches on it. They might be shown in stands or tubes of half-a-dozen varieties, and would make a very pleasing change in the tables of flowers. Like most herbaceous perennials which increase rapidly by the spreading of the roots, seedlings have been neglected, but it is not too late to begin.

TO DESTROY SLUGS.

BY CLERICUS.

At this season of the year, florists, as well as gardeners in general, have to contend with the depredations of slugs. Slices of turnip, the larger the better, placed on the ground so that the snails can creep under on one side, are excellent decoys. During the night they repair to them, feed voraciously, and usually remain concealed, so that in the morning, the slices being examined, they will be found, and can readily be destroyed. I have adopted this method for some time, and although, when I first commenced, I took them by hundreds in a morning, I have, by perseverance, almost got rid of the race from my garden.

ON THE CULTURE OF CHOROZEMAS.

THE Choroze^ma is generally considered difficult to cultivate, but it can be grown well by pursuing the following method:—The soil should be a sandy peat, well broken with the spade, but not sifted. The best time for potting is March or April: care must be taken not to overpot the plants, or injure the roots while potting; the soil must be made very firm and compact about the roots, and the pots well drained; then they must be placed in the greenhouse, in an airy situation, and not crowded among other plants. It is also well to keep them in the greenhouse during summer, but in hot weather they should be shaded for two or three hours each day during sunshine. They require a reasonable supply of water; that is, they must not be sodden nor left to dry. They may be propagated in the following manner:—The 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 an inch of the top with the soil before mentioned; on the top of this put a layer of white sand, into which put the cuttings, making a hole for their reception with a small stick; when the pot is full, give them a little water 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 70° : they should be shaded from the sun, which can 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 appearance of growth, they must be potted off, but care must be taken not to injure the roots ; then they must be shaded again for a week or ten days until they make fresh roots ; then they must be gradually hardened and placed in the greenhouse with the old plants. — *Gardeners' Journal*.

OBTAINING LARGE BLOOMS OF CARNATIONS AND PICOTEEES.

A VERY striking improvement has been effected in an increased size of the flowers of Carnations and Picotees which have been exhibited at the recent shows in and around London, and having visited several of the gardens from whence the show flowers had been sent, I found on inquiry that a much better knowledge of the natural character and capability of each particular kind of plant was now being obtained by cultivators in general, and especial attention paid to a judicious thinning of the buds, proportioning the quantity to the ascertained degree of its natural capabilities. A list of a number of varieties, and what it is considered by Mr. Dickson they should bring to perfection, is given in the Magazine of Gardening.

Show Carnations that will carry only one blooming pod on a stem : — Martin's Splendid, Eason's Admiral Curzon, Elliott's Duke of Sutherland, Lightbody's Mr. Groom, Fletcher's Duke of Devonshire, Rainsforth's Game Boy, Colent's Brutus, Ely's Lord Milton, Gregory's King Alfred, Jacques' Georgiana, Puxley's Queen Victoria, Ely's Mongo and Prince de Nassau, Willmer's Mayo, Nix's Lady Chetwynd, Chadwick's Brilliant, Wilson's William IV., Wigg's Earl of Leicester, Simpson's Queen Victoria, Brown's Bishop of Gloucester, Ely's Lady Ely, Barringer's Apollo, Tomlyn's Brisius, Wilson's Haniel, Wood's Rosabella, Fletcher's Duchess of Devonshire.

Show Carnations that will carry two blooms on a stem for exhibition : — Hepworth's Hamlet, Smith's Duke of Wellington, Twitchet's Don John, Willmer's Conquering Hero, Sharpe's Defiance, Lodge's True Briton, Hale's Prince Albert, Cartwright's Rainbow, Ely's Duke of Bedford, Ely's Mrs. Brane, Ely's Hugo Meynell, Halfacre's Rainbow, Holmes' Count Pauline, Mansley's Robert Burns, Wood's William IV., Puxley's Solander, Jacques' Iris, Hughes' Napoleon, Brooks's Eliza, Brabbin's Squire Meynell, Ely's John Wright, Mansley's Beauty of Woodhouse, Taylor's Lord Byron, Pollard's First Rate, Bucknall's Ulysses, Ely's King of Scarlets, Puxley's Rising Sun, Willmer's Hero of Middlesex, Smith's Marquis of Chandos, Copeland's Superb, Chadwick's Flora, Ely's Lady Gardener and Lovely Ann, Greasley's Village Maid, Lowe's Marchioness of Westminster.

Show Carnations that will carry three blooms on a stem for exhibition : — Colent's Julia, Davidson's Vanqueur, Barnard's Duke of Roxburgh, Puxley's Prince Albert, Young's Earl Grey, Hale's Lady

of the Lake, Sealey's Princess Royal, Addenbrooke's Lydia, Brooks's Flora's Garland, Puxley's Lady Alice Peel, Puxley's Princess Royal and Queen of Roses.

Show Picotees that will carry only one bloom on a stem for exhibition:—Barnard's Cornelius, Brooks's Duchess of Cambridge, Dickson's M'Irshaw, Sharpe's Red Rover, Mathew's Ne Plus Ultra, Sharpe's Countess de Grey, Tolworthy's Isabella, Brinklow's Conductor, Burroughs's Lady Douro, Ely's Mrs. Lilly, Mitchell's Nulli Secundus, Sharpe's Joinville, Brinklow's Lady Chesterfield, Burroughs's Duke of Newcastle, Headly's King James, Cox's Victoria Regina, Mrs. Barnard John's Prince Albert, Kirtland's Queen Victoria, Mathew's Enchantress, Sharpe's l'Elegant, Arvel's Princess Alice, Willmer's Princess Royal, Irshar's Matilda, Wilson's Miss Fanny Irby, Barraud's Bride, Burroughs's Lady Alice Peel, Dickson's Mrs. Irshar, and Garratt's Lady Dacre.

Show Picotees that will carry two blooms on a stem for exhibition:—Dickson's Charles Stanford, Wildman's Isabella, Burroughs's Mrs. Bevan, Cook's President, Dickson's Lady Jane Grey, Burroughs's Emma, Edmonds' Jenny Lind, Sharpe's Gem, Burroughs's President, Ely's Favourite, Green's Queen, Sharpe's Agitator, Willmer's Prince Royal, Burroughs's Miss Jane, Robinson's Nottingham Hero, Willmer's Elizabeth, Dickson's Sophia, and Syke's Eliza.

Show Picotees that will carry three or more blooms on a stem for exhibition:—Waine's Victoria, Irshar's Rosalind, Gedden's Sir R. Peel, Gedden's Masterpiece, Sharpe's Duke of Wellington, and several others. It is requisite to bloom some of these latter varieties in perfection, to take off the master pod, which decreases the others in size, and induces their expansion more truly, and in greater perfection. Brilliancy of colour in the Carnation and Picotee is another point of excellence to which it is desirable to direct the attention of amateurs. To facilitate this, I recommend a weak solution of sheep manure in water, to be given them once or twice a-week during the period the pods are swelling. Should this solution be judiciously applied, it will be found highly beneficial both as regards the size and beauty of the flowers.

The manner of preparing this manure water is briefly as follows:—Have a sufficient quantity of water to irrigate your plants once, made boiling hot, previously ordering a tub to be prepared, with due regard to the quantity of water before alluded to; place therein one-third of sheep manure in a fresh state, then pour the boiling water on it till the tub becomes filled; stir it up from the bottom with a stick for two or three minutes, when it must be covered over with a cloth to prevent the steam from escaping; in about two hours it may be strained through a fine sieve, when it is ready for use. To every three gallons of pure water add one quart of the above mixture.

NEW TULIPS.

HARRISON'S FELTON HERO.—A bizarre tulip, broken during the present season 1849. The cup is fine, base and stamens pure, form

good, and ground colour deep yellow, with a heavy brown feather. There is a slight flame up each petal, meeting the feather, without breaking through.

SCARNELL'S BIJOU.—A splendid feathered second row rose tulip, of superlative form. The ground is pure white, the marking well laid on, the petals of good substance, and altogether worthy of its designation. It has been shown this season, in fine character. In the hands of Mr. Dickson, of Acre-lane.

HORTICULTURAL SOCIETY'S FLORAL EXHIBITION.

(Continued from page 203.)

POT ROSES

Were again exhibited in tolerable perfection, notwithstanding the unfavourable weather we have experienced for keeping them in bloom. Messrs. Lane's plants, which were large and finely bloomed, consisted of—*Hybrid China*: Celine, five feet high, and two feet wide; Madame Plantier, three feet six inches high, and four feet wide. *Hybrid Bourbon*: Coupe d'Hebe, four feet six inches high, and two feet ten inches wide; Great Western, two feet ten inches high, and three feet wide; Las Casas, two feet two inches high, and two feet six inches wide; Paul Perras, four feet high, and two feet six inches wide. *Hybrid Perpetual*: Queen, five feet ten inches high and four feet six inches wide. *Bourbon*: Souvenir de la Malmaison, three feet six inches high, and three feet four inches wide. *China*: Abbe Mioland, three feet six inches high, and three feet two inches wide; Fabvier, four feet high, and two feet nine inches wide; Prince Charles, three feet high, and two feet six inches wide. *Tea*: Adam, two feet high, and two feet wide. Messrs. Paul had—*Hybrid China*: Madame Plantier, pure white; Belle Marie, rose; Blairii, No. 2, white, with pink edges. *Hybrid Bourbon*: Henri Barbet, carmine; Paul Perras, rose, edges blush. *Austrian Briar*: Harrisonii, yellow. *Hybrid Perpetual*: Louis Buonaparte, rosy-crimson. *Tea-scented*: Caroline, pink; Princess Marie, coppery rose. *Noisette*: Aime Vibert, pure white. *Bourbon*: George Cuvier, cherry red; Coupe d'Hebe, pink, changing to silvery blush. Mr. Francis produced clean looking specimens of—*Hybrid China*: Blairii, No. 2, Flora Mac Ivor, Chenedole. *Hybrid Perpetual*: Madame Laffay, Mrs. Elliott, Marquise Boccella. *China*: Abbe Mioland, Cels multiflora. *Tea*: Devoniensis, Elise Sauvage.

FUCHSIAS.

SAPPHIRE.—A beautiful new variety, of good habit; the colour dark crimson, with a very waxy appearance; the corolla deep purple. There have been several of this character raised in the neighbourhood of Birmingham, during the last few years, but this is one of the best.

CHATEAUBRIAND (Miellez).—A light variety, of novel and fine character. The flowers are large; the exterior, or the sepals, are pink,

tipped with buff, or pale yellow; the corolla, or interior of the flower, being a fine bright orange.

PELOPIDAS.—A very good third-row bybløemen, which pleased me much. Stock principally in the hands of a Mr. Smith.

QUEEN VICTORIA (Brooks).—Fourth-row rose. Deep and full feather, and clean.

HOGARTH (King).—Apparently a new and distinct variety of bizarre, the marking a well-pencilled star. Broke from a breeder in a cottager's garden, at Canterbury. Origin of the breeder not known.

MAY QUEEN.—A rose; fine form, thick petals, colour of lac. Broke this season. Considered by the censors a very superior flower.

DOUBLE SWEET WILLIAMS.

THE visitors to Hampton-Court Gardens, who take an interest in such things, will not have failed to observe a bed of double Sweet Williams, saved at different times from seed, and when once saved, piped, or layered, or slipped, to propagate the sort, that it might not be lost. In a large quantity of seedlings there may be, and sometimes are, several double ones. Having, however, obtained something that we are pleased with, the next thing to consider is, how are we to propagate it? The safest way is to layer it, the same as we should a Carnation; notch the under side of the shoot a little, and peg it down just under the surface of the earth, and, when all the shoots are so pegged down, let them be gently watered and left to root. In September they will be found rooted well, and may be cut off with their roots to them, and be numbered and planted out in proper beds to bloom the next season; but omit not to sow the seed saved from the best sorts. The best month for sowing seed is June; they then come to a good size for planting out, so as to get well established before the winter sets in, and do not get too forward to flower well in the season.

HORTICULTURAL SOCIETY'S EXHIBITION, HELD AT THE CHISWICK GARDENS ON JULY 12TH.

THIS was the last exhibition for the season, and, excellent as has been former July meetings, this, as a whole, stands very pre-eminent for the excellence of the specimens shown. In many instances it appeared that skill in culture had reached the climax. Great praise is due to the managers of the exhibition for the excellent arrangements which have through the season been made for viewing the specimens in a convenient manner by additional space, &c. We cannot in our present number insert the desired particulars of what we took notes, but a few must suffice till our next.

NEW PLANTS.—*Pentstemon azureus*. It is an erect growing plant, producing many long spikes of numerous flowers. The plant was near a yard high. Each flower is two inches long, the bottom part of the tube is red, and all the portion above is of a fine azure blue. At the inside of the tube, on the lower side, there are two streaks of white,

and a tinge of red shaded with the blue. The leaves are a quarter of an inch broad, and three inches long. It is a valuable addition to this charming, long-blooming tribe of plants. It had been discovered by Mr. Hartweg, the Society's former collector. Several plants are in the garden at Chiswick.

Mimulus tricolor. We noticed this charming small-flowered species in our last Number: the plant was now more profusely in bloom. It is a valuable acquisition. This, too, had been discovered by Mr. Hartweg, and several plants are in the Society's garden.

Gloxinia exquisita: blush-white, with pale rosy violet-streak down lower side of throat.

G. carinata splendens: a bright rosy-red, with a crimson spot inside.

G. grandis. The flower is of thick firm substance, and the form is superior to any other we have seen. The mouth of the tube opens rather widely: it is of a pale flesh colour, with a violet-crimson broad streak along the inside (lower part) of it.

G. Passinghami superba. The flower is larger than the original variety, and the large blotch inside the tube is of a rich dark-velvet colour. It is a pretty improvement. We understood the above were shown by Messrs. Henderson's, of Pine-apple Place Nursery.

G. Wortleyana: flower large, white, with a blue-violet rim inside the mouth, and beyond, it is beautifully spotted, similar to the common Foxglove. By Mr. Glendinning.

Achimenes Greisbrighti: tube near two inches long, rather narrow, about three-quarters of an inch across, of a rich orange, and the end of a fine scarlet colour; inside of the tube yellow. It is a pretty interesting flower.

Nitraria coccinea. This very charming shrub (supposed to be hardy) was again exhibited by Messrs. Veitch's; there were about sixty flowers upon it, and the large, drooping, rich orange-scarlet flowers produced a beautiful effect. It is a gem of much value.

Ruellia (new species). The tube of the flower is about three inches long, and the five-divided limb (mouth), two and a-half inches across. It is of a slate-blue colour, having the inside darkest. By Messrs. Veitch.

Nepenthus sanguinea. The pitchers are of deep chocolate-red colour. By Messrs. Veitch.

Maurandia Emeryana. In the way of *M. semperflorens*; the flowers, a pretty rose colour.

Salvia patens alba. The flowers are the size of the blue, and of a pure white: it is a nice companion for the other; the contrast, striking.

Fuchsia corymbiflora alba. Mr. Salter exhibited two large plants of this valuable white-flowered variety. One, five feet high, had had a graft of the *F. corymbiflora* inserted, and it was in bloom at this time: the contrast between its rich scarlet flowers and those of the white variety was very striking. The flowers of this new hybrid were pure white, longer than those we made our figure from, which we inserted in a recent Number of this Magazine. One of the racemous heads had

upwards of two hundred flowers upon it. It merits a place in every collection of this lovely tribe.

There was another variety shown by some person, whose name we could not ascertain; the tube of the flowers was about two inches long, buff colour, and the corolla a brilliant orange-scarlet: the sepals were tipped with green. It is a very pretty variety. Several other seedlings were shown; but there are better of the same classes already sent out. As a specimen plant, one was shown, which had had fourteen other kinds grafted upon it, all being in bloom. It was an interesting curiosity. Shown by Mr. Gregory, of Cirencester.

PETUNIAS.—*P. regina*: mottled with rose and white, and, with the dark inside of the tube, had a pretty appearance. Name of exhibitor not given.

Count Zichy: a pretty variety, of a rosy-purple colour, with a white centre, good form. By Messrs. Henderson.

P. splendens, *Exquisite*, *Victoria*, *Beauty of Rushbrook*, *King of Purples*, and *Madame Julien*, were also shown, and are very handsome. Their descriptive colours we intend to obtain for our next Number.

VERBENA.—*Madame Brunzod*: white, with a deep velvet eye, good form. This is a beautiful variety; of its class, unequalled. Ought to be in every collection.

CARNATIONS and **PICOTEES** were more numerous than we expected; for amateurs, being classed with nurserymen, are somewhat "backward in coming forward."

Carnations: 1st, Mr. Ward, of Woolwich, with *Hamlet*, *Colonel of the Blues*, *Cartwright's Rainbow*, *Martin's President*, *Puxley's Prince Albert*, *Kay's Majestic*, *Lady Ely*, *Earl Grey*, *Beauty of Woodhouse*, *Hale's Prince Albert*, *Lady of the Lake*, *Conquering Hero*, *Lydia*, *Juba*, *Sarah Payne*, *Count Pauline*, *Regular*, *Millwood's Premier*, *Earl Spencer*, *King of Scarlet's*, *Brutus*, *Village Maid*, *Sir H. Smith*, *Barrenger's Premier*; 2nd, Mr. Norman, of Woolwich, with *Puxley's Prince of Wales*, *Sir J. Reynolds*, *Frederick Squire's Defiance*, *Mrs. Burkill*, *Hector*, *Brutus*, *Mrs. Moore*, *Hale's Prince Albert*, *Queen of Purples*, *Bonaparte*, *Hepworth's Vivid*, *Sir R. Hill*, *Lord Rancliffe*, *Simpson's Queen*, *Count Pauline*, *Flora's Garland*, *Princess Royal*, *Omnium*, *Princess*, *William Penn*, *Cartwright's Rainbow*, *Jackson's King of Purples*, *Admiral Curzon*, *Lady Ely*; 3rd, Mr. Bragg, Slough.

Picotees: 1st, Mr. Norman, with *Prince of Wales*, *Crask's Prince Albert*, *Mrs. Bevan*, *Daphne*, *Ne Plus Ultra*, *Pride*, *Lord Chandos*, *Lady Dacre*, *Duke of Newcastle*, *Mrs. Barnard*, *L'Elegant*, *Emperor*, *Princess Royal*, *Miss Hardinge*, *Morgiana*, *Lord Nelson*, *William Cobbett*, *Shaw's Beauty*, *Garratt's Rededge*, *Portia*, *Prince Alfred*, *Miss Annesley*, *Seedling*, and *Elizabeth*; 2nd, Mr. Ward, with *Marris's Prince Albert*, *Sarah*, *Purple*, *Perfection*, *Cray Beauty*, *Lady Chesterfield*, *Agitator*, *Miss Desborough*, *Vespasian*, *Mrs. Bevan*, *Norwich Rival*, *Ward's 156*, *Mrs. Barnard*, *Duke of Newcastle*, *Crask's Prince Albert*, *Princess A. of Cambridge*, *Norman's Beauty*, *Isabella*, *Enchantress*, *President*, *Lady Dacre*, *Ward's No. 2 Seedling*, *Kirtland's Queen*, and *L'Elegant*; 3rd, Mr. Bragg.

CULTURE OF FERNS.

BY MR. THOMAS MOORE.

FERNS do not, in a general way, under cultivation, associate with other plants. Orchids, however, are an exception; the degree of humidity kept up, and the shade afforded, in the case of Orchid-houses, being favourable to their growth. Low buildings are preferable; and if they face the north, the plants can receive more light, without the danger of the sun's rays. Of atmospheric moisture these plants need an abundant and almost unvarying supply; even in winter this is necessary for those in a growing state. Deciduous kinds are the better for being kept somewhat drier, from the time the fronds decay until they again renew their growth. Shading should be used in bright sunny weather, during the whole of the summer season. The propagation of Ferns is effected by division and spores; those species which creep horizontally and form underground stems, throwing up fronds at intervals, may be increased by dividing the caudex with a portion of the roots and fronds; and the same method can be adopted with those which do not creep, although the opportunities of doing so are less frequent than in plants of the first character. The separated plants should be fixed firmly in small pots, the crown being just clear of the surface of the soil; and, after being gently sprinkled with water, they should be placed in a situation where the atmosphere is rather closer than is required for established plants, until they have begun to grow. The smaller and more delicate kinds are greatly benefited by being covered for a while with bell-glasses. Propagation is also effected by spores. Half fill some shallow, wide-mouthed pots with broken crocks, and on this put a layer of about two inches of little lumps of spongy peat soil, mixed with soft sandstone, broken in small lumps of the size of nuts or peas. This compost should not be consolidated. Next shake a brush very gently over a sheet of white paper, or frond of the species to be propagated; the fine brown dust thus liberated is to be regularly and thinly scattered over the rough surface of the soil, which must be immediately covered with a bell-glass large enough to fit down close within the pot-rim. The pots should be at once set in feeders kept constantly filled with water, and placed either in frames or in the fern-house, according to the kinds sown. It is never advisable to water the surface of the soil after the spores are sown; and it is well to roast the soil employed, in order to kill the germs of any other plants that may be contained in it. For soil, a good general compost may be formed of equal parts of fibrous heath-soil, broken up into lumps as large as walnuts (or smaller for small pots), and perfectly decayed leaf-mould, with a portion of clean gritty sand, especially for potting the more delicate kinds; the more robust growers are benefited by a small portion of light loam being added to the above compost. In potting, good drainage is essential, and the crown of each plant should stand about level with the pot-rim. The temperature which the tropical species require is about 70° in the growing season, decreased to 60° in winter, and lowered at night to 55° or 50° . The species which are natives of temperate climates require a day tempera-

ture ranging from 40° to 60°; permanently lower in winter than in summer, and, in all cases, lower by night than by day; from 35° to 40° will be a sufficient night temperature. The hardy and half-hardy species may be placed in a frame kept moderately close at all times, and, in winter, covered at night with mats. The hardy species do not absolutely need this protection, but the shelter thus afforded is favourable to their development. Shade, during bright sunny weather, is decidedly advantageous to these plants. Ferns should never be suffered to become dry; when growing, they require a free supply of water at the roots, and frequent sprinkling overhead; but when at rest, a moderate quantity is sufficient. Soft water should always be used.—*Journ. Hort. Soc.*, iv. 90.

REMARKS ON THE FLORAL PRODUCTIONS OF THE SWAN RIVER COLONY.

PERHAPS the whole of the rest of Australia, singular and beautiful as its vegetation is, must yield to the Swan River flora the palm of elegance and gorgeous colouring. This spot, probably, has also been as well examined as any part of the country, and many of its most interesting plants have been introduced to this country; but still many remain to be introduced, and fresh additions are made every day as the country is further explored. One of the natural features of this part of Australia, which no doubt has an effect on this beautiful vegetation, is the almost universal presence of water, generally within two feet of the surface, if not breaking out in natural springs. The country is generally of an open undulating character, the forests being composed of about three-fourths gum-trees (*Eucalypti*). The principal rise in the country is the range of the Darling Mountains, rising to a height of two thousand feet, and composed of limestone, covered with evergreen woods. The large plants giving the peculiar aspect to the country are, chiefly, the grass-tree (*Xanthorrhæa*), often associated with a very large Banksia (*B. grandis*) and with *Zamia spiralis*, which, like it, often attains a height of thirty feet. Others are the cypress pine (*Callitris*), two species of *Casuarina*, and the fire-tree (*Nuytsia floribunda*), a plant attaining the height of a small tree, and in its season so densely covered with spikes of orange flowers, that the above popular name has been bestowed on it by the colonists of King George's Sound from the appearance which it makes in the landscape. With these are associated an immense variety of bushes, many of extremely neat and graceful habit, and producing a profusion of the most splendid flowers. By far the greater proportion of the vegetation is different in species from the other parts of Australia, especially from that of the neighbourhood of Sydney. Of the natural order *Myrtaceæ* many beautiful forms are found, among which *Calytrix aurea*, with oval leaves growing in an imbricated manner, and producing heads of bright yellow flowers, and *C. sappharina*, with rough heath-like leaves and round heads of very deep violet-coloured flowers, are very striking. But a much finer bush is *Chrysorrhœ nitens*, with heath-like leaves

and spreading yellow flowers, produced in such profusion as to give the plant the appearance of being covered with gold leaf. Two or three species of *Hedaroma*, bushes of low growth, are so deliciously fragrant in their leaves and half-ripe fruit, that it is a point worth consideration whether they would not pay to collect and import into Europe for the use of perfumers.

The Leguminosæ are equally abundant in this colony, as already noticed of the other districts, and equally remarkable as being, in the species, almost all peculiar to the district. Wattles (*Acacia*) occur in plenty, and some of very beautiful forms. Among the *Papilionaceæ*, or butterfly-flowers of this order, occur many most striking plants, as various *Hoveas*, *Mirbelias*, *Hardenbergias*, &c., remarkable in many cases for the intense blue or purple of their flowers; and other genera, as *Oxylobium*, *Chorozema*, *Gompholobium*, *Zichya*, &c., equally gay, with flowers varying from pure yellow to every shade of yellow and crimson mixed. The Swan River colony appears rather bare of *Rutaceous* plants, an order very abundant on the east side of the continent; but among those peculiar to the west coast is *Diplolæna Dampieri*, a hoary looking spreading shrub, with oblong rusty leaves, and curious nodding heads of flowers with long protruding pink stamens. Nearly twenty species of *Lasiopetalæ* are known to exist here, among which *Corethrostylis bracteata* forms a downy shrub with heart-shaped leaves, and bears a profusion of forked racemes of pink flowers growing from coloured bracts, and forming an elegant plant. Another is *Sarotes ledifolia*, a stiff growing shrub, with narrow leaves arranged in whorls of threes, and producing corymbs of large light blue flowers.

Plants with composite flowers are numerous, and some of them are very beautiful; none perhaps more so than the now common *Rhodanthe Manglesii*, with its copious heads of decurved delicate pink flowers on the slender stems. *Lawrencella rosea* (like the last, an annual) is said to be even more handsome, having blunt linear leaves with terminal heads of rosy flowers. The greater part of the order is, however, inconspicuous or weedy. Of *Epacridaceæ* many species exist, but very few of much interest, and those chiefly belonging to genera well known in other parts of the country. *Goodeniaceæ* are numerous, and comprise several fine *Leschenaultias*. *Dampiera cuneata* is a dwarf herbaceous plant, with leathery leaves and terminal flowers of a bright blue. A great number of species of the curious genus *Stylidium* are found in the colony, nearly all of which are worthy of cultivation, their flowers varying from pink to yellow and many shades of purple. Of the equally neat genus of sun-dews (*Drosera*) several species of great interest are found, not only on account of their flowers, but from the bulbs of some of the sorts being said to afford an article of food to the natives, as well as to give promise of being valuable for dying purposes. One of these, *D. erythrorhiza*, has bluntly-ovate leaves, fringed and in whorls, with a terminal bunch of flowers, and bulbs of a bright scarlet colour the size of large hazel nuts. One of the most numerous orders is *Proteaceæ*, whose varying forms are so abundant as to stamp the Australian character on the whole country. They occur of all sizes, from bushes of humble growth to trees of the height of fifty feet.

Upwards of sixty species of orchids have been detected, many of

them very handsome, and all interesting from the singular structure of the flower, and frequently from the different methods in which the bulbs are formed. These plants are also worthy of notice from the roots of several species affording a considerable amount of food, at certain seasons, to the Aborigines. Many other species of monocotyledonous plants are to be found of great interest; and among the grasses, a common one here, as well as nearly all over New Holland, is the Kangaroo-grass (*Anthistiria australis*), a plant of invaluable utility in all the grazing districts.

REMARKS.

TEROMA JASMINOIDES.—We have on several occasions recommended this lovely flowering plant as a charming one for the greenhouse, either for training up a pillar, or round a low wire-frame, also to grow it as a bush, by stopping the vigorous leading shoots, and in each particular mode it becomes a beautiful object. A very large plant is now in profuse bloom in the conservatory at the Horticultural Gardens, and in the Royal Gardens of Kew, plants trained to wire frames, and others as bushes, have bloomed most profusely. Their handsome large white flowers with a deep crimson inside of the tube, and borne in fine clusters, are admired by all visitors. The plant grows freely in a rich loam and sandy peat in equal portions. When in pots, it requires to be re-potted every year, taking away all the old soil possible, so as not to injure the roots. When planted out in a bed in the conservatory, and growing vigorously, the shoots should be bent and coiled round the support, so as to check the luxuriance. It deserves to be grown wherever there is the convenience.

WIRE-WORM.—We have never known any remedy but catching and killing this pest. We have covered them with salt for twenty-four hours, and they have been none the worse. The best way is, to make holes and plant carrots, to be drawn up every morning, and put down again. The worms work their way into the carrot half-way, and stick there, so that a score may be sometimes pulled out of a single carrot; and this continued, not only diverts them from the other crop, but lures them to their destruction.—A. Z.

ATMOSPHERE OF ORCHID-HOUSES.—The most obvious defects in the present management of Orchid-houses consist in the want of attention to their atmosphere, particularly as regards moisture, for the plants in such structures derive the greater part of their subsistence from the vapour. When the plants are exposed to every change of temperature and humidity, they are liable to suffer, and this in proportion to their luxuriance. Great attention, therefore, should be paid to the state of the atmosphere, and to having at command ample means of producing an abundance of heat or moisture, the one to counteract the other whenever either may be in excess. When an excess of moisture takes place, admit external air, raising the temperature at the same time; when dryness prevails, reduce the temperature and increase moisture by evaporation; for the amount of exhalation from the foliage depends upon two circumstances, the saturation of the air and the velocity of its motion, when dry. Damp air, or floating moisture of long continuance, would be detrimental to the

plants, for it is absolutely necessary to health that the process of transpiration should proceed freely under all circumstances. In a confined atmosphere like that in which Orchids grow, it might be found beneficial to the health of the plants if a small quantity of ammonia or carbonic acid were set free in the air, or dissolved in the water used in syringing the plants, both these substances being very soluble. The latter might be applied to the air, by placing large pieces of fresh chalk or limestone on the shelves, and pouring sulphuric acid, diluted, over them: shallow pans, filled with oats, or barley beginning to vegetate, are also beneficial to plants confined in a warm damp atmosphere. With respect to those kinds which require to be grown upon wood or in baskets, less danger is likely to accrue from a slight excess of moisture, when they are in a growing state, than from a want of it; therefore sphagnum or rough fibry peat should be fastened round the blocks, or placed about the roots in the centre of the baskets, in order to retain sufficient moisture when the atmosphere becomes too dry. The blocks on which the plants are grown should be those kinds like the apple or pear, with a smooth surface, and in a fresh state when the plants are fastened upon them. The fastenings should be effected by copper wire and nails; old dry blocks, with rough bark, or charred ones, are bad, on account of their easily becoming too dry, particularly the charred ones, whose black surface absorbs heat, which is injurious to the young roots, especially in summer. Blocks or baskets are perhaps, in the majority of cases, best for true Epiphytal Orchids, but on these they require more attention, in regard to moisture, than when grown in pots. In the case of Stanhopeas, however, it is absolutely requisite to grow them upon blocks, as their flowers grow downwards. Again, with *Aerides*, and all true air plants having thick, fleshy, aerial roots, it is necessary to place them upon blocks or in baskets, and to suspend them from the roof, so that their roots may grow freely in the damp atmosphere, for if confined under the soil they soon perish. Fibry peat, moss, or sphagnum, when used for the purpose of covering the roots, is of no other use than that of retaining moisture. Moss or sphagnum of all kinds is bad, if not fully exposed to the atmosphere, and soon becomes mouldy; it should only be used on blocks, or on the outsides of the baskets. In suspending the blocks, always place them perpendicularly, and the baskets quite horizontally; and invariably have them taken down and examined every third day in summer, and once a week in winter, to see if they want watering. This must be done independently of syringing, for some parts of the blocks may be found to be quite moist enough, while other parts are dry.—*Mr. Gordon's Paper in the Journal of the Hort. Society.*

CHEAP FLOWER GARDENING.—Those who do not possess a sufficient extent of glass frames for the propagation of *Verbenas*, *Calceolarias*, and other half-hardy bedding plants, may make a splendid display by filling some of the beds with masses of the more durable annuals sown in the places in which they are to remain. It is not to be expected that the duration of these will be equal to the plants for which they are substitutes, but with a proper exercise of taste in arranging them, the result will be much more satisfactory than many

suppose. For white beds use *Clarkia pulchella alba*, *Nemophila atomaria*, or *White Virginian Stock*; for pink or rose colour, *Clarkia p. rosea*, *Saponaria calabrica*, or *Rose Virginian Stock*; few things make a more splendid yellow or orange bed than *Eschscholtzia*, and for a dwarf very compact bed of the same colour the common *Mimulus moschatus* is well adapted, if the situation is not too shady; for blue beds, *Nemophila insignis*, *Lupinus nanus*, the late blue Forget-me-not, or the beautiful but rather scarce *Centaurea depressa*; for dwarf scarlet beds Verbenas or Geraniums are indispensable, but a taller bed may be made of *Pentstemon gentianoides*; the different varieties of *Antirrhinum majus* are also very useful, particularly the dwarf double white variety—the taller kinds may easily be made dwarfer by pegging them down; for a purple bed, nothing surpasses the purple branching Larkspur, if raised from seed on a warm border, planted out eight inches apart, and pegged down twice during the growing season. The rest of the annuals in the above list may be sown at once in their places, and thinned out to proper distances. The Musk and Forget-me-not are hardy perennial plants, as are also the Antirrhinums and Pentstemons. The time for sowing annuals must be regulated by the period at which the greatest display will be most useful; and as this will generally vary from the middle of July to the middle of September, the seeds should be sown from the beginning of April to the end of June. The little *Chænos-toma polyantha* makes a very pretty dwarf bed; it should be sown in March, in a warm frame, pricked out into boxes as soon as it is up, and planted out at the usual time; the young plants will require stopping, in order to induce a bushy habit. *Lobelia erinus grandiflora* is known in the seed-shops as *L. e. compacta grandiflora*. This, and all the other varieties of *L. erinus* or *L. gracilis*, although called greenhouse plants in catalogues, are excellently adapted for flower-garden decoration; they may be propagated in early spring, either by seeds or cuttings, and, with proper attention to potting or transplanting them into frames as they require it, will be ready for bedding out by the middle of May. They will commence flowering immediately, and, unless the ground is very poor, will continue till the end of September. — *Gardeners' Chronicle*.

TEMPERATURE OF ORCHID-HOUSES.—In managing the temperature of an Orchid-house, some have been misled by fancying that because the inmates come from what is called a “tropical climate,” they should naturally be kept very hot and moist at all times; others again imagine that those from the hotter and damper parts cannot be advantageously cultivated in the same house with those from drier and cooler stations. Now in all places where epiphytal Orchids are found, there are at least two seasons, a dry and a damp, with transitions from each; and although the transitions may be but of short duration, yet they represent spring and autumn. Orchids, therefore, like other plants, have the power of adapting themselves to changes of climate and locality, both as regards heat, shade, moisture, and full exposure to bright light, and they will even endure a certain degree of cold. *Lælia majalis* grows upon Oaks in the mountains of Mexico, where the ground in the cool season is sometimes covered with hoar frost. Such low temperature, however, must always be endured at the expense of

vigour. Again, plants, natives of a colder climate, may be grown in a far warmer one than ever they were subjected to in their natural state, provided at all times the extra heat and moisture are judiciously applied, and only when the plants are in full vigour and in good health; so we find that air plants, although naturally subjected to a high temperature, may, with proper precautions, be grown with advantage in a much lower one; and as all plants grown in a lower temperature than their natural one require less moisture, so Orchids, in a cool atmosphere, should be kept drier during a certain period of the year; an increase of moisture should only be given with an increase of heat, and that only in the growing season. It should be recollected that no plants can exist for any very great length of time without rest, and that rest is induced in a tropical climate by drought, in the same way as low temperature in our own country suspends vital energy: therefore Orchids must be subjected to the usual seasonable changes of rest and activity. Rest is induced by withholding moisture from their roots, and partly from the air, and this state of things may be considered to represent their winter. Spring should be initiated by gradually reviving energy, by increase of moisture, first to the atmosphere, and afterwards to the roots or soil, accompanied by a proportionate increase of temperature: this period of their growth should be very slow. Summer must be represented by a greater increase of both heat and moisture; partial shade should also be resorted to to bring the energy of the plant into full force. And lastly, an autumn must be created to bring about maturity by gradually reducing the quantity of both heat and moisture, until the plants are again brought to a fit state for repose. The first and last stages should be of but short duration, and require caution, otherwise much mischief may be done to the plants. By growing Orchids in the mean instead of maximum of heat and moisture, they will not make such rapid growth; but they will become more robust and healthy, and be less liable to receive injury from sudden transitions in the atmosphere, either of heat, drought, or moisture. The temperature of the house can only with certainty be kept regular by night, particularly in summer; therefore the fire should never raise the heat of the principal house higher than 60° , and about 5° less should be maintained where the plants are in a less excitable state; but as the days lengthen, so the temperature may rise, yet it should, if possible, never range higher than 75° by night in summer; it will occasionally, however, be higher in very warm weather, and should be counteracted as much as possible by evaporation and ventilation by night, and by both, as well as by shading, by day. Injury is often effected by a sudden rise of temperature by fire-heat in winter, while little or none is caused if the rise is occasioned by sun-heat: care should therefore be taken to guard against a rise of temperature by fire-heat, particularly in midwinter; rather suffer a depression of a few degrees of heat in very severe weather than use over-strong fires, which will over-dry the atmosphere, and, on the other hand, create too much moisture, if water is supplied. Moisture, however, is by no means injurious to Orchids, provided they can part with it freely, but they are impatient of stagnant damp.—*Mr. Gordon's Paper in the Journal of the Hort. Society.*



IN THE FLOWER GARDEN.

A NNUAL flower seeds, as Clarkia, Collinsia, Schizanthus, Ten-week Stock, &c., now sown in small pots, well drained, and kept in a cool frame, or a spare corner in a cool greenhouse, through winter, will be suitable for turning out in the open borders at the end of March or in April. Such plants bloom early and fine, and they are early ornaments for the flower garden; and as they decline, the spring-sown plants are coming into bloom. Seeds of many kinds, now sown in the open border, generally survive the winter, and bloom vigorously early the next season. **CARNATIONS:** the layers should be taken off, severing them off *at a joint* as near the root as possible. Only a few of the bottom leaves should be trimmed off to admit the compost to settle closely around the stem, and that no leaves may rot inside the soil, and be likely to damage the main stem. The compost in which to pot them must not be rich, or the plants will be likely to grow too vigorous, and become what florists term too gross. Equal portions of year-old turfy loam and leaf mould, with a small proportion of sand mixed therein, is rich enough, and of a dryish texture, and the plants keep healthy in it if otherwise duly attended to. They must have a liberal drainage; over the broken pot, &c., spread a portion of moss or turfy loam, in order to prevent the compost settling amongst the bits of pots, and to allow a free passage for the water draining away. The compost must not be sifted, but chopped, and in its rough state. In potting, place two layers in each pot. When potted, put them in a cool frame for about ten days, keeping the lights closed, and shaded from mid-day sun; this contributes to an immediate striking root afresh: afterwards they may be fully exposed in a sheltered spot, having a thick floor of coal-ashes or boards to place the pots upon, in order to prevent worms entering. **PINKS:** beds of them may still be made, and the earlier the more successful: dig into the bed four inches in thickness of old manure; do it a week or so before planting, and plant as early in the month as you can. **PANSIES:** beds of them should be made for next spring bloom. Pot some of all the best kinds in small pots, to be placed in a cool frame during winter. If the sowing of the seeds of biennials, as Scabious, Canterbury Bell, Brompton and Queen Stocks, &c., has been neglected, they should be attended to as early as possible. **VERBENAS:** runners should be potted in small pots, a third filled with potsherds, and the rest with good loamy soil, placing them in a close cool frame for ten days, shading from mid-day sun; after which gradually expose them to open air. Attention to them should be immediate. When placed in a cool frame or greenhouse for winter pro-

tection, they vigour, by repotting, watering with liquid manure, &c., occasionally. CHINESE PRIMROSES should be similarly encouraged for winter blooming. If mildew appears on any plants, dust them with sulphur immediately. Camellias may be grafted; the operation may be performed with the greatest success by pursuing the method the French call "*graffe en placage*," which is merely inserting that portion of wood that includes a bud and leaf cut longitudinally, into a corresponding cleft in the stock. The grafted subjects should be plunged in bottom heat, and kept covered for at least a month.

SHRUBBERY, &c.

When it is intended to remove large evergreen shrubs, &c., the coming season, it very materially contributes to success now to have a deep trench cut round the plant at the size the ball is intended, and thus cut in the roots, which induces them to push lateral ones, and such readily strike afresh when removed. October and early in November is the best season for planting evergreens; the ground possesses some heat then, and promotes their more immediate establishment, and the air is cool and damp in a proportionate degree.

THE CULTIVATION OF ROSES.

PEAT soils, although not of the best kind for Roses, are found to grow them tolerably well. For the improvement of such if wet, the first effort should be to drain them. After this, stiff loam or pulverised clay, and burnt earth, may be brought upon the surface, digging two spit deep, and well mixing the foreign substances with the natural soil, as advised in the improvement of clay-soils.

The worst soils for roses are those of a sandy or gravelly nature. In such they often suffer fearfully from the drought of summer, scorching up, and dying. Soils of this kind are sometimes bad beyond remedy. The best plan to pursue under such circumstances, is to remove the soil to the depth of about twenty inches, as the beds are marked out, and fill up again with prepared soil. Two-thirds loam—the turf from a pasture, if attainable—and one-third decomposed stable manure will make a good mixture. If a strong loam is within reach, choose such in preference to others, and if thought too adhesive, a little burnt earth or sand, may be mixed with it. A good kind of manure for mixing with the loam, is the remains of a hotbed, which has lain by for a year, and become decomposed. Opiox, a French apothecary, attributes the superiority of the Roses grown for medicinal purposes, in the neighbourhood of Provins, to peculiar properties of the soil, which contains iron in considerable quantity.—*Paul's Rose Garden.*





Gloxinia fimbriata.



FLORICULTURAL CABINET

OCTOBER, 1849.

ILLUSTRATIONS.

GLOXINIA FIMBRIATA—THE FRINGED-FLOWERED.

THIS beautiful flowering plant was recently received at the Royal Gardens of Kew, where it has bloomed. The plant has very much the appearance of an Achimenes of the strong habit. It grows erect half a yard high, and blooms very freely. Like the rest of the Gloxinias, however, it is an herbaceous plant, the stem dying down after it has flowered and perfected its singular scaly roots, or rather underground stems. It requires to have rest in winter, keeping the roots dry, as is done to the Gloxinias generally, as also to Achimenes, and in all respects treated as the others are. The plant at Kew was grown very vigorously, and did not bloom so freely as one we possessed, which has flowered in profusion. It is one of the loveliest flowering plants we know, in delicacy and beauty far exceeding any other of the tribe. It grows very freely, and is easy of cultivation. It ought to be in every greenhouse and stove.

NOTES ON NEW OR RARE PLANTS.

BEGONIA CINNABARINA.

ALL the Begonias are interesting plants, and some of them very handsome. This new species is superior to any we have seen. It is a native of Bolivia in South America, and flourishes in the greenhouse from June to the end of the season. The foliage is hand-shaped, a shining green with reddish veins. The flowers are borne in drooping racemes, and are of a beautiful bright orange red colour, its golden-coloured anthers producing a pretty contrast. It was introduced into this country by Messrs. Hendersons, of Pine Apple Place Nursery. (Figured in *Pax. Mag. Bot.*)

CÆLOGYNE LOWII.

Mr. Low, jun., sent this pretty species from Borneo to the Clapton Nursery, where it has bloomed, as also at Mr. Rucker's and Mr. Halford's. In Borneo, the pendant spikes of flowers are near two feet long, and very fragrant. The sepals and petals are cream-coloured; the labellum is three-lobed, of the same colour, with a rich orange dash down the centre. The flower is about four inches across. (Figured in *Pax. Mag. Bot.*)

CYRTANTHERA AURANTIACA—ORANGE-FLOWERED.

Acanthaceæ. Diandria Monogynia.

This beautiful *Justicia*-like plant was sent from Belgium to Messrs. Henderson, of Pine Apple Place, who presented it to the Royal Gardens of Kew, where it has bloomed. The shrubby plant grows erect, very similar in all respects to the *Justicia carnea*, and the long thyrus heads of flowers are nearly as large, of a beautiful orange colour. It is an ornamental plant for the stove or greenhouse. (Figured in *Bot. Mag.* 4468.)

GLOXINIA DECAISNE.

The leaves are dark green, with white veins, having a pretty appearance. It is a profuse bloomer; the flowers are of a deep rose colour outside, and the lower part of the inside a creamy white, the upper portion a rosy crimson. We have had it in bloom nearly all the past season.

HOYA CAMPANULATA.

In the hot-house at Mr. Rucker's, of Wandsworth, this interesting species has bloomed freely, having a dozen bunches of its waxy, bell-shaped, cream-coloured flowers.

OXALIS ELEGANS.

This beautiful flowering species, which has usually been grown in the greenhouse, flourishes and blooms profusely in the open border. It is found to be treated as a half-hardy plant usually is; it blooms much finer than in-doors. The flowers are of a deep rose colour, with a rich purple centre. It deserves a place in every greenhouse or flower-garden.

PENTSTEMON CORDIFOLIUS.

This new species we obtained a short time back, and it has recently flowered. The tube is about an inch and a half long, narrow, and of a dull brownish red. It has much of the shrubby habit, and apparently is quite hardy. Not of much worth.

PENTSTEMON CYANANTHUS—AZURE-FLOWERED.

This handsome hardy species is a native of the upper valleys of the Plate River in the Rocky Mountains, where seeds were collected by Mr. Burke. It has bloomed in the open ground in the nursery of Messrs. Lucombe, Pince, and Co., of Exeter. It is a perennial her-

baceous plant, growing erect. The flowers are borne numerously in whorls around the stem. Each blossom is nearly an inch long, tube ventricose, mouth wide. The outside of the tube is purple, and the limb (face) of the flower is a bright azure-blue. It is a very showy handsome species. (Figured in *Bot. Mag.* 4464.)

ROUPELLIA GRATA—CREAM-FRUIT.

Apocynæ. Pentandria Monogynia.

It is a native of Sierra Leone, from whence it was sent to this country by Mr. Whitfield. It is in the select collection of plants at Mrs. Halford's, Newcourt near Exeter. It is a shrubby climbing plant, requiring to be grown in the stove, where it grows and blooms freely. It is a fine-looking plant. The cream-like juice of the fruit is esteemed in its native country. The flowers are very fragrant, white, with a slight tinge of rose at the under side. Each flower is nearly three inches across. (Figured in *Bot. Mag.* 4466.)

SIDA VENOSA—VEINY-PETALLED. (Syn. *Abutilon venosum*).

In our Magazine for February, 1847, we figured this most beautiful flower. It is a fine greenhouse shrub, growing erect, and blooming very freely. By stopping the leading shoots, it may be made to form a somewhat bushy shrub, and to bloom at the height of two to three feet. It blooms very freely with us, and plants turned into the open border in April flower splendidly during summer. It deserves to be in every greenhouse and flower border, or as a charming ornament for a lawn. The flowers are drooping in form, like a bell, nearly three inches across, of a rich golden-orange colour, beautifully veined with purple. (Figured in *Bot. Mag.* 4463.)

ZAUCHNERIA CALIFORNICA.

We have seen numerous fine-grown specimens of this highly ornamental flowering plant this season, and although a great deal was said of its merits previous to its being sent out to the public, it far exceeds expectation. It deserves to be in every greenhouse and flower-garden. It grows freely, is readily increased, and, whether grown in a pot, or as a bedding plant, with proper attention, it blooms profusely; its pretty orange-red flowers are very ornamental.

PLANTS IN FLOWER AT THE ROYAL GARDENS OF KEW.

CLERODENDRON SPLENDENS.—This is a climbing shrubby plant, grown to a wire frame in the conservatory. The heads of flowers are six inches across, of a buff colour, tinged with red. It blooms very freely.

STIGMATOPHYLLUM CILIATUM.—The flowers have much the appearance of some of the bright yellow *Oncidiums*. It is a climbing shrubby plant, blooms very freely, and deserves a place in every stove or greenhouse.

HIBISCUS LILIAFLORUS.—A handsome species. The flowers are large, flesh-coloured, with a deep crimson centre. The flower is single and very large. It thrives well in the conservatory.

RHODODENDRON DALHOUSIÆ.—In the Museum at these Royal Gardens there is an admirably well executed model of a specimen of this fine plant in bloom. The leaves are about five inches long, of thick substance. The flowers are just before opening, about five inches long, and when expanded are rather bell-shaped, and nearly as much across the mouth. The petals are of firm substance, and round at the outer edge; white, with one of the upper lobes spotted minutely with rosy-crimson. The blossoms are borne in terminal umbellate heads of from three to seven in each. It is a noble species, the finest known. This is one of the species figured in the splendid publication edited by Sir W. J. Hooker, "On the Rhododendrons recently discovered in the mountains of Himalaya." [Every admirer of this noble race of plants should possess this very interesting publication.]

FUCHSIA SERRATTIFOLIA.—Several plants of this handsome flowering species have been formed into a tree-like shape, having stems six or eight feet high, and a fine branching head, copiously clothed with flowers. They have a beautiful appearance, and appear likely to bloom for some months to come. This Fuchsia is a fine plant for winter ornament, alike suitable for the conservatory, greenhouse, or sitting-room.

MIMULUS GLUTIOSUS.—This shrubby plant is an old inhabitant of our greenhouses, and ought to be in every one where an autumn and winter decoration is desired. Its numerous lovely buff-yellow flowers have a pretty appearance. There are many of them in the plant houses here.

CHOROZEMA MACROPHYLLA.—There are some fine branching bushy plants in profuse bloom. The flowers are orange, with a yellow eye and purple keel. Blooming freely, now renders it a pretty acquisition.

SALVIA FULGENS.—There are several very fine bushes of this showy species, some of them having fifty spikes of these rich crimson flowers. It is an ornamental plant for autumn and winter.

EPACRIS GRANDIFLORA.—Several plants of this ornamental flower are coming into profuse bloom.

CORREA GRANDIFLORA and other species are now pushing forth their lovely flowers, and will be charming ornaments from the time the flowers are fully developed to next May or June. Every greenhouse or sitting-room ought to contain some of this charming tribe.

SWAINSONIA GALEGIFOLIA.—The rosy-purple flowered, as well as the white variety, are now in fine bloom, and will continue till Christmas. Their pretty pea-like flowers produced in five spikes have a nice appearance.

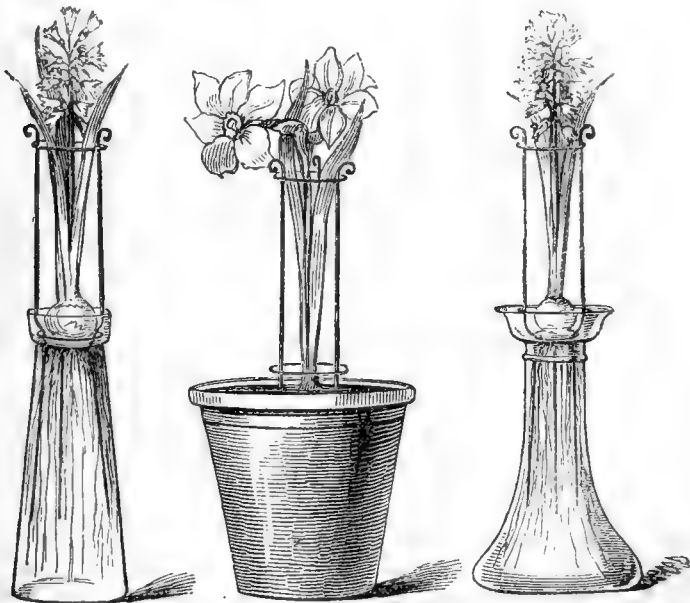
ACACIA TRITERNATA.—A fine bush, is in full bloom, the flowers are globular, a pretty yellow colour, and blooming throughout autumn renders it valuable; they generally bloom from January to May.

In the stove there is a very ornamental new *Gesnera* named *G. Hondensis* in fine flower. The flowers are orange-scarlet with a yellow end, each blossom an inch long. They are produced in whorls of from six to eight in each, and the spikes of whorls are two or more feet long. It is a very ornamental species.

HYACINTH AND NARCISSUS SUPPORTERS.

BY AN AMATEUR FLORIST OF BRISTOL.

I HEREWITH enclose you a drawing of a flower support which I used last year for my Hyacinths and Narcissus. If you have space in your Journal to make it more generally known I think it would be conferring a great boon upon florists, more especially the amateurs in the Hyacinth. Its merits, as given out, are utility, simplicity, and neatness, one and all of which, in my humble opinion, are realized. I used them for the first time last year for my Hyacinths, and their utility was at once visible to me, as it saved me all the time and trouble I used to take in former years in propping them up with, now to me unsightly, sticks and wires of all shapes, especially those in glasses, which when they bloom at all well are sure to fall over or break in the stem with their own weight, unless supported in some way, which let me do my best I could not do neatly till I caught sight of the supporter I now recommend, which when adjusted in the glass looks neat and tidy, and answers all the purpose for which it was intended. I used them for pots in the same way, adjusting them in both instances when I planted the bulbs. After the bulbs had done flowering I used the supporters in the garden for some delicate annuals, and they answered well in some instances, but as the Hyacinth season is approaching it is more particularly for them I now call the attention of the readers of the Magazine.



The enclosed drawing will save me saying more, as if you have space for its insertion the merits of the supporters will be palpable to all the readers of your widely circulated Journal. The supporter was invented I believe by Mr. Hamilton, seedsman, Cheapside, London,

but as I got mine from my own seedsman I suppose they are to be had at all the principal seed shops in the country.

[They are most suitable for the purposes intended, and are ornamental. We recommend them to our readers.—COND.]

ON THE CULTIVATION OF HARDY BULBS.

BY MR. A. COURTIN, GOMER GARDEN, SEAFORTH, NEAR LIVERPOOL.

So far as my opportunities have enabled me to judge, I believe there are comparatively few places in England where this beautiful tribe of plants are extensively or well grown. With the exception of the late Dean of Manchester, who was distinguished as a botanist for his knowledge of *Amaryllidææ* in general, as well as for his success as an amateur grower of a vast collection, there are none who have given bulbs that attention which they deserve, and which has been freely lavished on other families of plants, if not of less merit as objects of scientific study, certainly of less beauty and elegance of form. I have therefore much pleasure in laying before your readers a few observations on the cultivation of such sorts as may be grown in the open ground; and beg to assure them that those which I shall enumerate are well worthy of a place in every garden, and will amply repay the care that may be bestowed on them. If they are not grown extensively, they should be placed in the border in front of a greenhouse, where a limited number will produce the best effect; perhaps 500 or 600 plants might be conveniently grouped together. The finest hardy bulbs are, without doubt, the *Alstrœmerias* from Chili, the *Ixias*, the *Sparaxis*, with the different species and varieties of *Gladiolus*. In regard to the best way of managing the three first, I should say, choose a border in front of any house in your garden with a warm exposure; empty this border two feet deep, and put more than a foot and a half of good drainage at the bottom. The soil should be a mixture such as the following: Two-fifths old peat, one-fifth well-decayed dung or leaf-mould, one-fifth loam, and one part common sand; mix this well, and fill up the border with it to within about six inches of the top, in order to leave room for placing the bulbs in, as they will require to be covered five or six inches. In planting the *Alstrœmerias* it will be desirable to keep them one foot apart. The *Ixias* and *Sparaxis* may be planted closer. If your border is about four or five feet wide, the bulbs will be most effectively placed as follows:—Place three rows of *Ixias* close to the wall, two or three rows of *Alstrœmerias* in the middle, and the *Sparaxis* may be placed in front. Placed in this way they will form a neat arrangement, according to the size they attain. The proper time of doing this is about the middle of October, and the only thing to be observed after that is to prevent them from getting too wet. As soon as frosty or rainy weather sets in, they should be covered, by laying on some straw, and then some oiled canvas; or they may be provided with lights, supported on temporary frames, and these may be covered. Where lights can be spared they are preferable, as they keep off the rain without obscuring the light. In March, the bulbs will begin to

show their shoots, and while the weather is not too wet, the lights may be taken away during the day-time, and altogether removed in April or beginning of May. When the weather becomes dry they will require to be watered frequently, and if proper care has been bestowed on them they will be in flower in June, continuing to flower, if the weather is favourable, till the end of August. After flowering, they should again be kept somewhat dry, without, at the same time being deprived altogether of water, should there be no gentle showers, during the time they are ripening their seeds. By the end of September, the bulbs should be taken out and kept clean and dry on a shelf in an airy part of a greenhouse, and where they will be out of the direct rays of the sun. *Gladiolus floribundus* and *gandavensis* are the two best in respect of their flowers and their hardy character. *G. gandavensis* especially is a very fine hybrid between *G. cardinalis* and *G. psittacinus*; it is in every respect far better than its parents. The best way to treat it is to prepare a small bed in the flower garden with rich sandy soil. Take about a dozen or fifteen strong bulbs, and put them in by themselves, about six or seven inches deep. This may be done in the middle of October; they do not require any cover over them during the winter time. In spring, when they begin to grow, water must be given to them very frequently. The flowers will be seen in May or beginning of June. *G. psittacinus*, *cardinalis*, and *bizarrhinus* require the same treatment. The bulbs must be taken out, after their stems and leaves get yellow, and they must be kept clean and dry in an airy place till they are planted again. They propagate themselves by forming a great many young bulbs during the summer.

THE BOTANY OF WESTERN AUSTRALIA.

THE following interesting observations on the botany of the western part of the colony of Australia, are derived from a communication of Mr. James Drummond's to Mr. Leake, and published in the Journal of Botany. They will be found to describe a number of new plants remarkable for beauty or otherwise interesting, collected by Mr. Drummond chiefly on the Perongarup and Toolbranup hills, which are situate from thirty to forty miles to the north-east of King George's Sound, and consist of clusters or groups of hills surrounded by a kind of indurated clay, coloured from ironstone, of a very barren description. It is evident, from Mr. Drummond's account, that the great variety of plants which clothe the surface of these hills, must, in a great measure be attributed to the different nature of the rocks and soil of which it appears they are composed. It is a well known fact, that plants vary according to the latitude, longitude, or altitude of their locality, but it is very evident, the difference caused by these, in the extent of a few hundred miles, is not near so great as that caused by the different nature of the soil. The *Leguminosæ* tribe of plants are more numerous than any other in Australia, and of these Mr. Drummond has made many additions. "One of the most beautiful plants I have seen," he says, "is, I suppose, a species of *Gastrolobium*, which I call

G. Leakeanum; it grows twelve to fifteen feet high, with opposite leaves three inches long, by two broad, and bears clusters of large deep scarlet flowers in the axils of the leaves; it is abundant on Congineerup, near the east end of the mountain, growing in all sorts of soil, from the base to the summit. The banks of the Salt River, and its tributary streams, produce a fine species of *Brachysema*, an upright growing plant, producing its flowers on the shoots of the preceding season; they are borne on short footstalks, five or six in the axils of each leaf; they are large and bright scarlet. The fine foliage of this plant, silvery underneath, and the great number of its flowers, in which it differs greatly from the other species of the genus, make it one of the finest plants of the order to which it belongs.

“I found growing on Congineerup a remarkable Leguminous shrub, bearing instead of leaves, large glaucous *phyllodia*, somewhat resembling *Acacia gamophylla*, but having yellow papilionaceous flowers: I could see nothing of the old or young seed vessels. The plant is very rare on Congineerup, near the east end of the mountain. To *Myrtaceæ*, and particularly to the sub-order *Chamelauciacæ*, I have made most important additions. A beautiful and apparently nondescript genus near *Actinodium*, but differing from it in having the outer flowers of the heads forming a ray like many composite plants. I gathered two species of the genus in my last journey to the south, both fine plants, but the one now found much surpasses the others; it grows on an upright shrub, from two to three feet high, with small imbricated, heath-like leaves; the heads of the flowers are borne in corymbs from a foot to eighteen inches in diameter, each head of flowers, including the ray, about two inches wide. There is a curious resemblance between these heads of flowers and a fine double daisy (*Bellis perennis*); the colour varies from white to various shades of rose colour. Several fine species of *Chamelaucium* have been found, one with flowers as large as *Verticordia insignis*; the flowers are white when they first come out, but before they go off they change to a fine purple. There seems scarcely any generic difference between *Verticordia* and *Chamelaucium*.

“To the now splendid genus *Genetyllis* I have added four additional species. The tulip-bearing *Genetyllis*, discovered and described in my last journey, I gathered in flower on Mongerup; I had only seen it when the seeds were ripe, and although it was then beautiful, it now surpasses my former description. Along with it, on Mongerup, I found a species with heath-like leaves, a bright scarlet involucre inclosing dark purple flowers. On Congineerup I found two large bracted species of this genus; one with thyme-like, ciliated leaves, and the bracts which form the involucre ciliated; the other with heath-like leaves and bracts, without ciliæ; the bracts in both are rose-coloured. In my first ascent to Toolbranup, I found a scarlet Fuchsia-like *Genetyllis* (noticed in my journal), but saw only a few specimens, which I lost on the mountain. It was burned over last year by the natives, and where the *Genetyllis* and other rare plants grew there is nothing to be seen but stones and blackened stumps. I have now, on Hume's Peak, gathered a beautiful scarlet Fuchsia-like *Genetyllis*, which may

possibly be the same species. When we consider that the involucre of these plants resemble corollas of the same size, it will be seen that they are highly ornamental before the flowers expand, and they retain their beauty in a great degree until the seeds are ripe. Their fragrance is at least equal to the *Hedaroma latifolia* of Lindley, which is *Genetyllis citriodora* of Endlicher; they are most desirable plants to introduce into cultivation. Two fine species of *Calythrix* have been found; one of the largest yet seen of the genus bears rose-coloured flowers, which become white before they go off; and one with reddish purple flowers—a fine plant. To the true *Myrtaceæ* many plants have been added. A *Hypocalymma* grows on Congineerup, in the woods at the east end of the mountain, a faithful drawing of which, leaves, flowers, and branches, might very well pass for the broad-leaved Italian myrtle. There is also a beautiful purple species of the *Cardiomyrtus*-section of this genus, which I observed on all the Toolbranup hills. To *Rutaceæ*, especially to the genus *Boronia*, I have added several beautiful plants. In the swamps behind Cheyne's Beach I observed a pinnate-leaved, black-flowered *Boronia*—a remarkable plant; it grows four or five feet, with drooping branches; the corollas are yellow inside, but the yellow is not seen unless the branches are turned up; the flowers appear quite black; the anthers are smaller, and, I think, fewer in number than is usual in *Boronia*, and concealed by the projecting umbrella-like stigma; the plant has but little of the diosmaceous scent of *Boronia*, and the flowers are very fragrant in the night-time. A pinnate-leaved *Boronia*, with yellow flowers inside and out, and all the usual characters of the genus, is seen on the side of the path from Cape Riche to King George Sound; a fine pinnate-leaved species with large rose-coloured flowers, grows on most of the Toolbranup hills; and one with trifid, very minute leaves; together with a very small entire-leaved species, perhaps the *B. tenuifolia* of the Plantæ Preissianæ, grows with it. The beautiful blue-flowered *Eriostemon nodiflorum*, found here, is a different species from our Swan River *E. nodiflorum*, which has white flowers, more or less tinged with rose colour, and a different habit; it grows also in a very different situation, in the beds of stony brooks. The beautiful rose-coloured, sweet-scented *Hibiscus* of Cape Riche, is a very different plant from *H. Hugelii*; and is quite distinct from *H. Pinonianus*, which grows with it, and bears purple flowers. I found a pretty white-flowering diœceous malvaceous plant, remarkable for having the male flowers much larger than the female; the plant is very rare on the right bank of the Salt River, just by the second crossing-place from Cape Riche to the sandal-wood station. In regard to *Epacrideæ*, I have added many species of a new genus to this order; I found two on Congineerup. The plants are of robust habit, and bear their flowers in the cone-like terminations of the branches; these all become white at the time of flowering, with the exception of the points of the leaves, in the axils of which the flowers are borne: these retain their green colour. From this colouring of the cones at the time of flowering, these plants are showy, as well as curious. I found a red-flowering *Andersonia* on Mongerup; it is the only red flower I have seen of the

genus. I have added many composite plants to my collection. Soon after the rains set in, a beautiful little annual everlasting flower covers the tops of the Perongarup hills, in many places giving them the appearance of being covered with snow. This little plant would be worth cultivating in England, and it would flower long before any of the other sorts from seed. I found a very curious plant of this order, of a genus different from any other I have before seen in this country, and bearing, in leaves and flowers, a considerable resemblance to the European Dandelion; it has a single, milky, tuberous root, the size and shape of a skirret; one is annually formed, which flowers the following year, and, like some of the *Orchideæ*, the tuber which flowered the year before, is seen, in an exhausted state, by its side. I have made some additions to my collection of *Proteaceæ*. A large and showy species of *Isopogon* grows on the tops of all the Toolbranup hills; I suppose it is altogether a larger plant than the *L. latifolius* of Mr. Brown. A remarkable *Isopogon*—a stemless species, with downy leaves, a foot long, divided as in *Franklandia fucifolia*—grows about the lakes to the east of Toolbranup; and a fine upright-growing thorny *Adenanthos* on the top of low ironstone hills in the same vicinity. In botanical characters, it comes near the *A. pungens* of the Plantæ Preissianæ; but that is a prostrate plant, covering the ground like a carpet, while this has no branches near the ground. A very curious *Grevillea*, with smooth, rigid, simply pinnate-leaves, is seen in several places by the road-side in going from Cape Riche to the sandal-wood stations. I must leave some account of the *Endogens* I have met with to a future opportunity.”

OBSERVATIONS ON AN EFFICIENT AND ECONOMICAL MODE OF PRODUCING BOTTOM HEAT IN STRUCTURES FOR THE GROWTH OF PLANTS.

BY MR. WILLIAM CHITTY, OF STAMFORD HILL, NEAR LONDON.

FEELING assured that anything calculated to further the interests of gardening, more especially of the floricultural part of gardening, will be welcomed by you, I would take this opportunity of saying a few words in favour of the mode of producing bottom heat so lucidly described and illustrated in the “Appendix to M’Intosh’s Practical Gardener,” not but that you and your readers (at least a large proportion of them) are already acquainted with the mode as there detailed, and very many probably with its practical operation and excellence, but still it may not be amiss to recal attention to what will be found to be not a mere figment, but the most cleanly, economical, and efficient mode of heating a forcing house or stove that can possibly be introduced, and withal so simple in its management, “that a child might be entrusted with its care.”

A powerful argument in favour of this mode of producing bottom heat, taken in connexion with its efficiency, is the very small cost at which such an apparatus can be fitted up, wherever there is a pit already existing, which may have been used for the purpose of con-

taining fermenting materials, and a flue which has been used for warming the atmosphere of the house; the cost in such a case would be little more than nominal in introducing the tank system according to the plan laid down in the article alluded to, and almost the entire expense incurred by the alteration would be saved in one year in fuel, especially in localities where fuel is dear. And even where the entire apparatus has to be made, the expense is so much less than that of those ordinarily in use, as to recommend it to the attention of all those who wish to purchase the pleasures of floriculture at as reasonable a cost as possible.

Still, if cheapness were its only recommendation, it would not be worth attention, it is also most efficient in its operation, producing a steady, genial, growing warmth, which can be lessened or increased according as circumstances, the season of the year, or the kinds of plants to be grown may demand. In a small pit constructed after this model not far from this place, I have seen it in admirable operation, more especially is it adapted to such plants as produce their flowers naturally in the winter season; in the fore-mentioned pit I have seen *Euphorbia jacquiniiflora*, *Gesneria oblongata*, and similar winter flowering plants developing and perfecting their inflorescence in a way superior to anything I had seen under any other mode of culture.

Its superiority over the mode of producing bottom heat by means of dung, tan, leaves, &c., will be evident when it is recollected that "the plan was always attended with trouble and expense. It is troublesome, by causing much inconvenience; a quantity of litter and dirt is carried about, and in some places where it has to be conveyed through neat and cleanly gardens it looks very unsightly, while time and trouble are occasioned to restore order. But the chief fault of the old plan was the time lost in getting the beds replenished; for instance, the bed of bark becomes cold and dead, and worms, fungus, and insects abound, whence it becomes necessary that another bed should be speedily prepared. Previously to this, all the tender plants and cuttings must be removed and stowed away in any hole or corner that presents itself. After some delay the old tan is taken out, and in a day or two the fresh may be ready to be brought in, when the bed is again formed; but many days must elapse before it sinks to a proper level and consistency, and is ready to receive its tender occupants. The plants are then removed from their temporary lodgment; but how annoyed must the cultivator be to find that dozens of tender cuttings and plants have perished from the want of sufficient care, and from exposure to cold."—(Page 13 of Appendix.) All these evils are obviated by the adoption of the tank system.

Not one of the least advantages of this plan is, that it requires no large amount of artistic skill in its erection; any gardener, amateur, or gentleman may, with the assistance of their usual tradesmen and the diagrams found in the Appendix, (and the entire volume is worth procuring were it only for the sake of it,) carry it out to perfection. Not to be further tedious, I would only now add, that the mode of producing bottom heat now referred to may be adopted without the least hesitation by the merest tyro in the art of plant cultivation, since

(all other circumstances being equal) those influences will be transmitted both to the atmosphere of the house, and the material in which the pots may be plunged, as will ensure the most complete success.

DESCRIPTIVE LIST OF THE BEST ERICAS.

SEVERAL of our country correspondents having requested us to insert a descriptive list of the best Ericas, we carefully noted down the particulars of those kinds which were shown at the principal Floral Exhibitions at Chiswick, Regent's Park, and the Surrey Gardens during the present season. We scarcely need to state that the kinds are the best and most showy grown in this country, and from the list we give our readers may safely make a selection suited for any establishment.

Erica splendens: tube-shaped, slightly curved, one inch long. Colour, fine orange scarlet; handsome.

E. ventricosa-globosa: tube bottle-shaped, an inch long, waxy Outside flesh colour, inside red; fine.

E. ventricosa hirsuta alba: tube bottle-shaped, waxy, one inch long, white; fine.

E. mutabilis: tube an inch long, flesh colour, with a deep-pink mouth (limb.)

E. tricolor: tube waxy, one inch, white with a green mouth, and a darker rim.

E. metulæ flora: tube half an inch, waxy, red, with a pink mouth.

E. eximia: tube one inch, waxy, red at the bottom, shading off to a lighter colour, and a green mouth; fine.

E. jasminoides: tube an inch and a half long, flesh waxy, mouth white.

E. ventricosa magnifica: tube one inch, bottle-shaped, a deep pink with a white mouth; fine.

E. massoni Schombergi: tube one inch, waxy, pale-flesh, with a deep green end; fine.

E. intermedia: white, in large racemes; very pretty.

E. ventricosa grandiflora, tube waxy, pink, one inch long; pretty.

E. ventricosa breviflora, tube half an inch, bottle-shaped, pink; pretty.

E. ventricosa splendens: tube one inch, pink, with a light mouth; pretty.

E. vestita coccinea: tube one inch, funnel shaped, crimson-scarlet; fine.

E. florida: bell-shaped, hanging dependent, white; very pretty.

E. Swainsonia: tube bottle-shaped, one inch long, a pale flame colour; fine.

E. Cavendishii: broad tube an inch and a half long, yellow, which stand out well. The black anthers are very distinct inside the mouth, and produce a pretty effect; fine.

E. prægnans: tube one inch, bottle-shaped, a pale flesh with dark inside; fine.

E. mirabilis: a pure white, star-shaped; pretty.

E. tricolor alba: tube an inch and a half long, bottle-shaped, waxy, white; fine.

E. odora-rosea: bell-shaped, half an inch long, white; very pretty.

E. tricolor chlorissa: tube an inch and a half long, lower part a flame-pink, and the upper lighter with a green end; fine.

E. depressa: tube an inch long, curving inwards, broad, yellow tinged with green; pretty.

E. Bergiana: flower small, bottle-shaped, purple-red, blooming in vast profusion; pretty.

E. retorta: tube an inch long, bottle-shaped, flesh colour, with a dark rim round the end, mouth white; fine.

E. pulverulenta: tube half an inch, pink. All the plant appears as if sprinkled with flour.

E. vestita alba: tube an inch and a quarter, white, with dark anthers: fine.

E. translucens rosea: tube one inch long, rich rose; very pretty.

E. propendens: flowers like small pink balls, produced in profusion; very pretty.

E. perspicuum: tube an inch and a half, blush with a white end; fine.

E. ventricosa coccinea: deep pink with a red tip, profuse bloomer; very pretty.

E. Humei, blush with a red eye; pretty.

E. elegans, tube one inch, rose with green.

E. inflata rubra, dark rose with a white tip; fine.

E. Hartnelli: tube one inch and a quarter long, rosy red with a dark rim and white end; fine.

E. tumida, tube an inch long, broad, a fine scarlet; superb.

E. cerinthoides: flowers in heads, tube an inch long, rich scarlet; fine. Usually this plant is of a straggling habit, but the plants exhibited had had the leads stopped, and they were handsome bushes, have thirty or more heads of beautiful flowers.

E. oblata: tube large, wide bottle-shaped, tinged with red below, then a green band round, and a white end; fine.

E. jasmiflora alba: tube an inch and a half long, white; pretty.

E. ventricosa Regina: tube bottled-shaped, one inch long, flesh colour, with a deeper coloured end; pretty.

E. aristata major: tube waxy, an inch and a quarter long, rosy red, a dark band near the top, and white mouth; fine.

E. nobilis: rose-colour at the lower part of the tube shading off to a clear bright yellow.

E. Newtoniensis: the flowers are like the *Massonia* in form and size, but of a rosy purple tipped with green.

E. Victoria Regina, tube one inch, a pretty flesh colour, with the inside of the mouth of a darker colour; very pretty.

E. Eweriana: rosy-purple with a green end, hairy tube nearly two inches long; very pretty.

E. tricolor elegans: tube bottle-shaped, one inch long, pink with a white end.

E. densa: tube one inch, in long terminal pyramidal spikes; pretty.

E. Hallicacuba : tube one inch, a deep green ; very singular.

E. sulphurea : tube one inch, hairy, a deep sulphur colour ; very pretty.

HYDRANGEA, OR CHINESE GUELDER ROSE.

Hydrangea Hortensis.

“ Witness the sprightly joy, when aught unknown
 Strikes the quick sense, and wakes each active pow’r
 To brisker measures.” AKENSIDE.

FEW flowers ever excited greater interest than the *Hydrangea* produced on its first introduction into Europe, nor do we remember an instance of any tender plants having become common in so short a period. The extraordinary size of the cymes of the flowers which this plant produces, even when confined in a small pot of earth, was a novelty alone sufficient to recommend it to every collector of exotic flowers. When it first became known in Paris, it was so eagerly sought after, and bore so high a price, as to make the fortune of the florist who had procured the first plants from England.

In this country we have followed the *Hydrangea* from the stove to the greenhouse, and from the greenhouse to the balconies of the wealthy and the casements of the cottagers, with a rapidity that seems almost incredible in a plant that produces only abortive flowers. It is now found to be sufficiently hardy to stand the open air during the winter, and consequently it is seen as an undershrub in every pleasure ground, and is become as common in the cottager’s court as it was familiar a few years back in the village windows.

The native place of this plant is not yet ascertained, but it is in all probability an accidental variety of a Chinese plant, since it is commonly cultivated in the gardens of China and Japan, from whence it was procured by the late Sir Joseph Banks, who presented it to the Royal Gardens at Kew, in the year 1790.

In the garden the *Hydrangea* is likely to retain a favourable attention, for when planted in the foreground of taller shrubs, its profusion of monstrous flowers, which continue in beauty for a great length of time, must ever make it a desirable ornament. We have sometimes seen it planted on lawns, and growing to an incredible size, producing a fine foliage intermixed with cymes of flowers of extraordinary beauty.

The colour of these flowers is green when young, but turns to a beautiful rose-colour when in perfection, after which they again become green as they decay.

Soon after the introduction of the *Hydrangea*, it was observed that some of the plants produced flowers of a fine blue colour, but the cause of this change could not be easily accounted for, since the cuttings had been taken from plants with rose-coloured flowers. Some supposed that it was caused by oxide of iron, whilst others concluded that it originated from salt or saltpetre being accidentally mixed in the

earth. We remember seeing a fine plant of this description with beautiful blue flowers at a cottage situated on a dreary common in Hampshire, where no one could at that time have expected to have found a common-coloured Hydrangea. The owner of the plant refused ten guineas for this flower, as it was the only one that had been seen in the country, and the circumstance of a poor cottager having refused so large a sum for a plant excited great curiosity, and brought all the neighbouring inhabitants to see it. The poor woman, although she did not like to part with the plant that had been reared by a child whom she had lost, gladly sold cuttings to all that required them, every one of which when they blossomed produced flowers of the original rose-colour.

We have since learnt that the poor woman's plant had been reared from a cutting of the common rose-coloured variety, and that the change was owing to its being planted in the soil of the heathy common on which she resided, mixed with a portion of turf ashes, whilst those who obtained cuttings planted them in good garden soil.

During the last year we saw exhibited at the London Horticultural Society a very beautiful plant of the Hydrangea, covered with cymes of flowers of a fine blue colour. This plant was grown in a pot of earth taken from Wimbledon Common, without any other mixture, which proves that the change of colour is produced by the nature of the soil, and it is now pretty generally known that some sorts of peat earth, as well as the yellow loam of heathy grounds, will produce this effect. [We have seen many proofs of this.—CONDUCTOR.]

CLIMBING ROSES.

BY AMELIA.

I LATELY saw a steep bank of strong loamy soil, sloping down from a gentleman's villa at its side, to the public road about thirty yards in length, planted with Roses, that had a very beautiful and interesting effect. Along the top, in a straight line, was a row of Boursault, Ayrshire, and Sempervirens classes of Roses, planted at six feet apart; these were trained to strong larch poles about eight feet high, having their branches left from a foot to half a yard long; these afforded supports for the Roses, from which they hung very gracefully, and bloomed profusely. Next to this row were Ayrshire and Sempervirens Roses worked on stems about four feet high, then a row with stems about two feet; and, finally, the rest was planted with all such Roses, not worked, but on their own roots, and they were permitted to ramble about unmolested. I found on inquiry none of the plants were ever pruned, but allowed to proceed naturally without restraint. Such an ornament in the pleasure ground, or wood, as banks often exist in such places, would be highly ornamental, and be done at a trifling cost.

Along the side of a leading straight walk I observed a number of tall standard Weeping Roses, consisting of the Climbing, Princess

Maria, Crimson Boursault, Leopoldine d'Orleans, Mirianthus Ranuncule, Felicité Perpetual, Amadis, Wood's Garland, Dundee Rambler, Ruga, Thoresbyan (or Bennett's Seedling), Madame d'Arblay, Rosea Elegans, and Jessica, with others I could not learn the names of. The whole had a very charming effect. When I saw them, early in September, they were in fine bloom, and I was told they had been so from May; they appeared likely to bloom till the end of the season.

PROPAGATING LUCULIA GRATISSIMA.

BY AN AMATEUR PLANT GROWER.

IN several of the previous Numbers of the FLORICULTURAL CABINET I have read communications relative to the above-named magnificent flowering plant, and the strong recommendation of it induced me to procure a large one to form an ornament in my greenhouse during the autumn and early winter months. I had a small border in the house, and turned the plant into it. There was a liberal drainage at the bottom of broken sandstone, upon which I placed cut pieces of turf, and a compost of equal parts of rich turfy loam, peat, and leaf mould. In this the plant flourishes amazingly. I have a row of pillars fifteen feet high, to which I have showy plants trained. In this manner I treat the *Luculia*, allowing it to have side shoots all the way up; this is easily managed by attention to pruning, and my plant is now in splendid bloom the length of ten feet up the pillar, and it fills the house with its delicious perfume. It is very easy to cultivate, and grows freely. The noble heads of flowers produce a charming effect, and the plant ought to be grown in every greenhouse and conservatory.

In order to have my plant suitably furnished with shoots its entire length, I necessarily prune it, as before noticed; this I do in February. The consequence of this operation is the production of a number of new shoots in spring; having such a supply I resolved, two years ago, to propagate the plant by cuttings taken off when they were about two to three inches long, taking them at the origin, inserting them in sand, and plunging the pots in a hot-bed, they struck in the proportion of one-third.

I had recourse to the following method of experiment, which succeeded to my utmost expectation. At the time I took off the cuttings, as above stated, I tightly tied round a number of shoots a piece of small twine, putting it close under the lowest joints; this caused the shoots to swell at those parts, and in about three weeks I cut them off, just below the swelling, inserted them in sand, and plunged them in a hot-bed, covered by bell glasses, and every cutting rooted directly.

I have a plant of the fine *Luculia Pinciana* which I am treating in a similar manner to the above species, and I anticipate when it blooms it will form a highly ornamental companion thereto.

GREEN MOSS ON TREES.

BY A NURSERYMAN'S TRAVELLER.

IN discharging the duties of the office I sustain, I have annually to travel through every county in Great Britain; this affords me numerous opportunities of noticing what comes under my view.

I was very much surprised the past season to observe, in many instances, the unsightly appearance of both trees and shrubs in the immediate connexion of the mansions of the proprietors, even in the pleasure garden, shrubbery, &c., by being covered with a green powder which eventually becomes Moss. This was the more prevalent in low confined situations, but in higher sandy lands I saw many instances of the same defect. Now, it is very obvious, that where this green powder and Moss exist, as I above describe, it must close up the pores of the plant, and thereby prevent the vessels from being acted upon by the external air, &c. I likewise think it receives nourishment by exhausting the sap in the bark, which I perceive first begins to crack, and afterwards die and fall off. I am more confirmed in this opinion by having seen an experiment tried to destroy it; this was done by using the common solution of soft soap and sulphur-vivum mixed with boiling lime water till it became of the consistency of paint. This, when cold, was applied with a paint brush to part of the branches of a young tree that were covered with this green mould, yet the bark was free from cracks. The bark of the portion thus dressed, in a short time, became quite clear, and entirely free, whilst the remainder of the tree was clothed in its green garb.

I very strongly advise all gardeners who have trees, shrubs, &c., infested in the way I deplore, to give them a sprinkling once or twice in the winter season, and I doubt not that it will answer their highest expectation.

I think such attention is very desirable on all ornamental trees, shrubs, roses, &c.

I saw some young plantations of forest trees perishing by the injurious effects of the pest, although they appeared to have only been planted three or four years, and with the exception of the then summer's green shoots were wholly covered with it. When the trees were wet in the winter season, if a good sprinkling of lime dust were thrown over them, I am of opinion it would destroy the Moss, &c., and the trees would be free for years to come, if not for the rest of their growth. I saw an experiment of it, which, in the case of some standard roses, not only was effective when first applied, but ever since they have been quite free and healthy, whilst shrubs of other kinds around have been, and still are, infested, where the remedy had not been used.

SELECT CARNATIONS, PICOTEEES, AND PINKS.

HAVING attended nearly all the principal shows of florists' flowers during the past season, as usual, we took notes of all the best we saw, these were the following:—

Flora's Garland, rose flake ; Puxley's Queen of Roses, r. f. ; Wakefield's Paul Pry, crimson bizard ; Hale's Prince Albert, scarlet bizard ; Puxley's Princess Royal, r. f. ; Hepworth's Vivid, s. f. ; Jaques's Georgiana, c. b. ; Brabbin's Squire Meynell, purple flake ; Fletcher's Queen of England, r. f. ; Ely's Lovely Ann, r. f. ; Addenbrook's Lydia, s. f. ; Ely's Lord Middleton, c. b. ; Bottomley's Beauty of Brighthouse, s. f. ; Mansley's Beauty of Woodhouse, p. f. ; Taylor's Lord Byron, p. f. ; Brown's Bishop of Gloucester, s. f. ; Holmes's Count Pauline, c. b. ; Ward's Sarah Payne, pink and purple bizard ; Martin's Splendid, s. b. ; Twitchett's Don John, s. b. ; Barringer's Earl Spencer, p. f. ; Barringer's Premier, r. f. ; Jackson's Squire Trow, p. f. ; Barringer's Apolla, r. f. ; Ely's Mango, p. f. ; Elliott's Brilliant, s. f. ; Ely's Lord Milton, c. b. ; Easom's Admiral Curzon, s. b. ; Colcut's Brutus, s. b. ; Holliday's Thomas Hewlett, c. b. ; Hollyoak's Dido, s. f. The above are of first-rate excellence, and all, or any part will prove valuable, and form an approved selection for exhibiting at the floral shows or otherwise.

PICOTEES.—H. signifies heavy edge ; L. light edge. The former having a larger breadth of coloured margin than the latter. Jessop's Sir William Middleton, h. red edge ; Burroughs' Mrs. Bevan, h. red edge ; Cox's Regina, l. purple edge ; Burroughs' Lady Smith, l. purple edge ; May's Juliet, l. purple edge ; Gidden's Princess Royal, l. red edge ; Dickson's Mrs. Trahar, l. rose edge ; Burroughs' Miss Burdett Coutts, l. red edge ; Brinkler's Lady Chesterfield, h. purple edge ; Headley's King James, h. red edge ; Edmond's Jenny Lind, l. red edge ; Wilson's Miss Fanny Irby, h. rosy-scarlet edge ; Sharp's Duke of Wellington, h. red edge ; Wilmer's Princess Royal, h. rosy-scarlet edge ; Syke's Eliza, h. rose edge ; Edmond's Ernest, l. red edge ; Mrs. Ferdinand May's Olivia, h. purple edge ; Dickson's Mr. Trahar, h. rosy-scarlet edge ; Garratt's Lady Dacre, l. rose edge ; Matthew's Witch, l. purple edge ; Marris's Prince of Wales, h. red edge ; Youell's Gem, l. red edge ; Barnard's Mrs. Barnard, l. rose edge ; Brinklow's Wonder, l. purple edge ; Marris's Prince Albert, l. purple edge ; Green's Queen Victoria, h. rose edge ; Burroughs' Nimrod, l. rose edge ; Burroughs' Amy, l. purple edge. Any selection out of the above will prove of excellent quality in all respects.

YELLOW PICOTEES.—Martin's Queen Victoria, Hoyle's Topaz, May's Seedling. Out of many exhibited, the above three are only worth recommending, the others being very defective.

SEEDLING PICOTEES EXHIBITED.—Dodwell's Mary, l. red edge. The flower is full, petals fine form and substance, also perfectly smooth at the edges, a first-rate in all respects. It was shown at Slough, and obtained the extra prize offered for the best of any colour. Norman's Lord Nelson, h. purple edge, white pure, edging rich and clear, an excellent flower. Norman's Prince Alfred, h. purple edge, this too is a fine flower in all respects, white pure, and edging very distinct. Burroughs' Lady Harriet Moore, l. purple edge, white pure, and form excellent. Burroughs' Lorina, a very similar flower to the last. Creed's Miss Edwards, h. rosy-scarlet edge, a very good flower, having the coloured portion well defined. Matthew's Juno, l. lilac-

purple edge, a large good shaped flower. The above would form a first-rate collection.

SEEDLING CARNATIONS.—May's Owen Glendower, crimson bizarre, good white, with rich clear colours, and a full sized flower. May's Falconbridge, pink bizarre, petals of good substance, and fine form. May's Romeo, rose flake, large flower, white pure, edging rather pale, but it will be an useful flower. Barringer's No. 100, scarlet flake, white clear, marking very distinctly defined, and free from the defects of spots; at the all England Show it obtained the first prize in its class. Barringer's Derby, scarlet bizarre, of excellent form, with colours clear and distinct.

SUPERB FORMED PINKS.—Norman's Seedling, Smith's Diana, Wilmer's Laura, Norman's Lord Hardinge, Read's Jenny Lind, Looker's Seedling, Kerr's Harriet, Young's Double X., Lady Mildmay, Lord John Russell, Smith's Oxoniensis, Kirtland's Prince Albert, Hodges's Melona, Kent Hero, Joseph Sturge, Etchell's Susannah, Beauty of Clayton Moor, Beauty of Blackburn, Duke of Devonshire.

VERBENAS.

THE following are new French seedlings, in addition to the kinds noticed in p. 152.

LOUIS NAPOLEON BUONAPARTE (Miefflez).—Rich deep scarlet, with a very dark spot in the centre surrounding the mouth of the tube, which is quite white, of good average shape, and the best we have seen of its class.

JOHN SALTER (Chauviere).—pale red or scarlet with a deep crimson red spot in the centre, large size, and tolerable form.

MONT ETNA (Dufoy).—Heavy reddish crimson with a darker shade in the centre, large size and good form; distinct.

CHARLOTTE CORDAY (Dufoy).—White changing to pale blue, as the flowers become fully blown, which gives a novel appearance to the trusses, the inner flowers being white encircled by pale blue ones; good form.

PRINCESS AGATE (Dufoy).—Very pale blue, good size and shape, and a neat grower.

IPHIGENIE (Dufoy).—Lilac with crimson-red centre, beautifully shaded and striped with deep blue; of good form and a very large trusser, one of the best.

MARQUIS DE RIDOLFI (Chauvière).—Shaded crimson with a small dark red eye, pretty.

BELLE ANZINOISE (Defosse).—Blue with a small black eye, a free bloomer.

CELESTIAL (Chauvière).—Azure blue, very even and flat trusser, fine form, and in habit equal to Heloise.

ARIADNE (Salter).—Creamy buff, good trusser and passable shape; distinct.

GENERAL LAMORICIERE (Defosse).—Deep crimson, rather dull, good shape and habit.

SALMONA (Chauviere) deep salmon rose, lively and distinct in colour ; a remarkably free bloomer and well adapted for bedding.

GENERAL CAVAIGNAC (Defosse).—Deep crimson with a darker centre, very large size and of good form.

LUCRECE (Salter).—Lilac shaded and edged with blue purple, a large trusser and distinct.

ECLIPSE (Epps).—This is an English variety, in colour blush, regularly striped down the centre of each segment with pink. In form as good as the average, a free bloomer, and very pretty variety.

REMARKS.

NEW PETUNIA "COUNT ZICHY."—This is a very beautiful Petunia and well adapted for pot cultivation, training over a wire trellis, &c. The flowers are of intermediate size, the ground colour deep rosy crimson, clouded towards the limb-margin of the corolla with glowing purple, and having a good light centre, the throat being distinctly striated with dark pencillings. Some of the flowers eventually become rosy crimson selfs, and (interpersed with the darker ones) produce a very pretty appearance in contrast with the bright verdure of the leaves.

SALVIA PATENS ALBA.—As *Salvia patens* is admired for its fine blue, so the subject of our present notice will become a favourite from its whiteness. In foliage, robustness of habit and general appearance, if we except the inflorescence, it is of course, as the name imports, but a counterpart of *S. patens*. The flowers are equal in size to the latter, and of a snowy whiteness, having, however, an inconspicuous tinge of a pale blue (which enhances rather than detracts from its merit) in the centre of the lower lip of each flower. It will doubtless be found a useful acquisition to the flower garden, and all the more desirable for being a white *Salvia patens*.

MANURE FOR GARDENS.—*Sulphate of Ammonia.*—Half an ounce to a gallon of water is a powerful stimulant, but must only be applied as you would water ; the soil should be soaked. Two waterings will be found sufficient.—*Soot*, at the rate of six quarts to a hogshead of water, and stirred well, till it dissolves, is an excellent liquid manure may be applied much oftener, and on a larger scale. *Guano.*—Half an ounce to a gallon of water is strong enough to be used with advantage, without danger of injuring anything ; and two or three applications, a month apart, will not be too much. These liquid manures are most efficacious when applied to plants that have filled their pots with roots, and want shifting, for it gives new life, and protracts the starving point some weeks ; but weak as they may be supposed to be if applied without intermission, long together they will do mischief.—*Gardener's Journal.*

A LIST OF PLANTS FOR A VASE, &c.—What flowers are most suitable for stone vases, two to three feet in diameter, stationed on the

lawn, combining an upright plant, such as a *Fuchsia*, with others that will hang down the sides of the vase?—G. B. N.

[In numerous instances, vases are removed at the end of summer from out-door situations, and are placed where they are protected from the effects of winter. In these cases, plants in pots can be turned into the vases early in spring, and become ornaments for the entire season. We have known others having plants that are permanent ones, but the vases are removed with the plants retained into a suitable place of winter protection. There are plants which endure the severity of winter in a vase without injury. The first method is what we have adopted for many years. The following kinds we have proved to answer fully:—

Fuchsias, both dark and light flowered; *Clematis Sieboldii*, white, with dark eye; *Clematis azurea grandiflora*, blue; *Sollya heterophylla*, blue; *Tropæolum canariense*, yellow; *Eccremocarpus scaber*, orange red; *Maurandia Barclayana*, blue; also the white variety; *Caprifolium flexuosum* (Honeysuckle), yellow; *Caprifolium gratum* (evergreen ditto), red and white; *Caprifolium sempervirens* (trumpet ditto), scarlet, and the *floribunda*, scarlet; also, the *splendens*, scarlet. There is another variety, called the *aurea*; the flowers are an orange-golden colour. These four trumpet-flowered are very distinct and handsome. *Bignonia radicans lutea*, yellow; *Bignonia radicans major*, orange red; *Bignonia capreolata*, purple; *Passiflora cærulea*, blue; *Jasminum revolutum*, bright yellow; *Sutherlandia frutescens* (pea-formed flower), scarlet; *Dabæcia polifolia* (Irish Heath), purple; also the white-flowered variety. These are readily trained up to fine bushes. *Edwardsia grandiflora*, yellow pea-flowered; *Escallonia rubra*, red; also the white-flowered variety; *Cytisus filipes*, white; *Cytisus Aileeana*, yellow; *Cytisus purpureus*, purple; also the white variety; *Hibiscus Syriacus* (*Althæa frutex*), white, red, purple, striped, and rose, both single and double flowers. These are readily pruned to any desired form. *Hydrangea hortensis*, rose; also the blue variety; *Spirea prunifolia*, white; *Roses*, of which there are many of the Chinese, Hybrid Chinese, Noisette, Bourbon, and Evergreen classes, peculiarly adapted to bloom from the beginning of June to November. Dwarf standards or climbers are most easily formed to any shape desirable. The Chinese, crimson, red, scarlet, and other colours, are splendid, as are the beautiful white-clustered *Aime Vibert*, *Noisette*, and the handsome white *Ayrshire*, *Thoresbyana*. Our space, at present, prevents us giving an extended list. *Genista canariensis*, yellow; *Heliotropium Voltairianum*, rich blue, large heads of flower, it forms a fine tree; *Abutilon venosum*, golden yellow, with a rich crimson net-work (see vol. for 1847, Feb. Plate); *Pentstemon gigantea elegans*, rich crimson; *P. gentianoides alba*, white; *P. gentianoides vera*, blue; *Cuphea strigulosa*, yellow, green, and red; *C. platycentra*, crimson, black, and white. These are very interesting and beautiful, blooming very profusely. *Petunias*, tree-like plants, in great variety and beauty, from May to November; *Ceanothus azureus*, blue; *Pelargoniums*, scarlets and blush varieties, which, by pruning,

form very handsome objects; *Plumbago Larpenæ*, blue; this is a splendid object when in bloom (*see* last Month's Plate).

There are many showy flowers, very suitable to be planted around the inside of the vase, the branches of which hang over the edge, as *Anagallis*, red, orange, and blue-flowered; *Verbenas*, numerous colours; *Bouvardia*, scarlet; *Campanula pumila*, dwarf blue, also the white variety; these have a very pretty appearance. *Phlox Nuttalli*, white with dark eye; *Hemimeris linearis*, scarlet; *Lobelia erinus*, blue, as well as many annuals of a pendant character, such as *Collinsia bicolor*, *nemophila insignis*; &c. In the above list there are many plants of a climbing habit, these are easily brought to any form, pyramidal, globular, &c., but we do not advise a stiff form, but the outline to be as natural as may be consistent with an approach to the form desired. We have used small larch trees, shortening the branches, somewhat, and allowed the climber, or trained plant, to be secured to the parts remaining. By such attention, *Tropæolum canariense*, *Clematis Sieboldii*, Climbing Roses, &c., are brought to the desired height and the branches are allowed to hang down as low as desired. We have only given a list of such plants as bloom nearly all the summer and autumn seasons.—CONDUCTOR.]

TULIPS.—Being a young florist, and anxious to make a few additions to my Tulip bed, you would much oblige me by giving the names of eight of each class, suitable to the pocket of a working man.—A. S.

[*Roses*.—Lady Middleton, Heroine, Flamed Triomphe Royale, Camellius, Aglaia, Catherine, La Vandycen, Count de Vergennes. *Bizarres*.—Royal Sovereign, Magnum Bonum, Captain White, Polyphemus, Pilot, Earl St. Vincent, Surpass Catafalque, Lord Milton. *Byblæmens*.—Violet Alexander, Princess Royal, Lilliard, Norwich Baguet, Criterion, Van Amburg, Bacchus, Lady Flora Hastings.]—(*Midland Florist*.)

SUPERB AUTUMN BLOOMING ROSES.—*Hybrid Perpetual*: Lady Sefton, lilac blush; Lady A. Peel, rosy carmine; Louis Bordillon, rose; Jacques Laffitte, cherry crimson, edges pale; Mrs. Elliot, rosy purple; Comtesse Duchatel, rose; La Reine, pink tinged with lilac; Dr. Marx, carmine; Marquisa Boccella, pink, blush edges; William Jesse, crimson, tinged with lilac; Madame Laffay, rosy crimson; Edward Jesse, crimson, shaded dark purple; Baronne Prevost, pale rose; Duchess of Sutherland, ditto; Lawrence de Montmorency, rosy pink, tinged with lilac; Du Roi, or crimson; Mogador; Madame Aimé, pale flesh, nearly white. *Bourbon*: Acidalie, blush white; Amarantine, purplish rose; Comte d'Eu; Madame Desprez, rosy lilac; Celimène, clear blush; Irina; Armosa, bright pink; Comice de Seine et Marne, crimson; Queen, fawn-coloured rose; Pierre de St. Cyr, pale rose; Vicomte de Cassey, lively red; Le Grenadier, light crimson; Duc de Chartres, deep rose; Souchet, deep crimson purple. *Tea*: Caroline, blush pink, centre rose; Comte de Paris, light crimson tinged with lilac. *China*: Mrs. Bosanquet, pale flesh; Cramoisie Superieure, velvety crimson.



FLORAL OPERATIONS FOR THE MONTH

IN THE FLOWER GARDEN.

AURICULAS and Polyanthuses, Carnations, Pinks, &c., should be placed in their winter quarters, in a dry, sunny, sheltered spot, but, at the same time, where a free circulation of air can be admitted on all proper occasions. The surface soil must be loosened, and a slight sprinkling of fresh compost be spread over it. Any plants out in the open beds, as Lobelias, &c., should be taken up and potted for winter preservation in pits, frames, &c. In taking up the bulbs of Tigridias, let all the soil be retained that will adhere, and allow them to be preserved therein; it will gradually dry, and they will be preserved very perfect. Chrysanthemums grown in the open ground, and required for blooming in-doors, should be taken up as entire as possible, and be potted with due care; they will bloom fine. All tender kinds of plants, as Scarlet Geraniums, Verbenas, in fact every kind requiring winter protection, should be housed *immediately*; it is bad policy to put off a single day longer. Already we have had slight frost which has injured the tender things in some places; it is very probable a sudden and severe visit will soon occur. All plants like light; place them as near to the glass as convenience will allow, the farthest off the worst. Tender Roses, grown out of doors, should have protection over the roots, &c., or be taken up and housed. (See Calendar for October, 1848, relative to soil, planting, &c.)

DAHLIAS.—Let the crown of the roots be covered, heaping a few inches deep of soil around the stems.

SHRUBS of all kinds may now be planted. (See remarks in our September Calendar.)

SHRUBS, &c., FOR WINTER BLOOM.—Such as are to bloom early should be gradually prepared, potted immediately, if required, and by the middle of the month introduce such as are desired to bloom by Christmas into the house or pit. The kinds which are well deserving such attention are Roses, Honeysuckles, Jasmines, Azaleas, Kalmias, Persian Lilacs, Andromedas, Carnations, Pinks, of which Anne Boleyn is the best, Rhododendrons, Rhodora, Deutzias, Ribes, Spirea prunifolia, Mezereum, Gardenias, Cupheas, Heliotropes (the new blue is fine), Scarlet Pelargoniums, Cactus, Eranthemums, Justicias, Salvia, Gesnerias, Corræas, Chinese Primrose, Aconites, Mignonette, Primroses, Cinerarias, Stocks, Persian Iris, Crocus, Cyclamens, Sweet Violets, Hyacinths, Lily of the Valley, &c.

IN THE GREENHOUSE, STOVE, &c.

If the stock is not housed, it ought to be done immediately, and, as has been observed in a former Calendar, much judicious attention is necessary in the placing properly a mixed collection of plants. Care

must be taken so that one plant may receive something like its proper treatment without interfering materially with the well-being of its neighbours ; and whilst the tender ones must be placed in the best part for protection from cold wind, &c., as Polygalas, Pimeleas, Leschenaultias, Aphelexis, Baroneas, Gompholobiums, Croweas, and Diosmas, are always injured by being placed where there is a current of wind. Let each plant have all the space possible, and the robust large-leaved kinds, and the very slender delicate sorts, should be kept as separate as can be arranged, so as to allow a due circulation of air. Always be careful that the pots, &c., be perfectly clean before arranged for their winter situation. Re-pot Cinerarias, &c. Let Camellias which are to bloom early be placed in a warmer situation, also any Chinese or Indian Azaleas, so that they may be gradually advancing. In watering the stock of plants, let it be done, as far as practicable, in the early part of the day, so that any excess may be dried up before evening, and damps be avoided, or otherwise mouldiness will ensue. Give all possible air in suitable weather.

PELARGONIUMS.—The plants headed down some weeks back, now have pushed shoots an inch or two long ; the shoots should be thinned so as to leave only a proper proportion. The plants must now be repotted in order to have the roots well established before winter commences. In doing this, shake off the exhausted soil, and shorten some of the long roots, or cut others clean away, so that young fibres which is essential to the vigour of next bloom, have a free drainage in the pots. If a compost, such as is recommended by Mr. Cock in a former Number, is not possessed, then take turfy loam well chopped up, with an equal portion of sandy peat and well rotted leaf mould, and half the quantity of well rotted dung. After potting, place them in a frame, or similar erection, to induce them to push root soon, and keep them shaded from hot sun. Give air in the day time, and be careful not to give over much water at the roots, for if saturated they will be injured.

NEW AND SUPERB-FORMED PHLOXES, SUITABLE FOR ANY SELECT COLLECTION.

FLORIDA, white, shaded with lilac, rose eye. *Mutabilis*, rosy-peach, with lilac eye. *Exquisite*, lilac, with white eye. *Madame Frobel*, white, with pink eye. *Chateaubriand*, rosy-purple, streaked with lilac, light eye. *General Duvivier*, white, with purple eye. *Iphigenie*, white, mottled with carmine, and deep rose eye. *Bicolor*, lilac, bordered with white. *Rodigaze*, lilac-purple, bordered with white. *Ne plus Ultra*, purple, and rose eye. *Reine Louise*, white, striped with rose. *Alba purpurea violacea*, white, shaded with lilac, and red eye. *Monsieur Affre*, white, with violet eye. *Alba grandiflora*, white, superb. *Mont Blanc*, white, very free bloomer. *Eliza*, rosy-lilac, with white eye. *Pucelle de Nancy*, white, with a pink eye. *Albion*, large pure white, but occasionally a branch will bear flowers spotted with rose. *Coldiana*, lilac, with white edges. *Anais*, white, with a deep purple eye. *Princess Helena*, white, striped with lavender. *Madame Coursell*, flesh-colour, with white eye. *Baron de Adswaerd*, rosy-purple, bright carmine eye. *Monsieur Vantre*, rose, violet eye.





Rhododendron Dalhousiae.

FLORICULTURAL CABINET

NOVEMBER, 1849.

ILLUSTRATIONS.

RHODODENDRON DALHOUSIÆ.

(LADY DALHOUSIE'S RHODODENDRON.)



IN our Number for July (p. 156) we had the gratification to notice Dr. Hooker's splendid work on the Rhododendrons of the Eastern Himalaya Mountains, from which we gave an abbreviated abstract, describing the species he had discovered. Preeminent amongst them is

the magnificent plant of which we are enabled, by the kindness of a correspondent, to publish the accompanying representation, prepared from a model. It will have been observed, in our previous Number, that Dr. Hooker discovered this species growing on the trunks of large trees, on ascending the Tonglo mountain, at an elevation of about 8,000 feet. The plant forms a spreading shrub of from six to eight feet high, and the branches bear leaves and flowers only at their extremities; the latter, besides being very large and handsome, diffuse a very sweet odour. There can be no doubt it will form one of the most noble of conservatory shrubs, and in all probability require very little protection from the weather.

NOTES ON NEW OR RARE PLANTS.

ANEMONE JAPONICA.

We have previously noticed that a pretty variety had been raised in the Horticultural Society's garden. It is now in profuse bloom. The flowers are flesh-coloured, and of a more regular formation and firmness than the original species. It is a hybrid between *A. Japonica* and *A. Sylvestris*, the former having rich rose-coloured flowers, and the other white. Every flower-garden ought to contain a number of patches of the *A. Japonica*, blooming, as it does, so profusely from June to November. This variety is a pretty addition, and merits similar attention. They spread rapidly.

ABRONIA UMBELLATA.

This very pretty sweet-flowering plant is found to do well out of doors in summer, growing it in a *sheltered, warm* situation, and having the stems trained erect among twiggy branches. In this manner we find it grow rapidly and bloom very freely. If the shoots be allowed to lie upon the ground, they will only do well whilst the surface is dry and warm, but when the soil is continuously wet, the plant generally perishes. It is one of the most lovely flowering plants, when properly grown, and ought to be in every greenhouse, frame, pit, or flower-garden in summer.

BRASSAVOLA DIGBYANA—MR. DIGBY'S.

Orchideæ. Gynandria Monandria.

This very remarkable species of *Brassavola*, is a native of Honduras. It has recently flowered in the orchideous house of the Royal Gardens of Kew. Each stem bears a terminal, large, fragrant flower, six inches across. Lip a cream-coloured white. Sepals and petals a pale purplish-green, faintly striped. (Figured in *Bot. Mag.* 4474.)

CHIRITA MOONII.

Some months back we figured this splendid species. The plant blooms very freely under the same treatment given to *Gloxinias*, *Gesneras*, &c. It deserves to be in every collection.

DELPHINIUM MAGNIFICUM.—MAGNIFICENT LARKSPUR.

The plant grows erect, tall, but branching. The flowers are large, of a brilliant blue colour, with a white centre, and are produced from May to September. It is a very handsome variety, and is in the collection of plants at Mr. Godwin's nursery.

DELPHINIUM CÆRULESCENS FLOREPLENO.—DOUBLE BLUISH-COLOURED.

The centre part of the flower is a mixture of rose and blue, with the edges blue, and the flower a full double flower. Very pretty.

DELPHINIUM AZUREUM.—AZURE BLUE.

A light sky-blue, and a full double flower. Very pretty. These beautiful varieties are well worthy a place in the flower-garden.

ESCALLANIA MACRANTHA. LARGE RED-FLOWERED.

This very fine species is a native of Chiloe, from whence it was sent to Messrs. Veitch's. It is far the handsomest of the genus, and proves to be a hardy shrub, growing robust, about a yard high. The flowers are borne in large terminal panicles. Each blossom is tubular, wide, half an inch long, with the ends of the five spreading petals being nearly three-quarters of an inch across. It begins to bloom early in June, and continues to the end of summer. It is a very valuable addition to our hardy shrubs. (Figured in *Bot. Mag.* 4473.)

FUNKIA GRANDIFLORA.

This pretty species is proved to be quite hardy. The flowers are white, long, tube-shaped, and having the delicious fragrance of the Tuberose. It should have a dry subsoil, and be in a warm sheltered situation. It succeeds well, too, in the greenhouse or pit-frame.

FUCHSIA PUMILA.

This pretty plant grows about a foot high; foliage very small, and the flowers having red tube and sepals, with a rich blue-violet corolla. It blooms very profusely.

GONOLOBUS MARTIANUS.

An asclepiadeous plant, a native of Brazil, which has bloomed in the stove at the Royal Gardens of Kew. It is a soft-wooded, twining plant, of rapid growth, bearing numerous umbellate bunches of flowers. Each blossom is of five petals, white, with a deep green radiating ring at the centre, an inch across. It is a very suitable plant to cover a pillar or trellis quickly, and with its profusion of flowers produces a pretty effect. (Figured in *Bot. Mag.* 4472.)

GLOXINIA KNIGHTII.

The flowers are well expanded and of firm texture. They are white, stained inside with a brilliant carmine. It is a handsome variety.

GLOXINIA PERRYANA.

The flowers are of a fine red colour, stained inside with a rich crimson. A very beautiful variety. Both the above deserve a place in every collection.

GESNERA PICTA.

This fine new species is in profuse bloom at the Royal Gardens of Kew, and a considerable number are in a successive state of culture for blooming through winter up to next summer. So of the *Gesnera zebra*. The flowers of the former species are of more brilliant colours than the latter. Every greenhouse or sitting-room should be ornamented with them from this time to next April. We never saw them grown so well as at the Kew Gardens. They are first grown in pans about six inches deep, in leaf-mould, and a portion of loam, with a rather liberal sprinkling of pieces of charcoal in it. After attaining the height of six or eight inches, they are potted (carefully keeping all the ball possible) into large-sized pots, well drained, and into a compost as above, with about equal parts of leaf-mould and loam. In the stove at Kew we have seen specimens near four feet high, having a spike of bloom more than two feet long. The *Achimenes picta* is treated in a similar manner, and with proportionate success. They are fine winter ornaments.

IPOMEA.

In the stove at Messrs. Rollisson's nursery, of Tooting, where it has recently bloomed very freely. It was sent from Java. The flowers in form very much resemble the *Petunia*, of a rich crimson-violet with a white margin. Each blossom is two inches across.

METROSIDEROS FLORIDA.—COPIOUS-FLOWERING.

This charming plant is a native of the dense forests of New Zealand, and bloomed in this country for the first time last summer, in the greenhouse at the Royal Gardens of Kew. It is a handsome shrub, leaves shining green, oval, about an inch and a-half long. The flowers are produced in large terminal corymbose heads, of a brilliant red colour. It is very probable this fine plant would flourish in the open air in Devon and Cornwall, and the south and west of Ireland. It deserves a place in every greenhouse or conservatory, and to be tried in the open air wherever likely to succeed. (Figured in *Bot. Mag.* 4471.)

NYPHÆA AMPLA.—BROAD-LEAVED WATER LILY.

This interesting species requires to be grown in the stove, or warm greenhouse. The leaves are very large, a purplish-green above, and a purplish-red below. The flowers rise above the water, and are white, nearly six inches across. The stamens are numerous, and of a bright yellow, contrasting nicely with the white petals. (Figured in *Bot. Mag.* 4469.)

ONCIDIUM RIGBYANUM.

This handsome flowering species was purchased by Mr. Henderson, of Pine Apple-place Nursery, at a sale of the nursery stock of the late Mr. Rigby of Brompton. The flower scape is a foot long, branching, bearing a profusion of flowers, of a lemon-yellow colour varied with dark brown marbled spots. The labellum is of a brighter yellow, also spotted. It is a very neat species, well meriting cultivation. Each blossom is nearly two inches across. (Figured in *Pax. Mag. Bot.*)

PLEROMA ELEGANS.

This splendid Melastoma-like plant has by some persons been condemned as a shy bloomer, but this has arisen in consequence of a wrong treatment having been pursued. We have seen fine bushes of it (not long, unsightly, naked ones) in profuse bloom, and almost covered with its blossoms, each as large as a crown-piece, and of a very rich violet-purple colour, producing a splendid appearance.

It has usually been treated as a stove plant; and growing rapidly, without frequent stopping it is liable to become naked. It has, however, been discovered that it should be treated as a *cold* greenhouse plant; that it must be kept in a comparatively dormant state in the dead season by having a very small portion of moisture to the root, only just to save the plant from its leaves withering. The compost should consist of loam and peat in equal parts, with a tolerable sprinkling of sand, and to have a liberal drainage of a few pieces of broken bones, or bits of charcoal, rough turf, &c. When it begins to grow, in spring, it should be placed in the most sunny and airy situation in the greenhouse, and near to the glass, till the middle of May. A gradual increase of water should be given to the roots, and occasional syringing over and under the leaves. Whilst it is in its growing state stop the VERY rampant shoots to strengthen the weaker, and at an early stage of growth such a thinning of the shoots should take place that only a due proportion are retained to bloom and regularly form the plant. When the plant has about completed its annual growth, less water must be given both at the roots and over head, but not so as to allow it to flag. At this period it must be taken from the greenhouse and be placed in the open air, fully exposed to sun, light, and air, in order that the shoots be *well ripened*, or they will not produce flowers, so that all possible operation of the full sun's rays must be allowed, to have the wood fully matured. It is advisable to have the pot plunged in coal-ashes, or the pot be placed within another having a space between them, in which moss can be pressed, and be moistened occasionally. These precautions are necessary to preserve the roots from being scorched by the heated sides of the pot. While thus placed in the open air, give only just enough water to keep the plant from withering. If wet weather occur, a piece of slate or tile being laid over the top of the pot will prevent an undue watering of the roots. After the perfecting of the wood, and formation of the flower-buds, the plant may be placed in the greenhouse, duly watered, &c., and it will bloom in profusion, so as literally to be covered, and be one of the most ornamental objects of the greenhouse.

CARNATIONS.

WALLIS'S CRADLEY PET.—A first-rate scarlet flake. The petal is of fine form and substance, and the white good. The colour is rich, and well-defined in its marking.

SLATER'S CONSTELLATION.—A high coloured rich crimson bizarre, of good form and substance.

BUNN'S LORD LEWISHAM.—A brilliant scarlet bizarre, fine form, of good substance, and a first-rate flower in all respects.

HAINÉ'S DEFIANCE.—A fine scarlet-flake, the colour rich, well-defined, and white better than most others. Form excellent.

ELY'S GREAT NORTHERN.—A purple-flake, pure white, purple, rich, and very distinctly defined. Form excellent and of good substance. A superb flower.

ROSES.

The following Roses were the best shown by all the Rose exhibitors at the Chiswick Gardens in June last. They are suitable for any garden. Paul Perras, Adam, Geant des Batailles, Coupe de Hebe, Souvenir Malmaison, Madame Plantier, Amie Vibert, and Duke of Devonshire.

AZALEAS.

The following were the best Indian Azaleas exhibited at the Shows in and around London during the past season.

AZALEA IVERYANA.—White, spotted and streaked with bright rose. Each flower being three inches across.

A. FORMOSA.—The flowers are from four to five inches across, bright red slightly spotted with maroon-crimson. It is a very profuse bloomer.

A. BEAUTY OF REIGATE.—White, striped and spotted with orange-scarlet. Very good form.

A. CARAMBROLI.—Flowers of fine form, a pinky flesh-colour with a white margin, and spotted with deep crimson.

PICOTEES.

HOLLYOAKE'S DUKE OF RUTLAND.—A light edged purple of first-rate excellence; in all respects amply repays our respected friend for his industry in attempts to improve this beautiful class of flowers.

HOLLYOAKE'S MARY.—Another light-edged rich purple, very clear and distinct in its coloured margin. The petal is of good substance and form. A first-rate variety.

HARRISON'S PIC NIC.—A superb heavy red-edged flower; white good, and its colouring very distinct. It is in the way of the much admired Headley's King James.

DODWELL'S MRS. TURNER.—A heavy edged purple; petals good shape and substance.

DODWELL'S ALFRED.—Another heavy edged purple. Good form, and its coloured margin clear and distinct.

IN THE ROYAL GARDENS OF KEW.

ERICA DÆBOCIA, OR IRISH HEATH.—A quantity of this charming species, with its fine rosy-purple blossoms, have been in fine bloom for some time, and still are, as also the beautiful white flowered variety. They are growing in the clumps on the lawns, and near the walks, and being near the edges they have a pretty effect. These neat and handsome shrubby plants deserve to be in every collection.

ENOTHERA DRUMMONDI.—A bed of this rich yellow flowering

plant had a beautiful effect, it was very showy at the closing part of the day. If a yellow flower is desired for such purpose this answers well. As it is an annual plant it is readily provided.

PELARGONIUM UNIQUE.—This handsome variety is an excellent one for bedding. Its rich purple-velvet flowers, borne in profusion, have a pretty effect. The leaves, too, are beautifully curled, and have an interesting appearance. The plants were about a foot high.

LANTANA SELLOWII.—A bed of this was in bloom, and its vast profusion of purple flowers with a white eye had a neat and beautiful appearance. We have seen it tried as a bedding plant in other places, but here its blooming was beyond comparison. It was grown in a compost of loam and leaf-mould.

A bed of each of the following *Calceolareas* were in full bloom. **C. AMPLEXICAULIS**: the flowers are of a delicate primrose yellow, large, and in fine heads. This is the handsomest kind. **C. VISCOSISSIMA**: it blooms profusely, and of a rich yellow. It is second best. **C. INTEGRIFOLIA**: this is a most profuse bloomer, the flowers are small, and not of so rich a yellow colour as the previous sort.

VERBENA BARKERII.—It is one of the creeping varieties, but a most profuse bloomer. The vivid scarlet flowers were so dazzling, that they quite overpowered the sight when standing near the bed.

MARVEL OF PERU.—A fine collection of these charming flowers have been in profuse bloom for a long time. The contrast of white, yellow, rose, red, flesh-colour, &c., produced a pretty effect. This charming tribe of flowers deserve more general cultivation, both for their beauty, profusion, and long period of bloom. The roots are preserved like Dahlias, and so replanted.

NEW PLANTS, &c., IN THE HORTICULTURAL SOCIETY'S GARDEN.

WISTARIA SINENSIS: ALBA. WHITE-FLOWERED. (Mr. Fortune sent this from China.)—According to Siebold, the Chinese have many varieties of the *Wistaria* (or *Glycine*) *Sinensis*. Of these a pure white one has flowered in the garden. It differs in no other respect from the lilac kind; but, when plentiful, it will produce a pretty effect by being inarched upon the branches of the latter.

CŒLOGYNE ASPERATA. (Received in flower from T. Twisden Hodges, Esq., May 30, 1849.)—This orchid is much the finest of all the *Cœlogyne*s. It is a native of Borneo, and flowered in the garden of Hemsted Park in such profusion that not fewer than eight spikes were produced at the same time. Each of these spikes is nearly a foot long, and, hanging downwards, bears twelve or fourteen magnificent white flowers, full three inches in diameter when spread open. They have a firm fleshy texture, are a pale cream colour, except the lip, which is richly marked with brownish-yellow veins, springing from a rugged bright orange central ridge.

MIMULUS TRICOLOR: HARTWEG. (Raised from seeds brought home by Mr. Hartweg, and said to be collected on the plains of the Sacramento valley, in California.)—An annual, soft and covered with

delicate glandular hairs. Leaves pale green, oblong-lanceolate, tapering to the base. The flowers, which are about two inches long, grow singly and nearly sessile in the axils of the leaves; they have a long narrow plaited unequal calyx, beyond which projects the very slender tube of the corolla, which then widens into a funnel-shaped limb, with an oblique border cut into five nearly equal rounded lobes. Its general colour is bright pink, with a deep crimson spot at the base of each lobe, and a bright yellow stain along the lower lip. As far as its cultivation is understood, it appears as if it would be best to treat it as a half-hardy annual. It is a delicate growing plant, with very neat party-coloured flowers, well repaying any care required for its cultivation.

EPIDENDRUM FRAGRANS : SWARTZ ; var. *megalanthum*. (Presented to the Society by G. U. Skinner, Esq., in July, 1848, and said to be from Guatemala.) The flowers are full four inches in diameter, of a pale clear greenish white, and the lip is vividly marked by clean stripes of very rich crimson. It is quite a giant of its kind, for the pseudobulbs and leaves, taken together, are sometimes eighteen inches long. It is best grown in the coolest part of the orchid-house, potted in fibry peat, with half-decayed leaves, and liberally supplied with moisture during the growing season. It is a very desirable plant, with large fragrant flowers.

PEONIA MOUTAN : *VERSICOLOR*. (Received from Mr. Fortune, in April, 1846, from the north of China, and said to be the "Tee-lok," a greenish-white kind.) Flowers large, semi-double, or probably quite double, with large broad petals, very irregularly arranged and cut on the edges, deep purple near the base, fading to a rosy lilac near the outsides. Very handsome, showy, and distinct.

PEONIA MOUTAN : *ATROSCUINEA*. (Received from Mr. Fortune in May, 1846, marked "dark purple," from Hong Kong, and from Shanghai, as "very dark, nearly black.") Flowers a good double dark crimson. It is a handsome deep blood coloured variety, the darkest of all the tree Pæonies yet in cultivation.

CULTURE OF LESCHENAULTIA FORMOSA.

BY A FOREMAN OF A LONDON NURSERY.

THIS beautiful flowering plant has now been brought to a state of perfection in growth which a few years back would have been deemed impossible. The noble specimens seen at the London Floral Exhibitions are full proof of the truth asserted. I am accustomed to exhibit on those occasions, and am always glad to be taught what I do not know of an useful character, and am equally pleased to contribute to the advantage of others. By the following mode of treatment I grow this beautiful plant, equal in size and merit to any other exhibitor.

Early in spring I took four healthy young plants growing in thirty-two sized pots, and had them potted in twenty-four's, as follows:—In a compost 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, one inch and a-half 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 beauteous 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. One of them was shown the past season at Chiswick and the Regent's Park Gardens, and its equal I have not seen for a dense mass of rich blue flowers.

REMARKS ON ALSTROMERIAS.

THIS is one of the most showy stove, greenhouse, and frame plants, and some are nearly hardy. At one time it was brought into repute, by the offer of prizes for them at floral exhibitions, but from some

cause or other they fell into disrepute, and we rarely see them now in collections. The most showy species are—

Acutifolia, red and yellow, flowers in September; nearly hardy climber.

Aurantiaca, orange, flowers in June; greenhouse.

Edulis, red, flowers in July; a stove climber.

Flos Martini, white and purple, flowers in June; stove perennial.

Hamantha, orange and red, flowers in July; stove perennial.

Hirtella, red and yellow, flowers in July; a hardy climber.

Ligtu, scarlet, flowers in March; a stove perennial, fragrant.

Neillii, pale rose, flowers in June; a greenhouse perennial.

Oculata, rosy purple, flowers in June; a greenhouse climber.

Ovata, red and yellow, flowers in June; a hardy climber.

Pallida, pinkish red, flowers in June; a greenhouse perennial.

Pauciflora, orange and green, flowers in September; a stove climber.

Pelegrina, striped, flowers in July; a greenhouse perennial.

Psittacina, crimson, flowers in September; a frame perennial.

Pulchella, otherwise *Hookerii*, scarlet, flowers in June; a stove perennial.

Pilosa, scarlet, flowers in October; a stove perennial.

Rosea, pink, flowers in July; a stove perennial.

Salsilla, green and crimson, flowers in June; a stove climber.

Acutifolia aurea, yellow, flowers in September, a frame climber.

Barclayana, orange, flowers in July; a frame perennial.

Berteroana, pale pink, flowers in July; a frame perennial.

Bicolor, flowers in September; a stove perennial.

Chilensis, pink, flowers in July; a frame perennial.

Errembaultii, white spotted, flowers in August; a frame perennial.

Besides these, there are seedlings: some of which are an improvement on the sorts from which they were raised; but the subject has never been taken up in earnest by many persons, so that little or no notice has been taken of them. Many of the sorts are increased by division of the roots; others from cuttings, which strike freely. They all thrive in turfy peat, rich loam, and sand, mixed in equal proportions. The pots must be well drained with crocks one-third of the depth up, and as soon as the roots reach the side and begin to mat together, shift one size at a time. These plants, according to their respective stations in the frame, greenhouse, or stove, may be grown pretty fast until they occupy twelve-sized pots, and when they are beginning to rise for bloom, they must be watered freely. If the flower is very abundant, liquid manure will be of service, as it will afford extra nourishment, (put as the plant most requires it,) and greatly increase the size of the flowers. They must have as much air as possible and all the sun, until the colours are showing, when they must be slightly shaded to prevent the petals from burning. After the bloom is over, the plants may be turned out of the pots, and parted if increase is wanted, and if not, shifted into a larger sized pot. When parted, the smallest piece with a bit of root to it will make a good plant. These portions should be potted in as small sized pots as they will conveni-

ently go into, because room for wintering is an object, but as they fill with roots they must be changed to larger sizes; when the plants fairly fill up a twelve-sized pot, they form very noble objects, and show a mass of bloom very desirable in an exhibition or a conservatory. Many put out the small parted plants into the border in front of a hot-house, to grow there till late in the autumn, and only pot them just in time for their winter quarters. The seeds, whether imported or saved in England, have to be sown in the spring in wide-mouthed pots, thinly scattered, and when large enough may be pricked out half-a-dozen in a pot, so as to be an inch and a half apart. In these pots they may be grown till they touch one another, when they may be potted singly in small pots, and be treated like the other plants.

THE HOLLYHOCK.

——— “From the nectaries of Hollyhocks
The humble bee, e'en till he faints will sip.”

H. SMITH.

THE cultivation of this magnificent Eastern plant is of great antiquity in this country. Its noble size, majestic height, and splendid flowers could not fail to attract the attention of our earliest collectors of exotic plants; and although we cannot state the time when the Hollyhock was first brought to this country, it was certainly much earlier than the date mentioned in the *Hortus Kewensis*, or other works on plants that we have been able to consult. Dr. Turner speaks of it as a familiar plant in his work, dated 24th June, 1564; and Gerard, in 1597, observes that it was then sown in gardens almost everywhere.

The derivation of the English name of this flower may be traced to the Saxon language, the old name of Holyoak being the same as *Holihec*.

Mortimer retains the old name of Holyocks for these plants in his work on husbandry, as late as the year 1707, wherein he says, “Holyocks far exceed Poppies for their durableness, and are very ornamental.” Turner spells it *Holyhock*; and Gerard, and after him Parkinson, calls it *Hollihocke*.

The French, who consider this plant as a native of Syria, call it by several different names, as *Rose trémière*, *Rose d'outre mer*, *Rose de mer*, *Rose de Damas*.

Botanists have named it *Alcea*, from the Greek word *Αλκη*, on account of its supposed medicinal strength in curing the dysentery, &c., for which it was formerly held in great repute.

In floral language the Hollyhock is figured as the symbol of fecundity, and its extreme fruitfulness seems to justify the device.

It grows naturally in various eastern parts of the globe, and is common in China, from whence the seeds of the tall as well as the dwarf Hollyhock were frequently received. Pliny speaks of this flower in the fourth chapter of his twenty-first book, where he describes it as a Rose growing on stalks like the Mallow; and Miller says he received seeds of the plant from Istria, where it was gathered in the fields; but

these seeds produced single red flowers only, whereas from the seeds procured from Madras he raised plants with double flowers of many different colours.

We have but few flowers that contribute more to the embellishment of large gardens than the Hollyhock, although their hardy nature and easy propagation have rendered them so common that hitherto they have been much less regarded by the generality of florists than they deserve, since it yields to no flower for the grandeur and beauty of its appearance, as well as variety of colours, which embraces all the shades of the Rose from the palest blush to the deepest carmine, and from a pure white the yellows are equally numerous, until they reach the richest orange, from which the colour is carried on to a dark chestnut: others are dyed of a pale reddish purple, running up to a black.

The noble stalks which these plants send up, like so many floral banners garnished with Roses, render the Hollyhock particularly desirable for ornamenting the backs of flower borders; in giving gaiety to the shrubbery in corners, wildernesses, in the sun or in the shade, they will tower above ordinary things and display a continued succession of flowers until frost warns the floral goddess to depart.

But if they are to be grown well, as show flowers, and the splendid varieties recently originated highly deserve the most liberal treatment, they must be planted in rich loam, have plenty of room, and be sheltered from high winds, though not deprived of air or sun. Distant hills, trees, high walls, or fences keep off the wind; and it will be of advantage if the benefit of such shelter can be had without going so near as to shade them. If planted out in November, the roots soon establish themselves, although the tops make little progress until winter is over. After sharp frost, when the ground becomes light and spongy, the plants require to be examined, and the soil pressed close round the crowns. Nothing more is required, further than keeping them clean, until spring, when the flower-stems begin to rise; a good top-dressing of rotten manure will then be found to strengthen and assist the growth much more than any after-treatment can produce. The proper distance for planting is about three feet every way; and if they are grouped together, instead of being in one continuous row, there is a much better chance of giving variety to the seed. As the growth advances, if the weather is dry, they will require copious waterings. When the plants begin to open their flower-buds, not more than about ten or a dozen of the lower ones should be allowed to remain on each stem, the rest being cut off with the stem at that part. The advantage gained by this, apparently so destructive act, is to cause the blooms left on to come large and all open at once, increasing the effect that is produced by high cultivation and excitement. Any plants which put forth more than one spike of flowers should have all but the strongest immediately removed. The best way to propagate any particular varieties is, at the end of October or beginning of November, to take up the old plant and part it with a strong knife into as many parts as there are crowns, preserving a small piece of root to each. These pieces should be all planted about eighteen inches apart, and left one season to strengthen; or if they are required for ornament, and nothing occupies the place, they may at

once be placed where they are to remain ; otherwise, if planted in beds to have one season's strengthening, the earth should be well dunged, and trenched eighteen inches, mixing the dung and mould well together. In large plantations where the Hollyhock only forms a feature among other tall flowers, or towering above short ones, and where it may be desirable to always keep up the feature unimpaired, the best way is to remove the earth all round, and to cut away the smaller suckers or plants with a sharp knife, leaving the main one unmoved ; in this case the bare root should be left exposed to dry before it is covered up. The effect of removing the young ones from the principal plant is to strengthen it, and therefore is generally resorted to in preference to digging up and substituting others. The young plants so removed may be treated the same as if the whole were parted, always keeping them clear of weeds.

In raising from seed, the plan generally adopted by florists is to sow the seed on a prepared bed, rather thinly and evenly, and rake it in so that it be well covered ; or sift a little mould over it to make sure. Choose a day after there has been some rain to soak the bed well and put the ground in good order. Should the weather be at all dry and parching, see that the bed be watered—not sprinkled merely, but sufficiently soaked, with a fine rosed water-pot, that the seeds may not be disturbed. When they are up, hand-weed the bed so as to prevent anything from sharing the space with the seedlings, or depriving them of nourishment ; when they have four or six rough leaves, water the bed well, to soak the ground, and draw out the plants wherever they are too thick, so as to leave a good three inches between the remaining plants ; and having prepared another bed, prick out the drawn plants three inches apart all over it. The principal attention is now required to keep both beds clear from weeds, and give them water in very dry weather if they appear to want it, for sometimes the earth looks very dry, when it is not so a little below the surface ; in fact, watering should never be done often and in small quantities, but seldom and in profusion, so that the bed may be saturated some distance down. Nothing is worse for any plant than to be frequently watered and not far into the soil, for it encourages fibres near the surface, which suffer from ordinary drought, while the plants seldom but effectively watered, send down their roots after the nourishment that is seldom given at top. Towards the end of the summer these plants may be all transplanted into rows or beds eighteen inches apart in the rows, and three feet from row to row. In the spring these may be earthed up like a row of cabbages or cauliflowers, and when the blooms rise they must be watched. As the flowers are developed the worthless must be forked up and got rid of, to prevent future mistakes. Some merely cut down the flower-stem, and leave the plant in the ground to be sent to market or made to bring something ; those, however, who are at work for improved varieties had better always take them up and destroy them, for they are better on the dung-heap than anywhere else. In selecting those which are to be kept, recognise none that do not offer some decided advantage ; very thick petals, very bright or new colours, very double flowers, very good form, or some decidedly good quality. As observed by Mr. Glenny, "thickness

of petal is a decided point, for it is the most scarce of all; it is the greatest drawback in the hollyhock that the flimsy petals spoil the colour by their watery transparent nature, and shrivel and burn up rapidly with the heat of the sun, besides which they cannot keep anything like a good form, even if they are disposed to be good. Besides, however, looking among them for varieties with one or other of these qualities conspicuous, there may be some with well-formed flowers, beating present varieties of the same colour, however slight the superiority may be; but it must not dishearten the grower if he find forty or fifty to throw away, for one to save. It may be, however, that some sorts not worth keeping for their own merits as flowers, may, nevertheless, possess some scarce property worth seeding for; for instance, a very thick petal, and good round outline formed with handsome petals, may not be double enough to retain as a flower, but such a plant may be worth saving the seed from one season. Another, a very brilliant colour upon a very worthless bloom in other respects, may be worth keeping through the bloom for the chance of its imparting the colour to a better thing; all these things must be looked to while selecting those which are to stand, but though they may be worth seeding from once, it would be useless trying them a second year. Those intended for propagation and rearing should be labelled, and in all respects require exactly the same treatment as the established plants."

Among the qualities to be esteemed in new varieties, it must not be forgotten that those which are wide at the bottom of the spike, and have the flowers close together, narrowing the bloom gradually as they proceed upwards, are the best; and that if the footstalks are short, the blooms close to the stem, and therefore crowded and confused, they are by no means estimable. In showing the hollyhock, only a few flowers should be exhibited; three or four rows of flowers at the largest part of the pyramid should be set up, all above should be cut off, and no half-opened blooms or unbloomed buds should be seen. This, with as much of the under-stem as will serve to hold them in the stands, is all that should be shown, and all in a stand should be of uniform height. Three rows are the most effective, the back being the tallest, the middle rather more dwarf, and the front shortest. In some cases the exhibitors are restricted to five flowers, but this is not so good a plan as limited heights, for the reason that they cannot be so uniform. If, for instance, the lowest were restricted to nine inches of flower, and the highest to fifteen, it would allow of the three heights being nine, twelve, and fifteen inches. We can hardly imagine a gayer subject than a number of stands of hollyhocks thus arranged, making all show the same distance apart, and thus preserving not only a neat and uniform arrangement the whole length of the tables, but also affording the judges the greatest facilities for determining the relative merits.

As to the properties of the hollyhock, it will be enough for our present purpose to quote the following general rules laid down by Mr. Glenny:—

"1. The flower should be round, and the principal or guard petals should be thick, entire on the edges, and lie flat, being free from puckering or frilling.

"2. The centre, which is composed of florets, should form half a ball, and the more it covers the principal or guard petals the better.

"3. These florets should be thick, large, whole on the edges, perfectly free from fringe, or notch, or raggedness all over.

"4. The colour should be dense, instead of watery and transparent or washy, as that of the hollyhock is generally. The more bright and novel the more desirable.

"5. The spike should be close, the flowers touching each other, and tapering from the bottom to the top; the footstalks of the flower being longer at the lower end of the spike than at the upper end.

"6. There is no fixed height for the plant; but the flowers should begin one foot from the ground, and open all at once."

The following possess most of the above properties, and are the best that we have seen during the past season:—

Achmet—dark maroon.

Attraction—veined chocolate and white.

Aurantia—salmon-orange.

Black Prince—black.

Blue Beard—dark ground, with light edge.

Bicolor—purple and white.

Comet—ruby-red; very superb.

Commander-in-Chief—light, with rosy margin.

Delicata—French-white.

Defiance—maroon.

Enchantress—deep pink.

Fire Ball—bright red.

Formosa—dark claret.

Fulgens—bright glossy crimson.

Magnum Bonum—fine maroon.

Model of Perfection—chocolate and white.

Mount Etna—rich crimson.

Mr. C. Baron—delicate salmon-pink.

Mulberry Superb—deep crimson.

Napoleon—red and buff.

Obscura—grey and purple shaded.

Pallida—pale lilac.

Pulchella—light rose.

Queen—beautiful blush.

Rosea alba—rose and white.

— grandiflora—rosy-pink.

Snowball—white.

Sulphurea perfecta—sulphur.

Surprise—deep rosy-crimson.

Wellington—rosy-red.

William Tell—purple-crimson.

LANDSCAPE GARDENING.

THERE are certain subordinate expressions which may be considered as qualities of the beautiful, and which may originally so prevail in

natural landscape, or be so elicited or created by art, as to give a distinct character to a small country residence, or portions of a large one. These are simplicity, dignity, grace, elegance, gaiety, chasteness, &c. It is not necessary that we should go into a laboured explanation of these expressions. They are more or less familiar to all. A few fine trees, scattered and grouped over any surface of smooth lawn, will give a character of simple beauty; lofty trees of great age, hills covered with rich wood, an elevation commanding a wide country, stamp a site with dignity; trees of full and graceful habit or gently curving forms in the lawn, walks, and all other objects, will convey the idea of grace; as finely formed and somewhat tall trees of rare species, or a great abundance of bright climbers and gay flowering shrubs and plants, will confer characters of elegance and gaiety.

He who would create in his pleasure-grounds these more delicate shades of expression must become a profound student both of nature and art; he must be able, by his own original powers, to seize the subtle essence, the half-disclosed idea involved in the finest parts of nature, and to reproduce and develop it in his landscape garden.

Leaving such, however, to a broader range of study than a volume like this would afford, we may offer what, perhaps, will not be unacceptable to the novice; a more detailed sketch of the distinctive features of the beautiful and the picturesque, as these expressions should be embodied in landscape gardening.

The beautiful in landscape gardening is produced by outlines whose curves are flowing and gradual, surfaces of softness, and growth of richness and luxuriance. In the shape of the ground, it is evinced by easy undulations melting gradually into each other; in the form of trees, by smooth stems, full, round, or symmetrical heads of foliage, and luxuriant branches often drooping to the ground, which is chiefly attained by planting and grouping, to allow free development of form, and by selecting trees of suitable character, as the elm, the ash, and the like; in walks and roads, by easy flowing curves, following natural shapes of the surface, with no sharp angles or abrupt turns; in water, by the smooth lake with curved margin, embellished with flowing outlines of trees, and full masses of flowering shrubs, or in the easy winding curves of a brook. The keeping of such a scene should be of the most polished kind; grass mown into a softness like velvet, gravel walks, scrupulously firm, dry, and clean; and the most perfect order and neatness should reign throughout. Among the trees and shrubs should be conspicuous the finest foreign sorts, distinguished by beauty of form, foliage, and blossom; and rich groups of shrubs and flowering plants should be arranged in the more dressed portions near the house. And finally, considering the house itself as a feature in the scene, it should properly belong to one of the classical modes; and the Italian, Tuscan, or Venetian forms are preferable, because these have both a polished and a domestic air, and readily admit of the graceful accompaniments of vases, urns, and other harmonious accessories. Or, if we are to have a plainer dwelling, it should be simple and symmetrical in its character, and its verandah festooned with masses of the finest climbers.

The picturesque in landscape gardening aims at the production of outlines of a certain spirited irregularity, surfaces comparatively abrupt and broken, and growth of a somewhat wild and bold character. The shape of the ground sought after has its occasional smoothness varied by sudden variations, and in parts runs into dingles, rocky groups, and broken banks. The trees should in many places be old and irregular, with rough stems and bark; and pines, larches, and other trees of striking, irregular growth, must appear in numbers sufficient to give character to the woody outlines. As, to produce the beautiful, the trees are planted singly in open groups to allow full expansion, so for the picturesque, the grouping takes every variety of form; almost every object should group with another; trees and shrubs are often planted closely together; and intricacy and variety, thickets, glades, and underwood, as in wild nature, are indispensable. Walks and roads are more abrupt in their windings, turning off frequently at sudden angles where the form of the ground or some inviting object directs. In water, all the wildness of romantic spots in nature is to be imitated or preserved; and the lake or stream, with bold shore, and rocky wood-fringed margin, or the cascade in the secluded dell, are the characteristic forms. The keeping of such a landscape will, of course, be less careful than in the graceful school. Firm gravel walks near the house, and a general air of neatness in that quarter, are indispensable to the fitness of the scene in all modes, and indeed properly evince the recognition of art in all landscape gardening. But the lawn may be less frequently mown, the edges of the walks less carefully trimmed, where the picturesque prevails; while in portions more removed from the house, the walks may sometimes sink into a mere footpath without gravel, and the lawn change into the forest glade or meadow. The architecture which belongs to the picturesque landscape is the Gothic mansion, the old English or the Swiss cottage, or some other striking forms, with bold projections, deep shadows, and irregular outlines. Rustic baskets and similar ornaments may abound near the house, and in the more frequented parts of the place.

HINTS ON THE CULTIVATION OF THE GENUS EPACRIS.

BY ROBERT REID, C.M.H.S., GARDENER TO MRS. CLARKE, OF NOBLETHORPE NEAR BARNSELY.

THIS useful genus, which is yearly becoming more interesting by the addition of new varieties, almost rivals heaths in beauty, and must doubtless soon receive more extensive cultivation than it has hitherto done; for Epacrises are much better adapted for mixed collections than heaths, both on account of their more robust habits and the certainty with which they can be brought into flower at almost any given time, but more especially in the winter season. The following hints, therefore, on their cultivation may be found to be deserving of attention:—

With respect to propagation and soil, they require the same treatment as heaths. I have tried a little loam with peat, but find they always thrive best in sandy peat alone. The time for shifting can hardly be fixed, but it should mostly be done betwixt the months of

January and May. My practice is always to shift when the plant has done flowering, whatever time that may happen to be. The first thing to be effected before shifting, is to carefully cut down and thin out the small shoots, which should be cut to various lengths and heights according to the size and strength of the plant. The rule is to cut low enough to cause the plant to break down close to the surface of the soil, so that every part may be fully clothed with a sufficiency of young flowering shoots; for the main point to be considered in pruning is to produce a regular crop of well-ripened young wood, on which depends the future display of blossoms. When the plant is properly pruned and shifted, it should be at once placed in a warmer atmosphere, there to grow and ripen its wood. During its growth, stop the young shoots frequently, more particularly of the strong growing varieties, such as *grandiflora*, *impressa*, &c. These should often be stopped, say at six or eight inches, for if allowed to grow too long they will be destitute of flower-buds, and will require support from sticks, which should be avoided as much as possible. It will also be advisable, where the shoots are too thick, to take them off close to the stem, so as to prevent them from growing again.

Having no other convenience at this place, I grow my epacris in the pine-stove, where, although they do very well, yet the hot sun is almost too strong for them; for towards the middle of summer it causes the young shoots to droop. A pit, where they could be shaded, or a vinery, would, I should think, be more suitable for them; but where none of these places can be had, then they must occupy the warmest part of the greenhouse; and when this is so, the plants should not be pruned so closely as when heat can be had, for the young shoot will not in that case grow so long, and will consequently ripen sooner. The plants should never be turned out of doors at any time, except when they have been grown in heat and the wood brought to maturity early; then a few weeks out of doors will be of benefit to them, rendering them more hardy for the greenhouse in winter. The advantages of growing epacris in heat consist in the certainty of having every shoot covered with flowers; and by placing the plants in heat at different times, a constant succession of flowering plants during the winter and spring will be obtained.

By carefully attending to pruning and growing them in heat, epacris may be kept handsome in appearance, and in good health for many years, and will never fail to produce a regular crop of bloom in due season. It is well known, and perhaps still believed by many, that *E. grandiflora* was considered a shy bloomer: the reason of this is, that being always grown in the greenhouse, and the shoots allowed to attain any length without stopping, they never got properly ripened, and the few flowers that did expand were only on the smallest and shortest shoots, which ripen early; this shows the necessity of having a supply of these short shoots on every part of the plant. The more weakly growing kinds, such as *pulchella*, will not require to be so severely pruned as the stronger kinds; judicious stopping will mostly be found sufficient for them. Watering should be carefully attended to during their season of growth; they require a good deal at that time.—(*Hort. Soc. Journal.*)

A CHAPTER ON PINKS.

BY J. SLATER, FLORIST, CHEETHAM HILL, NEAR MANCHESTER.

THE following particulars on this charming tribe we extract from the "Midland Florist." It is from the pen of a celebrated Florist; and as our Magazine contains several articles in past volumes on the difference existing as to the proper qualities of a Pink between the South and North growers, we feel persuaded it will be acceptable to our readers.

"The following are the properties of the Pink laid down in Lancashire and Yorkshire for nearly forty years:—

"The stem should be strong, elastic, and erect, and not less than twelve inches high; the calyx rather smaller and shorter, but nearly similar in form and proportion to that of a Carnation; and the size of the flower should not be less than two inches and a half in diameter.*

"The petals should be large, broad, and substantial, and have very fine fringed or serrated edges, free from large deep notches or indentations; but the best are termed *rose-leaved*, that is without any fringe at all.†

"The eye should be perfectly round, and of a bright or dark rich crimson or purple, resembling velvet; but the nearer it approaches to black the more it is esteemed. The proportion should be about equal to that of the white, that it may be neither too large nor too small. The broadest part of the lamina, or wide end of the petals, should be a clear snowy white, and quite distinct from the eye, without spot or tinge; except it be a Laced Pink, that is, one which is so called from its being ornamented by a continuation of the colour of the eye round each petal, called *its lacing*, which should be bold, clear, and distinct, leaving a considerable portion in the centre perfectly free from tinge or spot. A red-laced Pink ought to be of a bright light red, and the nearer it approaches to scarlet the more highly it is prized.‡

"Much difference of opinion exists as to whether there should be a white edging beyond the lacing. I am of opinion that the lacing ought to come to the edge, as in the picotee, and show not the least white. This is generally adopted in the North; and as the properties laid down, or rather acted upon, have been strictly adhered to from time immemorial, I am induced to adopt this system; besides, the Pink is of the same family as the Picotee, and if one is to have an edging of white, why not the other? The moon, or centre of the Pink, has been adopted by Mr. Glenny, in his diagram of the flower, and he has laid down some beautiful standards. I consider that point

* The pod ought to be long, which will prevent it from bursting. Too many of the southern varieties have what may be termed a marble pod, that is nearly round, and require great care to prevent them bursting. The flower ought to make a true circle, without indenture.

† The flowers ought to consist of at least sixteen petals, and be perfectly free from those numerous small ones which so generally prevail in the southern varieties.

‡ There are three classes of Pinks shown in the North—Black and White, Purple-laced, and Red-laced. The first portion alludes to the Black and White, the centre of which ought to be a true circle, or, as it is termed, a moon, without the slightest starting to the edge, as the ground of some Auriculas do. The lacing of a Purple or Red Pink ought to be the same colour as the eye.

as settled; but he advocates the white edge beyond the lacing. This is a matter of opinion; and where the contrary has been acted upon long before the southern florists were great cultivators of the flower, I cannot see why custom ought not to prevail: besides, as I before stated, the Picotee has no white edging, and it may be termed, with strict propriety, a laced Carnation. The size of most southern Pinks is attained by long petals, commonly termed in this locality, from their narrowness, *strap-leaved*. The Pink named Jones's Huntsman is one that may be taken as a criterion and basis of all improvements in the flower.

"Having thus given the properties of the Pink, I will now describe a few which have fallen under my notice during the present season:—

"*Willmer's Laura*.—The moon or circle of this flower is bad, the lacing different from the eye, the petals not at all flat, and the edges not rose-leaved, the flower large.

"*Kirtland's Prince Albert*.—Flower large, moon deficient, edge paler than the centre, rose-leaved, white excellent; a striking flower.

"*Kerr's Harriett*.—Flower large, moon deficient, lacing lighter than the centre, petals good, but do not lie flat.

"*Hodge's Melona*.—The flower not large, good moon, not strictly rose-leaved, the lacing paler than the centre.

"*Dr. Moore*.—Purple-laced, form and moon good, flower small, and better than most that are termed rose-leaved. This variety has been disputed as being a seedling; the majority are of opinion that it is the one called *Mango*, and is now shown under that name.

"*Kay's Magnificent*.—Flower medium-sized, purple-laced, the moon good, and the lacing same colour, the petals equal to most called rose-leaved.

"*Jones's Albion*.—Flower good size, moon good, lacing same colour as moon, petals rather narrow, and what are termed spade-pointed.

"*Young's XX*.—This Pink has had more commendation passed upon it than any other, and the failure, I think, much greater. The flower has size, but at the expense of the petals, which are extremely narrow; the moon very starry, the white and the pod good.

"*Outrim's Staffordshire Beauty*.—Flower large, moon good, lacing same colour as moon, the white uncommonly good, petals extremely broad and fine, and equal to most called rose-leaved.

"*Outrim's Mrs. Outrim*.—Flower not large, moon good, lacing colour of the eye, petals good, equal to most called rose-leaved, and much resembles *Mango* in size, &c.

"*Outrim's Pottery Lass*.—Flower small, moon not so good as the others, petals the same as respects being rose-leaved; the colour, which is purple, does not appear bright.

"*Hand's Pilot*.—Flower large, moon good, lacing colour of the eye, petals good, and nearly equal to Jones's Huntsman in every respect.

"The Pinks raised by Mr. Outrim, a gentleman of Stoke-on-Trent, are not yet sent out, and the notes made of them were from a single bloom on each plant. The general opinion is, that the first two will be an acquisition to the purple-laced class: I have seen blooms of them since, after the plants had been taken up and replanted, and they fully bore out the remarks made."



IN THE FLOWER GARDEN.

THE beauty of the flower-garden for the present year has now fairly gone, and all that can be done to please the eye is to maintain as much neatness as possible. Keep the broom and rake in constant use, until the trees and plants are divested of their decaying leaves; cut away the tops of all plants that have been killed by frost, and rake and trim the beds. Planting and transplanting trees and shrubs, forming and altering walks, laying down turf, and all kinds of alterations and improvements, where such is desirable, will now engross considerable attention. Wherever it is practicable, it is much best to commence such business at this time, and proceed with all despatch, to enable each to become established or settled before another spring. These matters are too often deferred, or do not engage attention to that extent they ought to receive. New work hurriedly and imperfectly done, as a natural consequence of, and in conjunction with its being performed late in spring, is a sure prelude, more or less, to unsightly appearances through summer and autumn, produced by dead or dying trees and shrubs, brown glades and patches of lawn, ugly fissures in newly made ground, and so on. Amongst other out-door occupations this month, are partially or otherwise pruning a variety of things, supporting and protecting them at the same time, as may be deemed necessary. In the protection of tender things, the principles demanding attention are few and simple, and within the reach of every one, at least as far as such can be carried without the aid of houses and artificial heat. A comparative degree of dryness is the first great essential, whether in the atmosphere or the soil. In a frame or pit, this amount of dryness cannot be guaranteed without motion in the air; and this, of course, in the absence of fire-heat must be accomplished by a very free ventilation at every fitting opportunity, remembering that a small amount of frost is, in general, less prejudicial than an accumulation of damp, which will rapidly tend to a kind of mortification in the system of the plant. The same atmospheric conditions are to be obtained out of doors, as far as attention can secure them; thus, half-hardy plants against trellises or detached, if covered with a mat and stuffed closely with hay inside, will be in danger of perishing of what we may for the present term suffocation; the same specimen will always run through a long winter better with the mat alone, more especially if the collar is well protected by some dry and porous material, and, above all, the root well top-dressed with sawdust or ashes, or perhaps the two blended. As to comparative dryness of the soil, that must be accomplished principally by the most perfect drainage; this is indeed the great desideratum with plants of tender habits; indeed, without it,

other appliances are seldom satisfactory. Mounds of new sawdust raised around the stem, with a considerable body over the soil as far as the root ranges, will be found of immense benefit, as retaining the ground-heat, which we believe ascends in a progressive way up the stem, to alleviate the effects of very severe weather. Standard and dwarf Roses of tender character will soon need protection. Do not, however, afford it before they have borne a little frost, or their period of covering may prove of too protracted a character in regard of confined damp. Finish directly the planting of all bulbs that are intended to be put in before winter; a little sand round each will assist in preserving them from wet.

FLORIST'S FLOWERS.—*Auriculas* still require well looking after; all dead or yellow leaves must be gently slipped off, taking care not to wound the stem. The top soil must be frequently moved, and if there should be any appearance of bad drainage, the soil must be carefully turned out, keeping the ball entire, and more broken pot added. During rainy weather the lights of the frames must be kept on, but tilted, and a free circulation of air amongst the pots insured by raising the frame a few inches from the ground. Should autumnal blooms be thrown up, pull off the pips as soon as formed; but where they happen to be heart blooms, it is best to let the stems remain. *Tulips* should be planted as the first opportunities offer. Some prefer to dibble the roots in, but the readiest and most regular way is to plant them on the surface of the bed unfilled to within four inches of the destined surface. Seven strings are then stretched lengthways at equal distances, and secured by nails at each end of the bed; when the bulbs are planted a short line crosses these, and a bulb is placed at each section; the small line is then removed the requisite distance, and another row put in. When the bed is planted, the strings are removed, and four inches of soil placed over the roots very carefully, so that none are displaced. In planting *Tulips* it is sometimes a work of difficulty to arrange them properly, according to their respective height of growth; irregularity in this respect, when they are in bloom, being very unpleasant to the eye when viewed from either end of the bed. The tallest kinds should be placed in the centre row, then those of intermediate habit, and the shortest in the two outside rows. To produce an agreeable contrast, as well as judicious mixture of colours, care should be taken to distribute the three classes of roses, violets, and bizzarres equally throughout the bed. *Hyacinths* required for ornament, &c., should, if not already done, be potted or glassed immediately. For blooming in glasses, use rain or river water, adding to each pint a tea-spoonful of Cole's chemical preparation in powder, which will be found greatly to increase their luxuriance; fill up the glasses with this liquid until it will just touch the bottom of the bulb; place them in total darkness, and change the solution about once a fortnight; in doing this, hold the bulb in its place, and pour out the contents, filling up again as before. In a few weeks, the roots having advanced considerably, they may be removed to a window or other light situation. *Pansies* that have made long and straggling shoots, may now be cut closely, leaving a joint above the ground, and hoops should be placed over the choicest beds, that pro-

tection may be given in the event of sudden frost. *Carnations* by this time ought to be all well established in their winter quarters, they will require all the air and exposure possible in damp weather, avoiding continuous wet; should any plants appear mildewed, or the leaves become spotted, the diseased parts should be immediately removed, and the plants be placed away from the general stock, in a frame to themselves. *Pinks*—the beds may be kept free from weeds, and the surface clean, occasionally stirring between the rows of plants. *Dahlias*—any that still remain in the ground should be taken up, advantage being taken of fine days; great care should be taken to secure the labels firmly to each before the roots are set by. *Chrysanthemums* in pots should be placed in a deep frame or greenhouse where they can be freely ventilated, as they ought not by any means to be kept close or warm or they would soon become drawn and liable to be attacked by insects; a low temperature will also help to retard their flowering, which is usually considered more desirable than to hasten it. Thin away all small and weak flower-buds as they appear, and secure, in as neat manner as possible, the stems as they advance in growth.

IN THE GREENHOUSE, COLD FRAME, &c.

The proverbial dulness and dampness of the external atmosphere generally prevailing during this month is sufficient to induce more than the ordinary amount of care and attention. Plants of a succulent nature are liable to suffer as much from damp as from frost. Ventilation on all favourable opportunities is therefore highly necessary, closing the sashes early in the afternoon when a clear sky indicates frost; this precaution will often prevent the necessity of making fires in these houses. Withered leaves and flowers must be constantly picked off, and the plants should be occasionally turned round so as to present a different face to the light. Give water sparingly, especially to plants which are impatient of wet, such as *Calceolareas*. *Pelargoniums* must not be overwatered. Keep them free from dead leaves, and if two or three strong shoots take precedence of the others, they should be stopped.

In the conservatory but little requires to be done, excepting attention to cleanliness. Water sparingly, and let it be done early in the day, so that the moisture may dry up before evening; clear away all decaying and decayed leaves; keep as free circulation of pure air as possible amongst the plants, which should be placed a good distance from each other; and avoid using fire-heat unless the weather is very wet or frosty.

IN THE FORCING PIT OR STOVE.

All hardy and half hardy plants brought in for forcing should have a temperature at first of from 50° to 60°, to be increased up to 75° when more advanced; but as many plants will not bear such heat, and others will not do much good without a high temperature, there should be two distinct pits or divisions at least for this purpose. The double Roman *Narcissus* is the first of the forced bulbs, and where they have been potted early in August they will now stand 60° of heat, and will be in flower by the end of this month. *Cyclamens* that have made good roots

will stand forcing for a short time, and will soon throw up their blooms ; but, like bulbs of all sorts, they are injured by forcing before their roots are made.

Introduce Roses, Lilacs, Violets, Lilies of the Valley, and other plants, to bring them early into bloom, and watch after and destroy all insects as they appear. Chinese Primroses sown last spring should be encouraged, that they may blossom about Christmas. These are extremely subject to suffer from damp ; they ought, consequently, to occupy a dry and airy situation during winter. Orchids generally should be kept free from every kind of excitement ; give no water at the roots, and a very moderate degree of atmospheric moisture.

ON PRUNING ROSES.

BY ROSA.

A ONE-YEAR old budded plant usually has but one shoot ; such should now be cut down, so as to leave three, or, at most, four eyes. The branches which proceed from them must, at the end of the season, be cut back to two eyes, and on the third season a proper-formed head will bloom. In future the same process of cutting to two eyes must be adopted, and cutting clean away any part of the head that appears to interfere with others. It must always be kept quite open to the middle, and stand free from entanglement, that air and light may be admitted without obstruction. Always let the last bud of a shoot pruned be at the *lower side*, so that when it pushes it may grow rather *outwards* than *erect*. This tends to form the head more properly, and prevent confusion, which occurs when all new shoots grow erect, as the head becomes crowded. At the time of pruning too, if there are buds in the interior of the head that, on pushing shoots, would grow inwards, and so be injurious, they should now be rubbed off. All weak shoots should be cut away, leaving only the strongest.

The China Roses do not require the shoots to be cut back to two eyes, but the heads be thinned out, so as to leave the shoots at a proper distance from each other. If the head should have become ill-shaped, then a part may be cut off to equalize it, but otherwise do not shorten the shoots. When Climbing Roses have filled up their allotted space, and the branches are too thick, they must be thinned out, so as to prevent confusion. If the Pillar Roses are becoming too bulky, the shoots should be cut back to a few eyes. This process may be done every year, if desirable, so that any required size or shape is readily formed and kept. Do not prune the Banksian Roses in autumn or winter, as the *present shoots* are those which supply the flowers of next season. A thinning out of the shoots *in summer* is only necessary for this section of Roses.





Picotées.

1 *Barrington's Miss Duke*; 2 *Burroughes Duchess of Sutherland*.



FLORICULTURAL CABINET

DECEMBER, 1849.

ILLUSTRATIONS.

PICOTEES.—1. MISS DUKE (BARRINGER). 2. DUCHESS OF SUTHERLAND (BURROUGHES.)

BOTH the flowers represented in our plate possess sufficiently striking qualities to entitle them to the attention of all cultivators of this lovely tribe. **MISS DUKE**, sent out by Mr. Barringer last autumn, is a very pretty and constant variety, of medium size, mostly free from bars or spots, full and of good substance, and when well grown, as we have seen it, may be classed with the very best.

THE DUCHESS OF SUTHERLAND, is a new flower, offered for sale in the first autumn, by, we believe, Mr. Turner. We saw it at the metropolitan shows, and consider it the gem of the season; the white is pure, the edge well defined, and free from bar or speck. Size above the average, and of stout substance. It will, we are sure, be found an acquisition to the most select collection.

It is pleasing to have to record that during the last two or three years a most apparent advance has been effected in the cultivation of both Picotees and Carnations throughout the country. They are not only grown more extensively, but flowers of a much superior size are produced; this has been most apparent during the past season. What constitutes a perfect flower is now better understood, and florists are turning their attention more effectually to raising improved varieties, having petals of thick substance, even, round edges, properly arranged, flowers large and full, also having the outer row of petals to form a proper filled-up circle. By placing varieties of first rate character, and of different colours, at some distance apart from the general collection, and carefully impregnating them, the seedlings will certainly possess approved properties, and the intermixture of colours give such distinction in character as to entitle them to merit. The two we now figure are fine specimens in the right direction.

NOTES ON NEW OR RARE PLANTS.

ACHIMENES KLEELI.—MR. KLEE'S ACHIMENES.

Messrs. Lane of Berkhamstead, obtained this pretty species from Guatemala through Mr. Skinner, who discovered it there. It is of medium habit in growth, and blooms freely. Each flower is about two inches across, of a rosy lilac colour.

ACHIMENES JAYII.

It has much the appearance of *A. rosea* in habit, but the flowers are of a bright purple colour. A beautiful variety.

BROWALLIA SPECIOSA.—THE SHOWY.

This pretty flowering new species is a native of Peru, from whence it was sent to the Royal Gardens of Kew, where it has bloomed. Tube an inch long, and the irregular five-parted limb (top portion of the flower) is nearly two inches across; a pale lilac beneath, and a rich deep purple above, with a white throat. It is a shrubby, greenhouse plant, and showy. (Figured in *Pax. Mag. Bot.*)

CROWEA STRICTA.

The flowers are very similar in size, and a pink colour, like the *C. saligna*; the plant, however, grows upright and blooms more freely. It is well worth a place in every greenhouse.

CYCHNOCHES BARBATUM.—THE BEARDED.

From Costa Rica, and has bloomed in the superb collection of orchideous plants at Ealing Park. The scape is a foot long, dark purple, terminated by a drooping many-flowered raceme of flowers. Each blossom is two inches across, sepals and petals yellow, spotted with purple. Lip white, tinged with yellow, and elegantly spotted with deep blood colour. It is a singularly beautiful species. (Figured in *Bot. Mag.*, 4479.)

DENDROBIUM TORTILE.—TWISTED-PETALLED.

A delicately handsome flowering orchideous plant, which has been imported from Moulmein by Messrs. Veitch's. It has bloomed in the Royal Gardens of Kew. The flower-stem rises about nine inches long. Each blossom is two inches across, sepals and petals white, delicately tinged with rosy-purple, waved. The lip is large, a lemon-yellow tinged with purple, and the base streaked with dark purple. It flourishes attached to a block of wood, like all the *Dendrobiums*. It requires a high temperature, being from Java. (Figured in *Bot. Mag.*, 4477.)

INDIGOFERA DECORA.—THE COMELY.

Mr. Fortune found this pretty species in the nursery gardens at Shanghai in China, who sent it to the London Horticultural Society. It is a hardy greenhouse shrub, compact, and blooms very freely. The flowers are borne in racemes of six inches long, rose-tinged, and spotted with purple. It is very neat and showy, and well merits a place in the greenhouse. (Figured in *Pax. Mag. Bot.*)

LUCULIA GRATISSIMA.

This fine blooming plant may be had to bloom quite dwarf, in a similar manner as is done by the *Hydrangea hortensis*. Plants a foot high, each having a large head of lovely fragrant flowers are readily produced. Every greenhouse should have one or more in it.

MANDEVILLIA SUAVEOLENS.—SWEET-SCENTED.

This is a beautiful evergreen shrubby twining plant, introduced from Buenos Ayres by J. H. Mandeville, Esq. It is not cultivated to that extent its merits entitle it. The plant grows rapidly, and blooms freely. The flowers are borne in axillary racemes, funnel-shaped, tube two inches long, limb five-parted, two inches and a half across. They are white and deliciously fragrant. It thrives well in the greenhouse, and best when grown in a border, well drained, where its roots can have full scope. It deserves to be in every greenhouse or conservatory, its numerous fine heads of sweet flowers being very ornamental.

OXALIS BOWEII.

In the London Horticultural Society's garden there has been a bed of this pretty plant in profuse bloom, producing a charming display. Its fine elegant rosy-crimson flowers, borne in large trusses, elevated above the deep green foliage, have a lovely appearance. The plants are grown on a dry south border in front of one of the plant-houses; and its showy appearance is unrivalled for a bed in autumn, and although these plants were in fine bloom some months back, they continue in profusion, and appear likely to do as long as season permits. In order to have it continue in beauty, it should have a cover at night to protect from frost. This plant, too, is one of the prettiest ornaments for adorning the greenhouse through autumn and early winter. It is easy of cultivation and readily increased.

PROMENÆA STAPELIODES.

A Brazilian orchideous plant, flowers similar to those of *Vandæ*, of a greenish yellow, spotted with dark.

PROMENÆA LENTIGINOSA.

Flowers greenish purple, profusely spotted with dark crimson.

RHODODENDRON CLIVIANUM.—DUCHESS OF NORTHUMBERLAND'S RHODODENDRON.

This is one of a very remarkable set of hybrids, produced by Mr. Iveson, head gardener at Sion Gardens. It is believed to be produced between *R. Catawbiense* and the white variety of *R. arboreum*. It is perfectly hardy. The heads of bloom are very large. Each flower is three inches across, white, tinged with pale rose; the upper lobe being numerously spotted with rich red. It is a very beautiful variety. (Figured in *Bot. Mag.*, 4478.)

SCHOMBURGKIA TIBICINUS, var. GRANDIFLORA.

An orchideous plant, native of the woods of Honduras. It has bloomed beautifully in the Royal Gardens of Kew. The peduncle

long, bearing a large panicle of very showy flowers. Each blossom is three inches across, sepals and petals palish purple outside, deep red purple, streaked with darker lines, and tipped with green. Lip large, each side lobe orange, edged with purple; the middle lobe white, stained with yellow, and a broad purple margin. It is a fine showy variety.

NEW PICOTEES.

VICTORIA REGINA (Marris), a splendid heavy-edged rose, good in all respects.

GRACE DARLING (Marris).—It was raised from Lady Alice Peel, remarkable for the regularity of its beautiful heavy edge; petals broad and well formed.

MARRIS'S COUNTESS HOWE.—A very splendid light rose, also raised from Lady Alice Peel; petals very broad, white pure. This is the variety which will dispute the palm with Mrs. Barnard.

MATCHLESS (Slater).—Raised from Nulli Secundii, extremely like the parent in point of form and marking; it is red instead of purple.

ACHILLES (Marris) is also of the same class as the above. The white is particularly good, the edge dark red, and petals first-rate.

ELIZABETH (Robinson).—A heavy-edged bright crimson; white pure, the margin well defined, a remarkably brilliant flower.

HARRIET (Moore).—Heavy-edged rose, the guard petals very broad, edging well laid on, and the flower clean; a very promising variety.

MARY ANNE (Robinson).—Delicately edged with crimson, without speck or bar, each petal appearing to be surrounded with a dark thread. It will bear comparison with Youell's Gem, and others of the same class.

Yellow Picotees.

LE ROI.—Rather a small flower, good pod, pale yellow ground, strongly marked with lively red.

WILLIAM THE CONQUEROR.—A very full flower, with good petals, ground colour yellow, heavily edged with deep purple. The late flowers are more clear than the early ones.

WILLIAM CATLEUGH.—The ground colour deep yellow, heavily margined with chocolate and crimson; a very attractive sort.

TOM PETHUS.—Rather small, the yellow indistinctly patched with white, margined with dark red; though small, rather a coarse flower, being somewhat serrated on the edge.

CLOTH OF GOLD.—The pod is long, the yellow good, margined very neatly with dark red. This is one of the cleanest and most decided in character, its drawback is a slight serrature.

DUCHESS OF NORMANDY.—The yellow pale and undecided, lightly edged with purple, distinct.

TRANSCENDENT.—Bright yellow ground petals, margined with light scarlet, and slightly serrated; a very pretty sort.

VESUVIUS.—Pod rather short, petals smooth, the ground colour deep yellow, heavily and decidedly edged with scarlet; a beautiful variety.—(*Midland Florist.*)

TREATMENT OF GREENHOUSE PLANTS IN OCTOBER AND NOVEMBER.

BY A GARDENER IN THE PEAK OF DERBYSHIRE,

HAVING been a subscriber to your valuable work for a number of years, may I occupy a few lines on the treatment of greenhouse plants during the months of October and November. I am sorry that I am too late in entering upon the subject for this year, but it may be of use in future years. I have often heard gardeners complain that those two months are the worst in the year for the health of greenhouse plants. It generally happens (as at the present time) that we have very mild damp weather for weeks together, and, as a matter of course, most persons like to keep their houses as cool and airy as possible; but in giving great quantities of air at such times, without fire heat to dry up the dampness of the atmosphere, they often find their plants, particularly such as are in a growing state, thickly studded with beads like dew drops all round the leaves, even in the middle of the day, which are certain to ensue in mildew and mouldiness; and if the plants once get these pests amongst the stock, it is not easily got rid of for some time, therefore prevention is better than cure. My plan is simply this: at this season of the year I look over my entire stock of plants to see which wants water, every alternate morning; this I think is quite often enough; and on those mornings I always light a fire the first thing, and raise a gentle heat, (at the same time giving all the air possible); one fire is quite sufficient, and I let it go out about ten o'clock, then it has plenty of time to dry up the superabundant moisture and get cool before night. With this attention I never find either mildew or mouldiness on any plant; the only pest that I have is the mealy bug in the stove, which I can do nothing with in the way of destroying. I have tried all manner of things that I can think of, such as tobacco-water, soft-soap liniment, mercurial ointment, neatsfoot-oil, lime and sulphur, soot and lime. Now I have tried them all in different ways, such as mixing two or more sorts in different proportions, but all to no avail; some of them have brought the leaves entirely off without injuring the pest in the least. I once saw recommended water at 180 degrees Fahrenheit for destroying the mealy-bug; I tried that, but I shall never do it again. I was very happy that I only tried one plant; I gave it a slight syringe, which very soon sent it to oblivion. If any of your correspondents can give me any information how to destroy the insect but not injure the plant it will greatly oblige me.

ON THE ODOURS OF PLANTS, AND THE MODES OF OBTAINING THEM.

NEROLI OR ORANGE FLOWER.—Few odours have a more extensive use in the art of perfumery than this: it is in no way altered by separation from the plant; hence, when on the handkerchief, it does not alter or become faint like many other perfumes; it forms the basis of the famed Eau de Cologne. It is procured from the *Citrus Aurantium*

flowers by distillation, also from the same by maceration in any fat body: the former yields what is found in the market under the name of Oil of Neroli, and as such is used in scenting soaps, and for other secondary purposes; the latter, being somewhat finer in fragrance, has a more delicate use. By digesting in alcohol it gives *Extrait de Fleur d'Orange*, or *Extract of Orange Flowers*,—a handkerchief perfume surpassed by none. It resembles the original so much that, with closed eyes, the best judge could not distinguish the scent of the extract from the flower. In the first process, namely by distillation, the water which comes over is put back into the still upon fresh flowers, and the operation is repeated several times; the Oil of Neroli finally floats on the surface, and is separated by a funnel. The water being left is filtered; and, as it is highly charged with the odour of the flower, finds a sale under the name of *Orange Flower Water*, and is used, like *Elder Water*, for the skin, and as an eye lotion.

Orange procured from the same plant as the above, but from the rind of the fruit instead of the flower, is expressed in the same way as lemons; the peel of the fruit is rasped, in order to crush the little vessels that imprison the oil or odour; it may also be procured by distillation. Its abundance in the peel is shown by pinching a piece near the flame of a candle; the true essential oil that spirits out ignites with a brilliant illumination. It has many uses in perfumery, more particularly in that preparation called "*Lisbon Water*," also in "*Eau de Portugal*," both of which are solutions of the oil of orange peel in proof spirit, to which is added a small quantity of lemon and vervain and ambergris by the Parisians. It is what is called a particularly clean scent, sharp, and refreshing.

ROSE.—This queen of the garden loses not its diadem in the perfuming world. The oil of Roses, or as it is commonly called, the *Otto* or *Attar of Roses*, is abstracted by various processes from the *Cabbage Rose* in Turkey, Persia, and India; the finest is imported from Ghazepore in the latter country. For obtaining it, the procurers at each place have their own mode of operation; the best method, however, is to stratify the flowers with a seed containing a fat oil; they will absorb the essential oil of Roses, and swell a good deal if the flowers are changed repeatedly. They are then pressed and the product allowed to stand for a time, the otto rises to the surface, and is finally purified by distillation. Pure otto of Roses, from its cloying sweetness, has not many admirers, it is moreover likely to produce headache and vertigo in this state; when diluted, however, there is nothing to equal it in odour, especially if mixed in soap, to form *Rose soap*, or in pure spirit to form "*Esprit de Rose*." The former preparation not allowing the perfume to evaporate very fast, we are not so readily surfeited with the smell as in the latter. The finest preparation of *Rose* as an odour, is made at *Grasse*, in France; here the flower is not treated for the otto, but simply by maceration in fat, as mentioned with other flowers.

The *Rose Pommade* thus made, if digested in alcohol, yields *Esprit de Rose* of the first order, very superior to that which is made by the addition of otto to spirit. It is difficult to account for this difference,

but it is sufficiently characteristic to form a distinct odour. It is never sold by the perfumer, he reserves this to form part of his *recherché* bouquets. Some wholesale druggists have, however, been selling it to country practitioners for them to form extemporaneous Rose-water, which it does to great perfection. Roses are cultivated to a large extent in England, near Mitcham in Surrey, for perfumers' use, to make Rose-water; the odour of the English flower is not strong enough to use for any other purpose. Though the dried rose-leaves are used for scent bags, they retain but little of their native fragrance. In the season when successive crops can be got, they are gathered as soon as the dew is off, and sent up to town in sacks. When they arrive they are immediately spread out on a cool floor, otherwise if left in a heap they will heat to such an extent in two or three hours, as to be quite spoiled; to preserve them for use they are immediately pickled; for this purpose the leaves are separated from the stalk, and to every bushel of flowers, equal to six pounds, one pound of common salt is thoroughly rubbed in, the whole becomes a pasty mass, and is finally stowed away in casks. In this way they will keep almost any length of time without seriously injuring their fragrance. For rose-water, which is best prepared from time to time, take 12 lbs. of pickled Roses, and 2½ gallons of water, place them in a still, and draw off two gallons, this product will be the "double distilled Rose-water" of the shops.

RHODIUM (*Convolvulus scoparius*).—A fine odour is drawn by distillation from the wood of this plant; it is but little used in perfumery, and is extracted more with an idea of adulterating the otto of Rose, as it somewhat resembles it in odour, than for any other purpose.

ROSEMARY (*Rosmarinus officinalis*).—The odour is more aromatic than sweet, it is procured from the leaves by distillation, and consumed largely in combination with other scents for perfuming soap. "Rosemary-water" and "Rosemary-oil" are a good deal used, with an idea that they possess the virtue of restoring hair; how far this is correct we know not, but we have little faith in such nostrums.

SANDAL.—

"The Sandal tree perfumes, when riven,
The axe that laid it low."

This is an old favourite with the lovers of scent; it is the wood that possesses the odour. Some of the finest comes from the Island of Timor and China, and on account of its fragrance, is often fashioned into lady's toilette-boxes and jewel-cases, &c. Many persons use Sandal-wood shavings to make scent-bags for drawers. When distilled the oil of Sandal is easily obtained, it is wonderfully strong and penetrating; the oil of Sandal mixed with pure alcohol forms the perfumers' "Extrait de bois de Santal." This preparation requires a little Rose to sweeten it for handkerchief use; it mixes well with soap, and then forms what they call Sandal-wood soap, and with charcoal and a little nitre it forms Sandal pastilles for burning, to perfume apartments, which, however, are but indifferent in odour; the oil of Sandal is often used to adulterate otto of Rose, with which it unites favourably; Sandal wood, with its derivations, is one of the most ancient perfumes.

VERBENA, OR VERVAINE, gives one of the finest perfumes with which we are acquainted; it is well known as yielding a delightful fragrance by merely drawing the hand over the plant; some of the little vessels or sacks containing the essential oil must be crushed in the act, as there is little or no odour by merely smelling at the plant. On account of the great value of the real article, it is scarcely if ever used by the manufacturing perfumer; but it is most successfully imitated by mixing the oil of Ginger-grass (*Andropogon Schœnanthus*) with pure spirit, the odour of which resembles the former to a nicety. Ginger-grass, or Lemon-grass grows abundantly in India, and the oil is procured by distillation. So cheap is it that "Extract of Verbena" is found in every fancy shop in the kingdom; this, however, is but a plain solution of the Ginger-grass oil in spirit. The finest "Extrait de Vervaine," of the French perfumers, contains, besides that oil, oil of Lemons and Oranges, with the addition of a little Essence of Rose; this preparation is really a very delightful and refreshing perfume.—*P. in Gardeners' Chronicle.*

ON DOUBLE FLOWERED STOCKS.

BY ALPHA.

A GREAT deal has been stated relative to the obtaining double-blossomed stocks, but the real origin of these productions is not generally known, I therefore transmit the following particulars on the subject, which may facilitate attempts to a more general production of double flowers, not only in the tribe of Stocks, but many other flowers not yet even thought about.

Double flowers are produced generally by a change of stamens and pistils into petals. This is promoted by the plant being checked in a poor soil, and sparingly watered for a time, then afterwards giving it luxuriant food and due treatment, which will tend to bring the pistil and stamens into petals, and so produce double flowers.

Double flowers being once obtained may be perpetuated by raising a supply from cuttings, slips, and grafts. This may be done with the Ten-week Stock, Wallflower, &c., but their original existence was from seed obtained from single flowers, as the double-flowered do not bear seed. The greater the check given, the more powerful will be the effect of after luxuriance when shifted into a rich soil, placed in due heat, properly supplied with water and every requisite attention; with the greater vigour there will be a flow of crude sap, and the flower is not only then produced larger, but the crude sap has a tendency to lower the state of existence, and the stamens and pistils being higher in the scale of existence, are reduced to a more inferior condition of petals. Sometimes the scale of existence is so far reduced, that what had been originally the nucleus of a branch, but elevated by elaboration acting on the vital energy into a state of petals, stamens, and pistils, is not only reduced to petals and become double, but will shoot again into a branch, as we have had instances with Brown's Superbe, and other roses. The double *Lychnis diurna* has the stamens changed into

red petals, and the pistil into green leaves, and the quantity of each greatly increased. In the *Rhododendron* the flowers are produced from the terminal bud of the shoot; if the summer and autumn have been warm, the buds swell larger, and we have a branch of flowers instead of a branch of leaves the ensuing spring; but it is always difficult to say, till the bud is evolved, whether we shall have leaves or flowers. In raising double or full flowers from seed, therefore, we should carefully guide our attempts by experience; in procuring the seed, we must get it from the *most double flowers we can*, as the progeny always bears more or less resemblance to the parent. In the *Dahlia* the flower is not, strictly speaking, full; it belongs to the compound class, in which a great number of florets are arranged on one common receptacle; in single *Dahlia*s, and other flowers of this class, the ray or outer row of florets has the petals fully evolved and coloured; in the florets of the centre or disk, the petal is only in the state of a small tube, inside of which the stamens are situated. Rich cultivation forces these tubes to assume the state of coloured petals; sometimes tubular, as in the quilled *Dahlia*s, and sometimes flosculose or flattened, as in others; sometimes the stamens are changed into petals, sometimes they are abortive, but generally both these and the pistillum are unchanged. and hence there is little difficulty in getting seed from *Dahlia*s. Plants that are full of double flowers at one time, when the plant is vigorous, will change and come more single when checked by bad weather, or when the plant begins to ripen and get woody. To return to the raising of seedling double flowers: *Roses*, *Pinks*, *Carnations*, and *Ranunculus* change the stamens only into petals, and sometimes these are only partially so in very full flowers, and seed is comparatively easy to be obtained from them; we should, as before observed, select from the fullest and best flowers. In the *Anemone* the pistils are changed into petals, the stamens unchanged; seed of these can, therefore, only be obtained from flowers not perfectly full, or by impregnating flowers nearly single, with a tendency only to fulness, with the anthers of full flowers. In *Stocks* and *Wallflowers* both stamens and pistil are changed into petals; and the best resource is to save seed from those blossoms which have a tendency to fulness, by having a petal or two more than usual. In growing *Stocks* from seed they will be more likely to be double, if the plants are checked first by a deficiency of nourishment, whether of water or manure, and afterwards excited to luxuriance by a plentiful supply; and the greater the change, the greater the likelihood of success. Old seed, or seed dried, gives a check; we have had instances of old neglected seed, which had been reckoned very inferior when the seeds were fresh and new, come almost every plant double, when a little had been left over and sold when old. The seed for raising double flowers of any sort can *hardly be too old*, if it will grow at all; and the weak plants, first stunted and then luxuriated, will be found most successful; the seed should be sown on heat, and the weak plants *most cared for*. After flowers have once been produced double or full, the habit of coming double will be retained, if kept so by rich cultivation. When any variety has begun to sport, the plants should be raised off those individuals which have

not yet sported, as the sporting habit might become fixed; and this should be carefully guarded against, by propagating from those roots that show the fullest flowers. The double China Asters, Feverfew, Rockets, Daisies, &c., come double in the same way as Dahlias. The double Snapdragon is similar to the Stock. Campanula, Cistus, the Thorn, and most other double flowers, are similar to the Rose. Thus, by attention, have many of our English plants been induced to produce double flowers, and so, no doubt, would be the result with others, both domestic and foreign, if attention was duly paid to the subject.

CULTURE OF IXIAS, GLADIOLUSES, ANTHOLYZAS, WATSONIAS, AND LACHENALIAS.

BY FLORA.

HAVING cultivated Ixias, Gladioluses, Antholyzas, Watsonias, and Lachenalias with the greatest success, under the following mode of management, it is with much pleasure I forward them to you for insertion in your Magazine.

All the above, and many other bulbous plants included under the natural order Iridææ, I have found to thrive best when planted in the open border, in a mixture of very light sandy soil and decayed leaves, and if this cannot be obtained conveniently, a little peat soil should be used as a substitute; the border should be close under a *south wall*. I usually plant them six or eight inches deep, so that no ordinary frost can injure them; I cover the bed all over with dry litter; this entirely prevents the strong frosts from injuring the roots, and it likewise keeps a great deal of wet from them, which is very liable to rot the roots, an excess of which would damage them. They are readily increased by offsets from the bulbs, which I generally take up at the end of September, and separate them; when this is done, I again plant them. By this treatment they will flower much stronger than if grown in pots. I have, however, cultivated Ixias with success, in pots kept in a greenhouse, in the following manner:—

In May, when the leaves are dead, I turn all my bulbs out of the pots in which they have grown, and clean the bulbs. I then place them in partitioned drawers until October, when I repot them, putting four bulbs in each small pot; I use 30's. The soil I use is a mixture of equal parts of loam and peat. I place them in a cold frame until the foliage appears, and then remove them into the greenhouse. As the plants advance in growth, and the roots appear through the bottoms of the pots, I remove them into larger-sized pots, repeating it if required until the blossoms appear. I use liquid manure water, at all times, to the plants. Antholyzas, Watsonias, Lachenalias, Sparaxises, and Tritonias, flourish under the same mode of cultivation.

CULTURE OF MOSSES AND LICHENS.

A PAPER on this interesting subject by Mr. James Donald was read before a late meeting of the Regent's Park Gardeners' Society, of which

the following is an abstract. The culture of these plants is a pleasing object, and many of them are comparatively easy; for example, the genus *Marchantea*, all grow and flower freely in cultivation; many of the *Jungermannias* also grow and flower freely in a house; and we had for some years a plant of that pretty and rare *Cryptogama Bryum roseum* growing in a pot in a greenhouse. Mr. Donald observed:—

“ I regret the absence of these interesting members of the vegetable kingdom in our botanical gardens, not even a square yard of ground being bestowed upon them amidst all the waste and grandeur around. After gazing upon huge plants, what an agreeable change would it not be to turn to a collection of Mosses in a shady corner, all correctly named. As a proof of their easy culture, it is only necessary to call attention to the difficulty of eradicating them where troublesome and out of place. Moist shady places in general are the situations which nature has provided for them; and if success is wanted, her rules must not be deviated from. I believe there is a collection of Mosses still in existence at Chatsworth; and I have heard, from an eye-witness, that they are grown at Edinburgh, under the stage of a greenhouse, in pots, and are looking very well: those at Chatsworth are grown upon rock-work. Pots are to be preferred, for two reasons,—water can be more judiciously given; tender varieties, liable to damp off in winter, can be removed to airy situations and attended to.

“ A low rustic house, built for the purpose on a north wall, or shaded by trees, where they could be protected in severe weather, is the best situation for their growth; this building can always be kept clean, and accessible even in winter. Fire heat must be withheld; this would induce Mosses to produce leaves instead of fruit, by which annual species are propagated. Keeping them too close would have the same effect, consequently the weather must be very bad to prevent air being given.

“ The soil for potting must be varied according to the nature of the species. They are found upon loam, peat, sand, stones, or bricks, wood, and some even grow in water. The mode of potting requires a fuller explanation. Such as *Polytrichum juniperinum*, which roots in soil, may be potted in the usual way; only, instead of a single plant, a tuft, or number, must be put together; this must be done when the plants are young. If possible, obtain a good portion of native soil with them, as they will succeed better in it than any compost you can make for them. For those which are found upon rotten wood and decayed vegetable matter, such as *Hypnum striatum*, *H. undulatum*, &c., rough turfy peat, mixed with pieces of half decayed wood, closely packed, answers the purpose: on this the plants should be fastened down; or, if possible, obtain the piece of wood, or whatever material they may be attached to, and fasten to the pot, without disturbing the roots. I have often found *Hypnum rutabulum* clinging to wood without any visible roots. Those found on stones must be treated in like manner, only substituting sandstone instead of wood. The aquatic species, *Fontinalis antipyretica* is an example: it should be grown in water, upon stones or gravel. *Hypnum ruscifolium* grows on stones in damp places, and will do best in water, but not covered with it. The various

species of *Sphagnum*, found in boggy places, and generally called White Moss, must be kept very moist; if kept under water, however, it soon dies. Mosses do not require potting so long as their drainage remains good, which is a point of great importance in their cultivation. I am decidedly of opinion, that this division of Cryptogamic plants might be grown in pots to produce perfect capsules, at least such as do so in a wild state. *Bryum ligulatum* and some other varieties, although plentiful, are rarely seen in fruit; the former is scorched up in summer, yet as soon as the autumn rains fall upon it, it springs again. It is a well-known fact, that *Tortula muralis* fruits in winter, and that its spores are all dispersed in spring. Now, when bricks are taken out of the kiln in summer, after being red-hot, and laid down in a damp place where *Tortula muralis* had never been seen before, this plant may be seen in the following winter peeping out of the crevices, as if the germ had withstood the power of the devouring element. Where did the seeds of these come from, or how were they preserved? Dr. Lindley, in his profound work, 'The Vegetable Kingdom,' p. 66, makes the following remark, which bears on the subject:—'The first green crust upon the cinders of Ascension consist of minute Mosses, they form more than a quarter of the whole Flora of Melville Island; and the black and lifeless soil of New South Shetland is covered with specks of Mosses struggling for existence. How they find their way to such places, and under what laws they are created, are mysteries that human ingenuity has not yet succeeded in unveiling.' From this it would appear that Mosses were the first inhabitants of our globe, at least on dry land, and that they first began to pave the way for the existence of man.

"With regard to the propagation of this group of plants, no proper directions at present can be given: one thing is certain, they must be produced from spores in the first instance; and where perfect capsules are found young plants may be relied upon. There are some species, such as *Hypnum proliferum*, which, if the branches are divided, will root like a *Lycopodium*. To secure an ordinary collection, plenty will be found propagated by the hand of nature within twenty miles of London.

"Lichens which can be cultivated are those found on the ground,—*Bæomyces*, *Peltidea*, *Scyphophorus*, and some species of *Citraria*. Those upon trees and stones are more difficult, especially the former; the latter, when removed on the stones to which they are attached, will live only for one season. I have kept *Scyphophorus paxidatus* and *S. cocciferus* in pots for two years, potted in lime rubbish, scraped off an old wall, where they were found. This wall was shaded in summer by fruit trees, and after the fall of the leaf it was exposed to the sun; here the plants remained, without receiving so much as a drop of water, excepting what they obtained from the clouds."

PLUMBAGO LARPENTÆ.

WILL you allow a few remarks on this calumniated plant? Every person conversant with decorative gardening is but too well aware how

desirable are masses of blue, or any of the delicate approaches to that colour which the atmosphere seems to monopolise, and which are yet so necessary to complete the *tout ensemble*. The very promising accounts given of *Plumbago Larpentæ* by Messrs. Knight and Perry, who "sent it out," (as the phrase is,) and by the leading floricultural journals at the period of its introduction, very generally led us to believe that the void was not only to be filled up, but in a manner that would put the fields of azure blue above us to the blush; hence many became possessed of the plant, taxing their imaginative powers largely as to the effect it would produce; and as these sanguine ones were almost necessarily to some extent disappointed, they now as generally condemn the plant as "worthless," "not good for anything," &c. Now, while I admit having seen this plant in the hands of some of these noisy ones in a wretched looking state, I know instances in private establishments where it is now a gem of perfect beauty: these I could readily particularise were it proper to do so; but such a course is unnecessary, as I have this day seen at Messrs. Knight and Perry's Nursery, in the King's-road, the original plant, of which, speaking cursorily, I should say it has several hundred flowers on it expanded, standing conspicuously forth from its lovely green foliage, and forming altogether an object resplendent with beauty. Those who doubt the desirability of cultivating this charming plant should see the specimen I allude to. I can promise them much gratification therefrom, and will answer that their conviction of its desirability as an autumn plant for the conservatory, or for almost any conceivable situation, will be complete. *E. B. R.*—(*Gardeners' Chronicle.*)

BRITISH FLOWERS.

THE study of our native flowers affords a rich enjoyment to all who give it attention. There is such a never failing fund of variety to occupy the mind that the interest increases with the pursuit. I have made large collections of many of the most beautiful, and introduced them into my grounds, and have endeavoured to cultivate them so as to improve their growth and floral display, and with a view of hybridizing some of them with our introductions from other countries, and my attempts have been very successful.

The plants I have already are too numerous to describe in this communication, but I will send it for another. I have, however, the well known wild HYACINTH, *SCILLA NUFANS*, or BLUE BELLS, congregated into a large mass, under the shade of a few trees, near to my house, and its profusion of beautiful blue flowers is the admiration of all who see them. Some have been impregnated by the Dutch Hyacinths, and from the progeny I have a pure white, a dark blue, a red, a rose, a cream colour, and a light blue striped with dark. These I have introduced into the flower-beds. I continue my pleasant task in hybridizing this lovely tribe, and I doubt not but still greater novelties will be obtained.

VERONICA CHAMÆDRYS is another plant I have introduced to a con-

siderable extent, and its lovely blue flowers adorn the sides of a long walk in the pleasure grounds. I have had several of the finest of the garden species grown with this, and have obtained some seed by cross impregnation; the plants have not yet bloomed, but I hope to have the handsome flower of the *V. Chamædrys* upon the long spiked species of the flower-garden. As soon as my hybrid plants bloom I will send you the result.

DIGITALIS PURPUREA, THE FOXGLOVE.—This noble flowering plant, the richest ornament of our woods, now grows abundantly in my ground, upon a sloping bank shaded with large trees, and is each spring and summer richly adorned with spikes of these charming flowers. I have obtained some very handsome varieties by impregnation; I have white with dark spots inside, cream colour with purple spots, flesh coloured, lilac, pink, buff, and other colours and shades; all are very pretty, and some peculiarly handsome. I am most amply repaid for the attention given.

EARLY CROCUSES.

THE old method of cultivating Crocuses and other dwarf bulbous plants in pots, for decorating greenhouses and drawing-room windows, has been greatly improved upon by fashionable floriculturists of the present day, who have contrived an agreeable substitute in a species of ornamental receptacle, capable of admitting a larger quantity of plants, and showing them to better advantage.

We have frequently seen a sort of saucepan-shaped flower-pot made use of, with a convex bottom, destitute of edges, freely perforated with holes, and placed in an inverted position; but this is objectionable, because its appearance is anything but pleasing, and there is a difficulty in supplying the plants with water. The shape best adapted for the object is obviously a pyramidal one, with a flat open space at the top, and a rim half an inch broad, inclining outwards, with another rim at the base, about the same distance below the bottom of the frame, to allow the water to drain off readily. The material we should employ would be wood, because this can be manufactured into any desired form; and although less durable than earthenware, it can be painted so as to last a considerable time, and may be renewed at pleasure at a very trifling expense. The whole of the sides and top should be bored with round holes, about an inch apart, and half an inch in diameter; and the bottom must be made to slide in and out as may be required. The size can be varied from four to six or eight inches diameter at the base, and a proportionate height. In painting them a green colour is to be chosen, as being more lively and natural.

November, or as soon after as possible, is the best period for planting Crocuses or other small bulbs, and a sandy loam is the most proper earth. If the varieties be judiciously disposed with regard to their colour, they will constitute a most brilliant and alluring display. Where the common flats which are placed beneath flower-pots, cannot conveniently be used, a small drawer lined with tin or zinc may be made at the bottom, to catch all the water administered as it drains through.

The plants must be placed in a light situation, watered daily, or once in two days, though not very abundantly, and suffered gradually to wither about two months after the flowers fade. We commend the adoption of such receptacles to all who feel an interest in watching vegetable developments, or who seek to banish the idea of winter, and anticipate the charms of spring.

PLANTS FOR AUTUMN, WINTER, AND EARLY SPRING ORNAMENT.

THIS class of flowering plants are peculiarly valuable: I need not therefore apologize for soliciting the insertion of any remarks for their successful cultivation, and therefore first remark upon the *CINERARIA*. I well remember when, about forty years ago, for the first time I bloomed the *Cineraria lanata*, and subsequently the *C. amelloides*, how much I was delighted with them. Successive periods, however, and more especially during the last ten years, an increasingly beautiful race has been raised, and now there is not an equal for winter and spring ornament for the greenhouse and airy sitting-room. They are easy of cultivation, and always profuse bloomers; also of almost every shade of colour: and an additional advantage exists in their cheapness.

To grow them successfully, as soon as the plants have ceased blooming, and the season admits, say in May or early in June, turn them out of the pots into a compost of loam and leaf mould, equal portions. This bed should be at the north side of a low hedge, &c.; attention will be necessary as to duly watering them, &c. Such plants as are required for blooming early should be taken off in August by careful division, be potted singly in equal parts of leaf-mould, peat, and loam, having the pots well drained. Successive pottings should be made up to the middle of October, and after potting having them kept in cool frames, &c., and being taken into a gentle forcing-house, greenhouse, sitting-room, &c. By judicious attention a succession of bloom may readily be had from October to July, and, if desirable, through every day in the year. They require but little attention, and are easily increased. Much attention has been given to obtain flowers of an improved form, and each successive season displays a marked improvement. Many of them, too, are fragrant. They deserve to be in every collection of in-door plants.

PRIMULA SINENSIS; CHINESE PRIMROSE.—There are now several varieties added to the original species, both single and double kinds. All are beautiful; those with fringed edges are peculiarly interesting. These, too, by a proper successive propagation, may be had in bloom all the year; but they are more valuable for autumn, winter, and spring. For plants to bloom well in autumn, sow seed in pots in March; place it in slight heat; pot them off singly into large sixties, when strong enough, into a compost of leaf-mould and loam, equal parts; place them in a frame having a north aspect, or otherwise shaded by a low hedge, &c., and the pots to be plunged in coal-ashes,

&c. When the pots are filled with roots, the plants must be re-potted into 48's or 32's, according to necessary requirements, and have a compost of leaf-mould, old well-rotted cow-dung, and good loam, in equal portions. The pots should be well drained. The compost must not be sifted. The plants may be removed from the shady situation to the greenhouse, sitting-room, &c., as desired for blooming, so that all are taken into shelter before frost. They delight in having shade, whether they be out of doors or in the greenhouse; and they require no higher temperature than the greenhouse. By sowing seed thinly, and at different periods, duly potting off and re-potting, a continuous bloom may be had, and will amply repay for any care bestowed.

MYOSOTIS PALUSTRIS, THE MARSH FORGET-ME-NOT.—This lovely British plant, when grown in spongy loam, and kept duly moist, blooms beautifully through autumn, winter, and spring. The plants should be potted off in April, and be planted in a ditch similar to what they usually grow in. They must not be allowed to bloom at the early period of the season; but the flower heads be 'pinched off at an early stage. The plants may be taken from the ditch to the greenhouse, or frame, as required; and by due attention will amply repay by its modest beauty for every care.

CHRYSANTHEMUMS.—This charming tribe of flowers, of almost every colour and form, scarcely need be recommended. They fill up a vacuum in the flower-garden and greenhouse that no other tribe can equal; and each successive season presents additional beauties to previous ones. Several excellent articles on their culture have appeared in this Magazine, and to which I refer your readers. The principal points to be realized are to have vigorous bushy plants. This is to be obtained by stopping the leading shoots about June or July, in order to induce the production of side shoots, a due proportion of which should be kept, stripping off the extra ones; and by growing the plants in equal portions of loam, well-rotted manure, and a portion of sand; also giving liquid manure occasionally. When the flower-buds are too numerous they should be thinned, so that the flowers may be free and vigorous. A collection of the best kinds when in bloom, with a due mixture of colours, is one of the loveliest sights that adorn the greenhouse. Dwarf plants are readily obtained by layering the shoots, as directed by a writer in the last volume of this Magazine.

GARDENING IN INDIA.

THE establishment of public gardens in a country like India, with its population, and abounding in tracts of land of the most fertile character, cannot fail to be of much practical value, not only in diffusing a taste for the most healthy employments, and affording valuable lessons to those about to form private gardens of their own, but as a model dispersing knowledge of the more suitable plants for cultivation, and the true method whereby the process of gardening is improved. We have read with no small degree of pleasure some extracts from private letters of Dr. Hooker in the *Journal of Botany*, giving an account of the

Horticultural Gardens at Bhaugulpore, a town situated on undulated and hilly ground south of the Himalaya. These gardens deserve our notice, were it only to record the energy and perseverance of Major Napleton, by whom they have been established.

“To me,” remarks Dr. Hooker, “the most interesting object in Bhaugulpore was the Horticultural Gardens, whose origin and flourishing condition are due to the activity and enterprise of Major Napleton, commanding the Hill-rangers. The site is remarkably good, consisting of fifteen acres, that were four years ago an indigo field, but now a really smiling garden. About fifty men are employed, and the number of seeds and vegetables annually distributed is very great. Of the trees used for shade and for ornament the most conspicuous are the Tamarind (of which one superb specimen stands conspicuous near the seed-room), *Tecoma jasminoides*, *Erythrinas*, *Adansonia*, *Bombax*, *Teak*, *Banyan*, *Peepul*, *Sisso*, *Casurina*, *Terminalias*, *Melia*, *Bauhinias*. Of introduced species for ornament or use, English and Chinese flat peaches (pruned to the centre to let the sun in,) Mangos of various sorts, *Eugenia jambos*, various *Anonas titchi*, *Loquat* and *Lougan*, *Oranges*, *Sapodilla*; apple, pear, both succeeding tolerably; various Caubul and Persian varieties of fruit trees; figs, grapes, guava, apricots, and jujube. The grapes look extremely well, but require great skill and care in the management: they form a long covered walk, with a row of plantains on the west side, to diminish the effects of the hot winds; but even with this screen, it is inferior to the opposite trellis of grapes. Easterly winds, again, blight them and other plants, by favouring the abundant increase of insects, and causing the leaf to curl and fall off; and against this evil there is no remedy. With a clear sky the mischief is not great; under a cloudy one the prevalence of such winds is fatal to the crop. The white ant, too, attacks the stems, and is best destroyed or checked by washing the roots with lime-water, yellow arsenic, or tobacco-water.

“The ornamental shrubs are *Oleander*, *Bougainvillea*, *Tabernæmontana*, *Ruellia*, two species; *Lantanas*, *Passifloras*, of sixteen species and varieties; *Verbenas*, *Ixora*, *Dracæna*, *Durantas*, *Quisqualis*, *Pergularia*, and *Convolvuli*, *Hiptage*, *Plumbago*, eleven kinds of *Roses*, *Jatropha*, various *Euphorbias*. *Crotons* and *Poincettia*, *Thujas*, *Abutilon*, and other *Hibisci*; *Cassia Fistula*, *Jasminum*, *Lagerstræmia*, *Buddlea*, *Clerodendrons*, and such like. Of what we should call hardy perennials, annuals, and bulbs, I saw *Maurandia*, *Lophospermum*, and *Thunbergias*, fine *Petunias*, *Sweet William*, *Mignonette*, *Pelargoniums*, *Pentas carnea*, several *Aristolochias*, *Escholtzia*, *Lupines*, *Clarkia*, *Schizanthus*, *Balsams*, *Violets*, *Clematis*, *Cannæ*, *Strelitzia*, and various *Marantaceæ*, numerous *Amaryllideæ*, and *Lilies*, *Erysima*, *Iberis*, *Stocks* and *Wallflowers*; *Clerodendron*, *Nyctanthes*, and many species of *Vitex*. These form the bulk of the garden: many of them being the same as we have at home, others replacing our *Fuchsia*, *Rhodendrons*, *Azaleas*, *Andromedas*, and such like natives of equally damp or temperate climates, to which the scorching sun at one season, or the periodical rains of the other are inimical.

“Numerous *Cercalia*, and the varieties of *Cotton*, *Sugar-cane*, &c.,

all thrive extremely well ; so do many of our English vegetables. The cabbages are sadly hurt by the green caterpillars of a white *Pontia* ; and so are *Peas, Beans, &c.* *Strawberries* are now (April) but in flower ; and *Raspberries, Currants, and Gooseberries* will not grow at all.

“ The manufacture of economic products is not neglected. Excellent coffee is grown ; and arrowroot, equal to the best West Indian, is prepared, at 1s. 6d. per bottle of twenty-four ounces—about a fourth of the price of that article in Calcutta.

“ The seed-room, a well-lighted and boarded apartment, measuring forty-six feet by twenty-four, is a model of what the arrangement of such buildings should be in this climate. The seeds are all deposited in dry bottles, carefully labelled, and hung in rows, round the apartment, to the walls ; and for cleanliness and excellence of kind they would bear comparison with the best seedsman’s drawers in London. Of English garden-vegetables and varieties of the Indian *Cereal* and *Leguminous* plants, *Indian corn, Millets, Rice, &c.*, the collections for distribution were excellent ; and I am promised samples of all these, as well as other economic products of the districts, for Kew, by my liberal friend Major Napleton.”

THE FLOWER GARDEN GAY IN SPRING.

BY CLERICUS.

AFTER the severity of winter, how cheering it is to have a profusion of what are termed spring-flowers to produce a display near to the dwelling-house. This object is readily obtained, and the bulbous tribe of flowers compose a principal portion in its composition.

CROCUS.—What a variety there exists *now* in this charming family ! Its yellows, purples, whites, blues, lilacs, and others in twenty varieties of shades, or plain, or with blotches and stripes, are admired by everybody.

SNOWDROP : and this first harbinger contains its original single pearly drop as well as the double flowered, of three varieties.

THE WINTER ACONITE, with its golden starry-looking flower, produces an interesting contrast with any other of the season, dazzling in the sun-beams.

EARLY HYACINTHS are a chief ornament, and are very readily grown in the open bed. The variety is almost innumerable, all lovely, whether single or double flowers. They grow vigorously in a compost of good loam, very old rotten cow-dung, and leaf mould, with a good sprinkling of sand. The bottom of the bed must have four inches of drainage, brick-bats, &c. ; upon this, twelve to fifteen inches deep of the compost. If planted in November, they will probably require a little protection if severe weather occur after the leaves appear. A good plan, however, is to plant them in pots, keep them in a cool frame, and early in April, or before, turn them out entire, into the bed, or in large patches in the border, to bloom. Of course, in both cases the bulbs require being taken up when ripe, and saved for another season. It is said the bulbs will only do well for one season. I have

bloomed the same bulbs, for the last twelve years, and they never were better than the last season. I usually add a few new ones each year. Growing them in pots and turning out in spring I most approve.

The poet sung of the lovely blue :—

“ Child of the spring, thou charming flower,
No longer in confinement lie,
Arise to light, thy form discover,
Rival the azure of the sky.”

ANEMONES.—The single flowered varieties of crimson, scarlet, white, blush, purple, rose, and blue are alike beautiful, and when grown in all their varieties together, nothing can be prettier in full sunshine. They are readily cultivated, and cheap to obtain. The attention in raising seedlings is very interesting; I have raised thousands, and every one handsome, there are no others. The splendid double scarlet, and one hundred other varieties are also highly ornamental. Now any of the above appear well in rows or patches, along the sides of walks, or in *small* sized beds.

The **NARCISSUS** family is numerous too; and how charming is the gay golden Daffodil! The sweet single kinds, the white red-eyed pheasant, and the little pale yellows, with the fine double white, and twenty others, merit a place in every garden.

TULIPS.—This universally admired tribe comprises almost an incalculable number of varieties. The early flowering too are numerous, the named ones consist of more than seventy very distinct kinds. I have grown nearly all, and the following are the best: Alida, red and white. Canary-bird, bright citron. Cîrêsse Incomparable, cherry red. Duc de Nemours, red and yellow. Duc de Orange, rich orange. Duke of York, mulberry. Globe de Rigo, striped purple. Golden Standard, red and yellow. Lac von Asturêen, white and crimson. Maria de Medicis, brown and yellow. Purpur Kroon, purple. Rex rubrorum, scarlet. Tournesol, orange and red. White Van Thal. Yellow and red Van Thal. Rose ditto, and new golden ditto. Prince du Ligne, citron.

RANUNCULUSES.—The Turbans are very showy early flowers, of this class are crimson, golden, scarlet, sulphur, white and violet. Nothing so dwarf can be more showy.

FRITILLARIAS.—These are not the most showy, but are highly interesting flowers, beautifully chequered purple and red. Their pretty drooping bell-shaped flowers are always admired.

SCILLAS (Squill).—These are lovely dwarf flowers, the blue ones especially pretty. Their star-like form, with golden anthers, have a nice effect.

DOG'S TOOTH VIOLET.—The purple, white, and yellow, are alike pretty.

CROWN IMPERIAL.—This noble tribe now consists of twelve distinct single and double kinds, red, orange, rose, yellow, striped, and others. All charming flowers.

Now all the above hardy bulbous plants may be had cheap of the seedsman, and may still be planted. They are worthy of adorning

every flower garden. In my next paper, for January, I shall give a descriptive list of all the showy spring flowering perennials. I would just add, however, do not omit to plant some of the charming *Gladiolus*, and bulbous *Iris*.

BRIEF REMARKS.

VICTORIA REGIA.—This celebrated noble Water Lily has bloomed for the first time in this country at Chatsworth Gardens, on November 8th. The flower and a leaf were presented before Her Majesty and Prince Albert at Windsor. Another flower expanded on the 17th of November.

For general remarks on the history of the plant we refer our readers to the Number of this Magazine for January, 1847, where a flower of it is figured.

The plant which has bloomed at Chatsworth was obtained from the Royal Gardens of Kew last August, and by very skilful treatment has thus early been brought into bloom. The manner of its treatment at Chatsworth is thus given in the *Gardeners' Chronicle*.

“In a hothouse of sufficient dimensions, a tank was constructed 3 feet deep and 12 feet square, warmed by hot water circulating beneath. To this was added a ledge all round, 9 inches deep, $3\frac{1}{2}$ feet wide, and heated by a triple row of small lead pipes, through which hot water circulated. By these means the tank was rendered 19 feet square, with a deep centre and shallow sides.

“In order to keep the water in motion, a small wheel was added at one corner; over that wheel water was caused to drop continually with force enough to keep the wheel constantly revolving; the water thus continually flowing into the tank was carried off by a small pipe in one of its corners near the bottom. In this way were secured the important advantages of the water being so often changed that it could not become stagnant, together with the ceaseless gentle agitation. Nothing could be more like the natural state of a tranquil river. By the heating apparatus its temperature could also be regulated with facility. The thermometer has generally indicated 85° .

“In the centre of the tank was introduced a hillock of earth, consisting of *burnt loam* and peat. To the burning of the loam Mr. Paxton attaches great importance; and this agrees with the daily experience of those who employ burnt or charred materials in gardening. The physical condition of soil is much improved by the process, and the weeds and insects are destroyed. Mr. Paxton is also of opinion that the removal by fire of all matters ready to enter into fermentation or rapid decomposition, when in contact with water heated to 85° , was in itself no inconsiderable cause of the success of his experiment; in addition to which it preserved the water perfectly translucent.

“On the hillock thus prepared, the *Victoria Lily* was planted on the 10th of August; and on the 1st of November the first flower bud appeared.

“The largest leaf yet produced is nearly 5 feet in diameter; the

largest flower, $10\frac{1}{2}$ inches in diameter. The latter appears to be the size of those seen by Bridges; Schomburgk, however, says that he saw flowers as much as 15 inches in diameter; and D'Orbigny says upwards of a foot. The leaves, too, although larger than any mentioned by Bridges, are inferior in magnitude to those found in Berbice, one of which measured 6 feet 5 inches in diameter."

A child three years old stood upon one of the leaves at Chatsworth, and was supported by it. A circular piece of wood was first placed upon it to distribute the weight equally. The wood weighed fifteen pounds, and the young lady forty-two, in all about sixty pounds. The flowers emit a very delicious fragrance, varying with its age, it is described to be, first like the Pine Apple, then the Melon, and lastly the Cherimoya, but in fact, it is added by Mr. Bridges, the discoverer, it is so delicious as only to be peculiar to itself. It is said to bear seed freely, and thus its very general cultivation may soon be expected, wherever there is a hothouse, or other suitable erection at command. It flourishes best in the full sun. No doubt many of our readers have seen the very noble plants flourishing so admirably in a large tank at the Royal Gardens of Kew.

ON PLANTS FOR CONSERVATORIES, GREENHOUSES, FLOWER GARDENS, &c.—Allow me to suggest to you the utility of occasionally inserting in your numbers some plans for ornamental conservatories and greenhouses, together with the ground before it, laid out as a flower garden. If the elevation, dimensions, and estimate for building accompanied the plan, no doubt but it would be most useful to many of your well wishers, and of whom I happen to be one. [We shall begin with our next number.—*Conductor.*]

TO DESTROY ANTS.—The most effectual method of destroying ants that we have ever tried, is the use of the following mixture:—Take equal quantities of loaf sugar, arsenic, and finely powdered dried bread; rub them together in a mortar, till they are very well mixed. This should be kept in a bottle, in readiness for laying small quantities near their haunts. Great care is requisite in the use of this mixture, for it is injurious to vegetable as well as animal life.

POINSETTIA PULCHERRIMA.—Is fully deserving the most earnest attention and careful management, in order that it may be so grown as to produce its flowers as perfect in our stoves as those grown at Philadelphia, where it is stated, the beautiful scarlet whorls of bractæ which terminate the branches measure as much as twenty inches across, and are equal in colour to the finest tints of *Rosa Sinensis*.

It is decidedly a splendid feature among our ornamental plants, and, from its habit, we feel confident it may be cultivated with the application of the common treatment given to stove-plants. Let it be kept in rather a close atmosphere in the stove or warm pit frame, &c. along with other tender plants, all of which are now and then syringed over when the weather is fine, in order to prevent the attacks of insects or the accumulation of filth; in the day, if fine, a free circulation of air be kept up; and at night the temperature of the house average from 65 to 70 degrees. The soil which suits well, is sandy loam; in potting, care must be taken to ensure a good drainage, and as soon as

the roots reach the inside surface of the pot, an additional shift be *immediately* given, so that the growth is never checked and the plant in consequence is kept continually progressing. It requires a great supply of water at the roots. It is a beautiful plant.

ON A SUCCESSION OF FLOWERS.—You, or any of your correspondents, would oblige me (and many others whose gardens resemble mine) if you would favour me with the information required below. My garden is small, and consists of little beds cut out in a grass-plot in fancy forms. I much wish to have a good succession of flowers in the lovely spring, and brilliant summer, and the mature autumn; but do not know how to manage it. I appropriate a bed to each sort of flower, preferring that to mixing various kinds. I have twenty of these small beds; the outside borders are much shaded by large evergreen shrubs. What are the best flowers for my small beds, commencing with the spring? when should they be planted? when removed, and to what situation? by what succeeded for the summer when removed, &c., and the same for the autumn; and when one set are planted, what is to be attended to in the bringing on the succeeding flowers.

THE ECCREMOCARPUS (Answer to *Flora*).—I beg to inform *Flora* that I have raised several strong plants of the *Eccremocarpus scaber* from the *preceding* year's seed, sown in April on a slight hot-bed; but the seed is very shy in coming up, but it must be covered with a little moss, so it be kept moist till the plants are up. I find, however, that the easiest mode of raising this delicate climbing plant is by cuttings of the same year's shoots, planted in August under a small hand-glass, in a shady border, where they strike root readily, and require to be afterwards potted in forty-eights or sixties, and housed during winter.

ON THE ECCREMOCARPUS SCABER.—In answer to a query respecting the seed of the *Eccremocarpus scaber*, I beg to state that about the middle of March, I filled a small box with light rich mould, and sowed some seeds of the *Eccremocarpus* gathered during the previous autumn. I found them very uncertain as to the period of germination, for though some grew and were ready for transplanting in a month or six weeks, others remained dormant for two or three months, and some even till autumn. I placed the box in a slight heat, and as soon as the young plants attained sufficient size, I potted them singly into small pots, and when these were filled with roots, I transplanted the ball entire into the open ground, where they flowered the same season; they were cut down late in autumn, and to-day (March 19) I have been transplanting some of them which have stood this winter without any protection, and find they have made very strong roots, and promise to become fine plants for this season.—*Meta*.

BENTHAMIA FRAGIFERA.—In one of our volumes we figured the fruit of this showy and ornamental Himalayan evergreen. The first plant raised in this country was in the garden of J. H. Tremayne, Esq., at Heligan, in Cornwall, from whence we received some of its large and beautiful fruit, along with some plants. The parent tree was, in September, 1848, twenty-two feet six inches high. The circumference of the stem, at five feet from the ground, was one foot nine inches; and at three feet, one foot eleven inches. A younger tree, handsomely

clad with branches and foliage to the ground, was twenty-one feet high. In Cornwall, Devonshire, and South Wales it flourishes in the open air, and we doubt not will do so in most other parts of this country, if planted in a dry soil and elevated situation, but having protection against the north and east winds. It is very handsome, blooming in profusion in summer and bearing abundance of fruit in autumn. The fruit very much resembles a strawberry about an inch and a half or more across. It flourishes in any common soil of the garden, and deserves universal introduction into the shrubbery.

TORENIA ASIATICA.—This beautiful flowering plant is very liable to perish during the winter season. When placed in the greenhouse, it must have a temperature warm enough to keep it growing. If the greenhouse will not effect that it might be placed inside the window of a warm sitting-room, where we have seen it flourish admirably through winter. Placed in the stove it thrives, and blooms in profusion at all times. We repeat it must be kept growing.

CULTURE OF DROSERAS (Sundew) AND PINGUICULAS (Butter Wort).—The Droseras very much resemble the *Dioncœa Muscipula* (Fly-trap of our hothouses). They are natives of our own country, growing in bogs, as are the Pinguiculas too. Few little plants are more interesting and beautiful when in flower than the latter when seen in the sunshine, with their bright green leaves all a glitter with their pearly studs. All who behold both the Droseras and the Pinguiculas admire them. I have long grown them in pots very successfully in the following manner:—

Three or four plants are placed in a pot of five inches deep, with some pebbles in the bottom, and over them a piece of sphagnum, above which the pot is filled with very fine peat. The use of the sphagnum is, that, whether dead or alive, it enlarges or contracts, by every change of amount of moisture in the pot, and thus always keeps the peat from cohering into a clammy mass, which otherwise it is apt to do.

Instead of being shaded, as generally directed, the plants are exposed to the full blaze of sunshine; and it is beautiful to see the leaves of the Drosera, some dilating themselves to the warmth and light, and others contracting on and imprisoning some “flutterer in the beams,” that, in an evil moment, has been tempted by the nectar of the dewy leaves.

The pots are kept plunged to within $1\frac{1}{2}$ inch of the top in water, during the whole summer; and, on the first appearance of frost, are removed to a dry airy frame, and given less water each day, until, by mid-winter, they are dry; in which state they remain until they begin to show signs of vegetation, when they are removed again to their summer quarters. If left exposed to the open air, during the winter, the roots are invariably pushed out of the ground by frost. With this treatment, three small plants, in one season, will completely fill a pot of the size mentioned.—*An Amateur.*

THE FLOWER-GARDEN SPRING ORNAMENTS.—What sight can be more enlivening than to see the Snowdrop, Crocus, Aconite, Jonquil, Early Tulips, Hyacinth, Anemone, &c., pushing themselves through their winter covering, and successively displaying their lovely hues? Now is the time of preparation for the spring display. In planting,

arrangement must be made both as to height of growth and to give the best contrast in colours, more especially with the Crocus and Hyacinth. A small bed of blue Crocus might be surrounded with rich yellow. A bed of the whites, with blue, &c. Or, if planted in patches, the best complimentary colours should be adopted. By a proper selection and arrangement, a combination of beauty and striking display may be effected.

IRIS PAVONIA (The Peacock Iris).—Last autumn I bought a bulb of this most lovely flowering plant, and its beauty, I think, exceeds all I ever saw before in a flower. The three large petals are streaked underneath with blue, and above they are of a pure white, with a most vivid eye-like spot at the base of each petal; one might almost fancy that nature had at first intended to make the petals blue (as in so many others of the same tribe), but afterwards changed her plan and reserved all the colouring matter to be concentrated, as it were, in one glowing spot of small dimensions, but intense brilliancy.—*A Country Curate.*

PROPAGATION OF THE CHINESE AND INDIAN AZALEAS.—By cuttings is the best method, it is readily done and the most successful. In propagating by cuttings, the slips may be taken off at any time before the plant has matured its growth; but if the cuttings are taken just at the time when the young shoots are assuming a brown colour, and the wood is about three parts ripe, the chances of success are much increased; indeed, with the ordinary management, rendered certain. In selecting the cuttings make choice of those of medium growth, and cut them about an inch and a-half long; prepare pots in the usual way with plenty of drainage, and a layer of peat and some sand; insert the cuttings, and cover them with a bell-glass. If the cuttings, at the time they are put in, are in a growing state, they may be placed at once in a gentle, moist heat; but if the wood be nearly ripe it will be advisable to place the pot in a comparatively low temperature until the cuttings are callosed over. They will strike in six weeks, and may then be potted in small pots.

SELECT DWARFISH HARDY EVERGREENS.—I beg to recommend the following evergreens to a Lady Enquirer:—*Cistus ladaniferus*—white flowers, with a purple centre; about 1s. Chinese Privet—white; about 1s. 6d. *Arbutus unedo*—white; about 1s. 6d. *Scarlet arbutus*—shaded with red; about 2s. 6d. *Rhododendron ponticum*—purple; about 1s. (bog earth.) *Daphne pontica*—yellowish; 1s. These are the largest on my list. The next in size are: *Kalmia latifolia*—pink crimson; 2s. 6d. (bog.) *Daphne collina*—lilac; 2s. 6d. *Rhododendron dauricum*—bright purple; 2s. 6d. (bog.) *Cistus creticus*—rose purple; 1s. 6d. *Cistus villosus*—fine red; 2s. *Cistus lusitanicus*—bright purple; 2s. 6d. *Cistus halamifolius*—yellow; 2s. 6d. *Cistus algarensis*—yellow; 2s. *Cistus libanotis*—white; 2s. *Erica arborea*—white; 1s. 6d. (bog.) *Erica australis*—pink purple; 1s. 6d. (bog.) *Erica Mediterranea*—lilac; 1s. 6d. (bog.) In the front there might be: *Kalmia glauca*—pink and crimson; 1s. (bog.) *Daphne Neapolitana*—bright lilac; 2s. 6d. *Rhododendron hirsutum*—crimson; 1s. (bog.) *Menziesia polifolia*—purple; 1s. (bog.) *Daphne gnidium*—white; 2s. 6d. *Polygala chamæbuxus*—white and yellow; 1s. (bog.) *Daphne*

neorum—crimson; 1s. 6d. Helianthemums, of all colours—pink, red, yellow, buff, puce; at about 1s. each. These plants are all handsome and hardy; and may be procured from any respectable nursery man.

TREATMENT OF AMARYLLISES.—My twenty years' practice as an amateur grower of Amaryllises instruct me that most of them make root at the end of summer, and it is in the fibres then made that the deposit of sap takes place to supply the future flowers. I therefore shift my plants entire into fresh pots when they appear to be in full vigour, or still growing, say in June or July, or earlier if required; by this treatment I never fail to flower my bulbs vigorously. I then take off any offsets, which can be readily done. I plant them in strong loamy soil, not sifted, and have a free drainage. When the tips of the foliage turn brown, I withhold water and gradually dry them, keeping them so till the flower stems appear, when water is given, and re-pot as above stated. If the above method be pursued, the result will be invariable satisfaction, and the flowers will be far more vigorous than are usually to be seen.—*W. H.*

FLOWERING OF THE RHODODENDRON.—I have long proved that in all sheltered situations, where a moderate degree of shade is afforded, and where the soil is of a light sandy nature, the Rhododendron will grow and flower well, without any peat earth whatever; provided the ground is properly prepared, by trenching and breaking the surface, so that all the grass and vegetable matter be properly mixed. I deprecate the too general practice of pitting and planting without the ground being previously well trenched. It may be proper to state, that the Rhododendron is to be seen growing here very luxuriantly, in banks of very strong clay; in this case, after the ground had been well trenched and broken, I had pits made according to the size of the plants, and a portion of peat earth placed under and around each plant (say one or two barrowfuls, according to the size of the plants.) Notwithstanding my having filled the pits with peat earth, I am satisfied that Rhododendrons, and other American plants of the same tribe, usually grown in peat, will grow and thrive even in clay, and perfectly well in loam, if it be trenched, and a portion of leaf-mould and of the scrapings of roads be mixed with it; the plants being planted in the neighbourhood of large trees, so as to be benefited by their shade. I have planted American shrubs with success at all seasons, but prefer from the second week in August to the end of December; always taking advantage of a mild day, and always giving, after the planting, a good supply of water. I would add, that the same treatment that I have recommended for Rhododendrons is here applied to *Kalmias*, *Azaleas*, *Andromedas*, *Vacciniums*, and *Cistus*—and to all with an equally satisfactory result.

I would recommend all who may wish to cultivate the Rhododendron *ponticum* extensively, to provide their stock of plants by raising them from seeds. The mode is a cheap one: and, besides the number of the plants which may be obtained by it, a considerable variety of kinds is acquired. In those which I have reared, the variety is almost endless, as to the shape, size, and colour. The seeds should be sown in February, upon a gentle hot-bed.—*An Admirer.*

THE BIGNONIAS.—I am afraid you will think me troubling you too much, concerning the cultivation of plants; but your Magazine is so entertaining, and has created such a zeal for flowers in me, that I cannot resist requiring it. Would some of your correspondents favour me with the best manner of cultivating that beautiful class of flowers, the Bignonias?

In the management of *Bignonia grandiflora* as a greenhouse climber, it ought to be kept in a light house, and if trained from the bottom to the top, the pot or tub in which it is placed should stand as high as the front stage for pots, and not be shaded or smothered up with other plants. By this means, the roots will be relieved from the danger of becoming saturated by an over supply of water, and the plant will soon be finely ornamented with a liberal profusion of bloom. Although a climbing plant it may readily be grown as a greenhouse shrub. Planted in a pot or tub of moderate size, and by judicious winter pruning, it will readily produce lateral branches when only three or four feet high, and each to bear a large panicle of blossom. To bring it to such a condition, dryness in autumn and winter, proper pruning, free access of light, and the removal to a slight distance of all plants that would prevent the solar rays from reaching the receptacle to which it is confined, are the essential pre-requisites. Each composed of ten or twelve of its spacious pendulous flowers, of which three or more expand simultaneously on every cluster, and remain open several weeks, must present a fine appearance.

It is occasionally grown out of doors trained against a south wall, &c., but the flowers are always of a dingy colour, so very different to rich coloured ones borne in a greenhouse conservatory.

ON BLOOMING AMARYLLIS JACOBÆÆ.—On flowering the splendid rich flowered *Amaryllis Jacobææ*, or (which I take to be the same) the *Sperkalia formosissima* of *Sweet's British Flower Garden*, he recommends planting it in the open border, which I have practised with success in the following manner:—In May, I plant my bulbs in a border of sandy peat and loam, in a sheltered situation, in which place they remain until September. I then take them up and dry them, taking care not to injure the roots. When in bloom, the flowers must be sheltered from rain or rough winds. I keep the bulbs in a dry room until the returning season for planting.—*Capensis*.

CULTURE OF THE CACTUS AND OTHER SUCCULENTS—During the past summer I visited, on several occasions, the most celebrated gardens in this country, and was surprised to see this interesting tribe of plants, especially the *Epiphyllums*, *Opuntias*, *Pereskias*, &c., of a dull brownish-green colour, instead of a full deep verdant green. I felt satisfied that the soil in which they were grown, a hungry poor yellow loam, was improper; for in a compost of the following nature, I have grown the same tribes for years in most vigorous health. I therefore gladly communicate it. Take equal quantities of very old blackish-coloured manure, and of lime-rubbish from old walls, to which add an equal part of good unctuous loam. A good drainage is given, the soil is pressed firmly around the stem at the time of potting, and is afterwards kept so. By proper attention to good watering at the growing

season the plants are always of a proper rich colour. The usual period of rest is of course essential to bloom successfully.—*Clericus*.

CARNATIONS AND PICOTEEES.—These lovely flowers are divided into several classes, and although well understood by the exhibitors, the majority of visitors at floral shows are unacquainted with the distinctions. A florist, therefore, sends the following description, which is indicated by the *colour* of the flowers.

Scarlet Bizarres; each petal being striped with two colours, scarlet and a dark maroon, on a white ground, varying in intensity in different sorts.

Crimson Bizarres; the stripes also consisting of two colours, but approaching in their tint more to a rose-colour and purple. In this class there is a subdivision, styled pink and purple, which are lighter and more lively in their shades.

There are three other classes, consisting of Flakes. Their colours are scarlet, rose or pink, and purple of various hues; some being many shades darker than others in each of the divisions, upon a white ground. After the flakes come the varieties called Picotees, with either spotted or striped *margins* to their petals, with white or yellow grounds. Of these there is a very great variety, and they may be classed under the heads of scarlet, red, rose-coloured, and purple. Formerly they were only shown in two classes, red and purple, without any reference to the extent of the colouring; but now each class is subdivided into heavy-edged, having the colour thickly laid on round the margin of the leaf, such are called in Lancashire *striped* Picotees, and light-edged where the colour touches the leaf in an unbroken delicate line, or as in Lancashire *feathered* Picotees.

SUPERB ROSES.—We scarcely need remark that all the best sorts of Roses are exhibited in competition at the London Floral Shows. From them we made selections of the very best, and also in looking over the collections in the principal Rose nurseries. We can strongly recommend to our readers the kinds we enumerate. A part of such list was inserted in the last October number, page 268, and the following are additional sorts. It now being the planting season we trust the selections will be useful to those desirous to possess the best kinds.

Perpetuals.—Geant des Batailles, brilliant scarlet crimson, large. Marquis Bocella, pretty blush. Robin Hood, pink. General Negrier, rosy-pink, fine form, and superb. Jeanne d'Arc, white, with a very slight tinge of flesh; the whitish perpetual rose, fine shape. Doctor Marx, carmine, large. Fulgorie, rich deep rose. Baronne Prevost, rose and pink, very splendid. Cymedor, brilliant red. Soleil d'Austerlitz, rich crimson. Madame Verdier, pinky blush, beautiful. Bouton de Flora, pale rose. L'Inflexible, flesh-colour. Duc d'Aumale, brilliant crimson. Augustine Mouchelot, rich vivid crimson. Aubernon, splendid deep crimson. Madame Guillot, beautiful blush. Standard of Marengo, bright crimson, shaded with scarlet. Madame Aimie, pale peach. The above will usually bloom from June to the end of November.

Bourbon Roses.—Acidalie, white, large, beautiful. Du Petit Thours, vivid crimson. La Gracieuse, bright pink. Proserpine, bril-

liant crimson. *Souvenir de Dumont d'Urville*, beautiful cherry red. *Madame Lacharme*, white, tinged with blush. *Madame Souchet*, blush, margined with red. *L'Elegante*, bright rose, mottled with lilac. *La Grenadier*, scarlet-crimson: the two last are very showy but not of the first-rate form. *Queen of the Bourbons*, fawn colour, tinged with rose. *Madame Nerard*, flesh colour. *Glorie du Paris*, deep crimson with purple shades. *Comte du Rambeauto*, crimson tinged with lilac. *Oscar Leclerc*, brilliant crimson, large, superb. *Glorie de Rosamene*, vivid scarlet; the form is not of much merit, but its fine showy character recommend it everywhere. These roses may be trained to form pillar roses of six feet or less as desired, a strong turfy loam well enriched suits this class admirably, manure-water is beneficial. These roses bloom from June to December.

Noisette and China Roses.—*Miss Glegg*, pale-flesh, beautiful. *Zobeide*, rich rose, fine. *Aime Vibert*, white, beautiful. *Archduke Charles*, rose changing to crimson. *Cramoise Superieure*, brilliant crimson. *Fellenberg*, bright crimson. *Blairii No. 2*, blush with rose centre.

Summer Roses.—*Princesse de Lamballe*, beautiful pearly white. *Comte Plater*, creamy fawn colour. *Diana de Poitiers*, pink and blush. *Boileau de Nanteuil*, rich crimson. *Kean*, bright crimson. *Antinous*, dark crimson damask. *Duchesse d'Angouleme*, bright rose, fine. *Duchesse d'Orleans*, pale pink with a deep rose centre. *Madame Verdier*, pale blush. *La Capricieuse*, rose, changing to red. *Porcelaine Royale*, rose, mottled with white. *Sir Walter Scott*, deep purple.

Moss Roses.—*Celina*, dark crimson. *Prolific Moss* (or *Gracilis*) colour of the *Old Moss*, but dwarf, and a most profuse bloomer.

WINTERING FUCHSIAS.—In reply to *Isabella*, we have to state, that many of the recently raised varieties are of the robust soft-wooded class, and they do not endure the severity of our winters out of doors, without very careful protection, by means of a cover of dry materials, over which there is a thick reed of straw thatch, or a wooden case, &c. With this class we find it best to dig them up with soil adhering, and place them in a hay chamber from frost, or shed, cellar, &c., the roots being fully protected. If they even endure out of doors, they have never bloomed well the following season. The old twiggy class of *Fuchsias*, as *coccinea*, *gracilis*, *elegans*, &c., will succeed to satisfaction, if they have a dryish soil, especially the substratum, and are protected from the cold north and north-west winds. Twelve years ago we planted out eighty plants of all the varieties of this class we could obtain, and they have flourished (in Norfolk) without any protection up to the present time. The largest bush we measured on November 14th, then in fine bloom, it is seven feet six inches high, and as much in diameter through the centre of the bush. The branches do not now suffer by the cold of winter, but have become inured to the climate. Plants struck out of doors from such, we believe will prove equally hardy.

STRIKING ROSES.—I have succeeded well with striking *Roses* in the following manner:—Take a pan one foot square by eight inches deep,

place in the bottom a few pieces of charcoal, and over this lay about two inches of the same broken very small; then fill up with equal parts of leaf-mould, peat, loam, and silver sand; mix the whole well together, and press firmly.

The proper time to select the cuttings I find to be when the wood is approaching ripeness in September; choose a dull day for the operation, and cut to a heel if possible; then insert the cuttings with a small dibble, so that the heel of the cutting may be near the charcoal at the bottom of the pan; press each cutting firmly in the soil, about an inch apart, and when the pan is full, give a good watering, and sprinkle the surface with silver sand and charcoal-dust to the depth of a quarter of an inch. Then plunge them in a well-glazed cold frame, amongst coal ashes, up to their rims; give air occasionally throughout the winter, and keep them clear of decayed leaves and weeds. They will require a little water by March, when they begin to grow.

By the beginning of May they will be ready for potting off or planting out eight inches apart in beds. Introduce a piece of slate or tile under each, and fill up with a handful of material similar to that they were struck in. The soil should be rich and well pulverised previous to planting, which should take place in a warm shady situation if possible; then give them a watering, and shade for a few days from sun and cold winds. The tiles are for causing the roots to take a horizontal direction, in order that the plants may be removed more readily in the autumn to their final destination.

The following is a good method of treating Roses intended to flower the following March and April: pot in the autumn, and plunge the pots in a bed of leaves, with the tops exposed to the atmosphere; they will make roots then, and be in a fit condition for gentle forcing in spring.

The Roses that I struck in the way mentioned above were Chinas, Teas, Bourbons, Noisettes, and Hybrid Perpetuals. If well managed, they blossom freely the first season.—(*D. Hay.*) *Gardeners' Chronicle.*

GLADIOLUS FLORIBUNDUS.—The following beautiful varieties have recently been raised in Belgium, and figured in the Ghent Annales.

The description of these is as follows:—

Rembertus Dodonæus.—The perianth is regularly formed with six divisions, of which three are yellow and three red; but most frequently the two first red divisions have their margins yellow, or a portion of that colour on the purple base. The inferior divisions are striated with purple, their point being entirely of that tint.

Christophe Longueil.—This variety is much more lively. The perianth has eight divisions: four are red, tinted with white, with the nerves also white; two are uniform purple, and two golden yellow, with the points purple.

Regnerus Bruitsma.—Flowers delicate and graceful. The perianth is almost regular, with six rosy divisions, ornamented with a white line or stripe in the middle; the under division smaller, with only a single tint of dull yellow.

Georges Van Rye.—In this variety the perianth has six unequal divisions; the three upper broad, rose and purple, these tints merging

into a brick red ; the three inferior divisions smaller and straighter, the two lateral ones yellow dotted with red ; that of the middle red.

THE OXALIS FOR WINTER FLOWERING.—Few plants repay the care bestowed on them better than Oxalises. During the cold season of the year, they decorate the rooms, the windows, and the vestibules, with their charming flowers. The small *Oxalis tricolor* is especially attractive and interesting in the evenings and mornings, by its pretty twisted corollas, striped with red and white, and at noon by its elegant open limb. This flower presents the phenomenon of reproducing its buds every night, to expand and fade with the rays of the morning sun. On the other hand, *Oxalis Bowei* has its large rosy-purple flowers ; *Oxalis variabilis*, faithful to its name, gives us '*grandiflora*' and the variety *Simsii*, so distinct by their fine milky-white flowers. *Oxalis speciosa* shines in the midst of its companions by its bright purple corollas : and besides these varied tints, *Oxalis Emersonii*, with its fine saffron-yellow flowers, is equally effective. In the garden of the learned Chevalier M. Michel Tenore, of Naples, there is the finest and most extensive collection to be found on the Continent. They are not grown, certainly, to large and heavy specimens, being not much more than six inches high ; but they are very neat, and grown so thickly that they form a sort of leafy carpet, interspersed with brilliant flowers. With regard to the culture:—At the commencement of September, the tufts or roots begin to start. They should then be separated in order to multiply them, putting three or four pieces or little tufts in a middle-sized pot ; unless it is preferred to have them in a box, or anything like a large flat vase, so as the better to imitate a flowery turf. The soil should be composed of peat, leaf-mould well decomposed, and sand, giving a third part of each. It should be made light and porous, so as to allow a free admission of air. In this mixture the roots are placed, about half an inch under the surface. They should be moderately watered, and removed to a warm and sheltered part of the garden. About the end of the month, the leaves will have begun to spring up. At the beginning of October, they are removed to the sill of the window which it is required to decorate. Here the essential conditions of their growth, and certain and continuing flowering, are the sun or light, air, and now and then a little tepid water. From October to March and April these pretty flowers are in all their perfection. In the spring they should be removed to a cool place, where the late frosts will not injure or reach them. Even then they had better be kept rather dry than have a great deal of water. Thus the routine necessary to have these flowers all the winter is very simple.—*Ghent Annales*.

SALVIA PATENS.—It is not generally known, that the root of this plant can be treated in all respects as the Dahlia during winter, and be propagated in spring the same way. I grow it, as well as the pretty white variety, extensively in beds during summer, and the garden being protected from strong winds, it flourishes without the flowers being injured.—*A. B.*



FLORAL
OPERATIONS FOR THE MONTH

G. RICHMOND

IN THE FLOWER GARDEN.

THE fine open weather has been favourable to the blooming of the Chrysanthemums in the open air ; where the flower beds require to be ornamented after these flowers are cut off, provision must be made by dwarf kinds of evergreen shrubs in pots, such as Lauristinus, Mahonias, Box, Rhododendron, &c. Tulips, Anemonies, &c. not yet planted should be done immediately. The single varieties are highly ornamental as early spring flowers ; they may be had cheap. Any spring flowering plants should now be planted, such as Gentianella, Hepatica, Draba, Aconites, Crocus, &c.

FLORIST'S FLOWERS.—*Auriculas*, *Polyanthuses*, &c. must be protected from overhead wet, and have all air possible in dry weather. In severe dry frosty winds protect from such. Keep the soil just moist. *Carnations*, *Picotees*, &c. require similar attention. Pinks in beds, keep soil pressed properly around the stems. A few sticks pricked among the shoots prevent the plants being twisted off. So in reference to *Pansies*. Beds of *Hyacinths*, *Tulips*, &c. require attention in protection should weather be severe ; the surface, too, carefully stirred. Ten-week Stocks, *Mignonette*, &c. in pots for spring flowering, should be kept free from frost, and not be over-watered. *Fuchsias* and tender *Roses*, &c. in open beds should have mulch over the roots. Protect the stems, &c. of any tender tall growing roses, or other plants, with branches of evergreen firs, yew, furze, &c. Protect newly-planted tender shrubs over the roots, and from being twisted by wind. Sweet *Violets* plant in every direction near walks, rooms, &c., especially have plenty of the lovely varieties of *Crocus*, *Snowdrop*, &c. near the house. Protect *Chrysanthemums* from frost, or the suckers will be injured by frost. *Hollyhocks* now planted bloom much more vigorous than if delayed till spring. *Hot-beds*, &c. for forcing flowers should be prepared. Suckers of *Roses* should be taken off. Now, too, *Roses* should be planted, if they are to bloom well next season. *Dahlia*-seed must be kept secure from wet, the roots too from being injured by frost or damp, so as to be mouldy.

IN THE FORCING STOVE.

The ornamental and fragrant flowers for winter decoration, should regularly be introduced, such as *Roses*, *Gesnerias*, *Heliotropes*, *Cirrœas*, *Cinerarias*, *Cactus*, *Eranthemums*, *Scarlet Geraniums*, *Gardenias*, *Hyacinths*, *Crocuses*, &c. (See lists in Calendars of former volumes.)

IN THE GREENHOUSE, &c.

Only give as much water to this class of plants as will just keep the soil moist (not wet), and let it be given in the morning. Admit air freely, so as only to keep frost out. Do not allow *Chrysanthemums*

done blooming to remain longer, or suckers will spindle up. Camellias must not be allowed to become dry, or the flower-buds will drop, let them be kept moist. Where there are clusters of flower-buds thin them, so as to leave only one at a place. Cinerarias are liable to be attacked by green fly; if they become so, place them in a frame closed, and fumigate with tobacco. Pelargoniums for exhibitions next season must not be forced forward, but kept stiff. Such as fill the pots with roots, should be put into a size larger. About the end of the month, stop the leads of longest shoots to make them throw out laterals. Do not crowd the plants. (See Articles on culture of in previous Numbers). Calceolarias must not have much water; shoots will often have roots protruded underneath, such should be potted off. Verbenas in frames must be kept near the glass, have plenty of air, and be careful not to over-water them. Ericas, Epacris, Azaleas, &c. require an airy situation, only protect from cold east or north winds. Plants that have extended as far as desirable should have the leading shoots stopped. The greenhouse should be ornamented with Chinese Primroses, Cinerarias, &c. Do not allow the surface of the soil to be crusted, or covered with moss, &c., but let it occasionally be stirred; this very much promotes the health of the plants. Pots that become green are injurious, excluding air from the roots. Only have just as much fire as will keep out frost, and dry up damp.

ON SCARLET GERANIUMS.

BY CLERICUS.

FOR many years I have grown this tribe of flowers, in beds, and in order to keep up my stock the easiest and best way, (I have seen none else to equal its success,) I pursue the following method.

As soon as the frost pinches the leaves, I cut off the tops to within a few buds of the origin of the last shoots. I leave the plants so for a week or ten days, covering them over with some dry hay. At the close, I dig them up carefully, and lay them in a dry room for a few days to dry, after which I place them erect, closely, in boxes, in dry chaff, burying the roots only. I keep them in a back shed, free from frost, till spring, and then re-pot, turn out, &c., as usual. In this way they flourish admirably.

ON INDIAN AZALEAS.

BY MARIA.

I HAVE an extensive collection of these lovely flowering plants, and by a little attention in taking in plants to the greenhouse in succession, I have them in bloom from Christmas to Midsummer. I have a nice dry pit-frame, along the front of which is a small flue; when heated it is just sufficient to keep out the frost. From this pit I make my selection, and having done it for years, I find that the plants which were brought into bloom at a given period last year, naturally offer for bloom the following. I therefore keep each portion to itself, and in the pit they are distinctively arranged.

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